



BIRDS OF YOSEMITE

SPECIAL ISSUE YOSEMITE NATURE NOTES

YOSEMITE NATURE NOTES

THE MONTHLY PUBLICATION OF
THE YOSEMITE NATURALIST DIVISION AND
THE YOSEMITE NATURAL HISTORY ASSOCIATION, INC.

Vol. XXXIII

AUGUST 1954

No. 8

Birds *of* *Yosemite National Park*

By

Cyril A. Stebbins

and

Robert C. Stebbins

(Illustrated by the junior author)



SPECIAL ISSUE

Contents

Foreword	75
Distribution of Birds	75
Life-zones of the Yosemite Region	76
Parts of a Bird	77
How to Use This Book	78
How to Study Birds	78
Conservation of Birds	80
Migration of Birds	81
Acknowledgments	81
Bird Descriptions and Illustrations	82-139
Flight Form, Birds of Prey	93
Family Characteristics of Birds	140
Identification Key to Yosemite Birds	146
Index	151

Cover illustration: male western tanager, from a watercolor by Robert C. Stebbins

Foreword

Even before you have finished establishing your camp in one of the many pleasant campgrounds of Yosemite National Park, you may be visited by a bird accustomed to finding people friendly and ready to share their food. In the face of such confidence one cannot be intolerant of the behavior of the colorful western tanager (see cover) when he alights on the camp table and helps himself to the butter, nor can one feel harshly toward the raucous Steller's jay as he boldly snatches a piece of bread and eats it out of reach but in full view of camp.

As with many of the animals in Yosemite, birds have come to regard man as a relatively harmless feature of their environment and therefore go about seeking their food, building nests and rearing their young with a minimum of diversion due to his presence. This results in a most favorable situation for one who would study the birds, for it often allows close approach and detailed observation of birds with little alteration of their behavior. Indeed, in Yosemite the birds will force your attention upon them whether you are a bird lover or not, for who can fail to be interested in the bird that joins the family circle at mealtime or feeds its young within a few feet of one's tent?

DISTRIBUTION OF BIRDS

Area Covered.—The Yosemite region, as referred to in this book, is the area of Yosemite National Park, the foothills immediately west of the park, and the slope from the Sierran crest to the shores of Mono Lake east of the park. At the present time 202 species have been reported within the park boundaries. Most of these have been described in the following pages. Species not described are those that have been seen only once or but a few times or about which there is doubt as to accuracy of identification. These undescribed forms are listed on page 139. In addition three species seen at lower elevations outside the park but not recorded within the park boundaries are described. These species are marked with an asterisk.

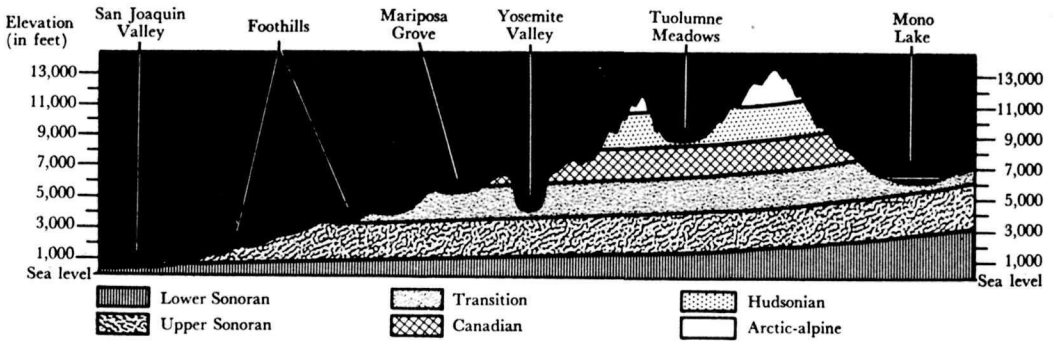
Habitats.—Birds have adapted themselves to many different environments, usually called habitats. This helps alleviate the competition between different species for food and nesting sites. To cite a few examples—ducks feed in open water and nest in marshes, swifts feed in the air and nest on the cliffs, kingfishers dive for fish in streams and nest in the banks, sandpipers feed on the shores and nest on the ground, woodpeckers frequent forests and feed on wood-inhabiting insects and nest in tree trunks, kinglets feed and

nest among the boughs of coniferous trees, and rock wrens feed and nest among the rocks. Knowing the habitats frequented by birds often helps to corroborate an identification, for you learn to look for certain species of birds in particular habitats.

Life-zones.—The variety of living conditions available to birds in the Yosemite region is reflected in the richness of its bird life. In an airline distance of 70 miles, between the western edge of the foothills and the Sierran crest, changes in kinds of plants and animals occur that are similar to those found over the vast area between southern United States and the Arctic tundra, a distance of about 2,000 miles. With changes in either altitude or latitude, from regions of high to those of low temperature, the character of the native plant and animal life varies. For convenience in biological study, characteristic forms of life have been grouped into belts called *life-zones*, in accordance with changes in climate. In California, made possible by its varied topography and climate, there are six such zones—the *Lower Sonoran*, *Upper Sonoran*, *Transition*, *Canadian*, *Hudsonian*, and *Arctic-alpine*. In this book the last three are sometimes jointly referred to as the *Boreal* zone. The intermediate region, the *Transition* life-zone, often contains considerable numbers of plants and animals from the adjacent zones and is thus appropriately named. Except for this zone, each zone has been named for a latitudinal region with a characteristic type of vegetation and animal life. For example, the *Canadian* life-zone, in a latitudinal sense, consists of a broad strip of coniferous forest with its associated fauna, that extends across much of southern Canada.

The visitor to Yosemite, entering the park from the Great Valley of California, starts his journey in the *Lower Sonoran* life-zone and can go by automobile to Tioga Pass in the *Hudsonian* zone having passed through the *Upper Sonoran*, *Transition*, and *Canadian* life-zones enroute. By walking up the slope of Mount Dana, less than 2 miles by trail from the pass, he reaches the coldest zone, the *Arctic-alpine*, which encompasses the summits of the highest peaks in the park. There, above timberline is to be found the dwarf willow, short dense grasses and sedges, lichens and other low growth, like that of the Arctic tundra. Thus within an airline distance of 50-70 miles, one can traverse all 6 life-zones in the western United States.

To aid in the search for birds and in developing an understanding of their occurrence, the life-zone range is given for all species except those frequenting Yosemite only casually. Determination of the zone depends upon recognition of certain "indicator" species of plants and animals. Trees, where present, are the most conspicuous indicators of a zone. The best "indicators" are confined to the zone in question, or in the case of animals, are those chiefly resident (especially as breeding) within it and which therefore serve as good landmarks. It must be kept in mind, however, that the lines between zones are seldom sharp and that local effects of slope exposure, air currents, precipitation, etc. may modify the local temperature and consequently the details of the zonal picture. Furthermore animals, especially birds and certain mammals, that have good powers of locomotion, and even those regarded as good indicators, may sometimes transgress zonal boundaries. Keeping in mind the foregoing reservations, we may list indicators for the life-zones beginning with the *Lower Sonoran* zone of the Great Valley and extending to the Sierran crest, an altitudinal range from 200 to over 13,000 feet. Altitudes given are for the western slope of the Sierra and are approximate. All zones tend to be higher on the east side of the Sierra.



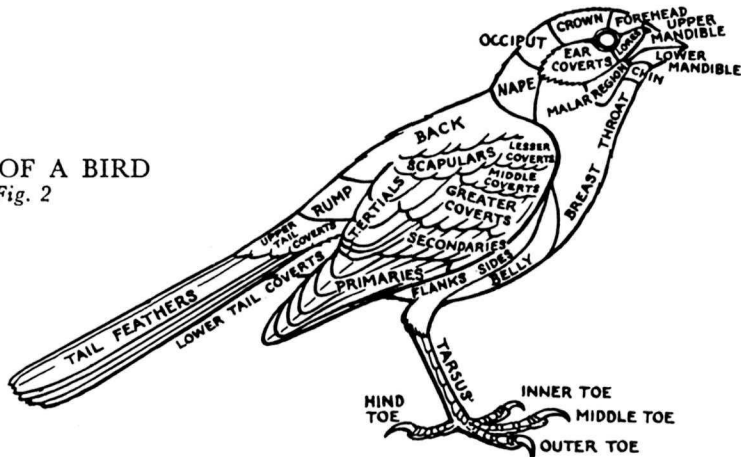
LIFE-ZONES OF THE YOSEMITE REGION

Fig. 1

ALTITUDES OF LIFE-ZONES IN THE
YOSEMITE REGION WITH PLANT
AND BIRD INDICATORS

- LOWER SONORAN**—Sea level to 500 feet. Grassland with scattered valley oaks; otherwise largely treeless except along streams. Confined to the lowlands of the Great Valley. Birds—Red-bellied hawk, barn owl, burrowing owl, Texas nighthawk, horned lark, cowbird, American goldfinch, blue grosbeak, least vireo, yellowthroat, mockingbird.
- UPPER SONORAN**—500 to 3,000-4,000 feet. Digger pine, blue oak, interior live oak, scrub oak, mountain mahogany, toyon and other chaparral plants. The brushland or chaparral zone of the foothills. Birds—Nuttall's woodpecker, scrub jay, Bell's sparrow, brown towhee, Hutton's vireo, California thrasher, Bewick's wren, plain titmouse, wren-tit, western bluebird.
- TRANSITION**—3,000-4,000 to 6,000-7,000 feet. Ponderosa pine, sugar pine, incense-cedar, white fir, Douglas-fir, black oak, canyon live oak, bigleaf maple, dogwood. Birds—Pygmy owl, band-tailed pigeon, California purple finch, solitary vireo, Nashville warbler, black-throated gray warbler, Tolmie's warbler, winter wren.
- CANADIAN**—6,000-7,000 to 8,000-9,000 feet. Red fir, Jeffrey pine, lodgepole pine, white pine, quaking aspen, chinquapin. Birds—Sooty grouse, goshawk, calliope hummingbird, Williamson's sapsucker, Hammond's flycatcher, Cassin's purple finch, Townsend's solitaire, Lincoln's sparrow.
- HUDSONIAN**—8,000-9,000 to 11,000-11,500 feet. Whitebark pine, mountain hemlock. Birds—Arctic three-toed woodpecker, mountain bluebird, California pine grosbeak, Clark's nutcracker, white-crowned sparrow.
- ARCTIC-ALPINE**—11,000-11,500 and above. Dwarf willow, various dwarf or matted flowering plants, and turf-forming grasses and sedges, the area above timberline. Birds—Sierra Nevada rosy finch.

PARTS OF A BIRD
Fig. 2



HOW TO USE THIS BOOK

Identification.—One of the delights and fascinations of bird study is the possibility of the discovery of a new species within a given area. The visitor to Yosemite is invited to contribute to the recorded natural history of the region. It is hoped this booklet will encourage such an effort and at the same time will further the mental and physical refreshment that accompanies the pursuit of bird study.

Illustrations have been designed to emphasize the more conspicuous field marks which serve as clues to recognition. An effort has been made to place the birds in characteristic poses, and a suggestion of habitat has been included. The figures below the name of the bird in each sketch are a measure of total length in inches.

Descriptions are in semi-scientific terms with distinctive features emphasized in *italic* type. The diagram on page 77 showing the parts of a bird will help to clarify certain of these terms. Statements in the descriptions that have bearing on the range or habitat of a species apply to the Yosemite region or the Sierra Nevada and are not to be applied more broadly.

An identification key will be found on pages 146 to 150. The birds are segregated, first, on the basis of some conspicuous color or other characteristic and, second, on the basis of size, comparing with certain well-known birds. Hawks, eagles, owls, and hummingbirds are not included since most people recognize these birds as to group. The many pictures including the plate showing the hawks, vultures, and eagles in flight should suffice for identification.

An excellent exercise for one interested in learning to know the birds is to color the illustrations from birds seen in the field or from study skins or museum mounts. Colored indelible pencils or water colors may be used. A light spray of "fixatif" will hold the pencil colors fast.

Seasonal status.—Throughout the descriptive accounts the status of each species is given for the Yosemite region. Status refers to the time and duration of occupancy of an area—whether the bird is present throughout the year (R.—resident), during the winter period only (W.V.—winter visitant), during the summer only (S.V.—summer visitant), or sporadically for brief periods (C.V.—casual visitant). In the latter category are birds that pass through the area only in fall and spring migration or enter it during postbreeding upmountain movements (M.—migrant). To shorten the text the abbreviations have been used.

HOW TO STUDY BIRDS

First learn this quotation: "A bird in the heart is worth more than a hundred in a notebook." Second, learn repose. Third, learn to listen. Fourth, learn to see accurately.

To study birds most successfully, proceed with your notebook and, if possible, a good binocular fieldglass, with six- or eight-power magnification, to a place frequented by birds. Choose bright mornings or late afternoons for your study. Sit quietly and patiently and you may be rewarded. When a bird comes into view take a detailed description, noting size, colors, type of beak, and other characteristics. Refer to the illustrations and "key" as soon as convenient. Suppose you have found a Steller's jay and are unable to identify the bird by examining the illustrations. Turn to "Birds

with Conspicuous Blue Markings" in the key, since this bird is largely blue. As to size it best fits the category "Intermediate, between Brewer's black-bird and crow"; therefore eliminate all other birds. When you have found a description in this group that fits the bird, turn to the page indicated in the index and read the more detailed description for further verification. Walk slowly and quietly through the region selected for field study, stopping now and then. Birds are frightened by quick movements. Try imitating the call of a bird in distress by sucking the back of your wrist. Birds may appear.

One of the greatest pleasures the birds may offer you is through their songs; learn to listen and to recognize the birds' voices, whether bird hunting or not. Whenever a new note is heard, if possible, trace it to its maker. Accurate recognition is often dependent upon the bird's song or call.

Learn to see correctly and to interpret wisely. Many see the apple pecked and the wheat kernel disappear, but do not see the activities of the same bird which mean the death of a codling moth or a grasshopper.

Observation is so inaccurate that state and federal authorities make stomach analyses of birds in order to determine whether they are harmful or not, on the basis of their food habits. While many birds are killed in different localities at different times of the year for this purpose, thousands of other birds are protected by legislation which results from such studies.

Some bird groups.—Characteristics of some of the bird groups may aid identification. *Hawks, eagles, and owls* are usually of large size, have powerful hooked bills, usually stout legs, and long talons. Some hawks soar when foraging, others dart through thickets to pounce on their prey. *Owls* are large-headed birds with broad, rounded wings; they usually forage at night. *Thrushes* are brown above, sometimes spotted below. They are trim, timid birds that forage near the ground. *Vireos* are small, active birds frequently with short, slender bills. There is a predominance of gray in the plumage. *Flycatchers* range in size from 5½ to 9 inches. They may be dull or bright in plumage, sometimes have wing-bars, an eye-ring, or white outer tail feathers. They have a marked habit of taking flight from a perch to return to the starting point or capturing an insect in the air. This act is often repeated. Raised feathers on the head often give the effect of a crest. *Wrens*, with few exceptions, are small, brown birds usually with dark bars on tail and wings and in some species a whitish line over the eye. As a rule, wrens, when foraging, hold the tail upward at a sharp angle to the body. They forage near the ground. *Woodpeckers* have stout, chisel-like bills, two toes in front and two behind (one exception), and stiff, pointed tail feathers. Black, white, and red are dominant colors. These birds forage around trunks and large branches of trees, bracing themselves with the tail as food is sought. *Sparrows* are generally grayish or brownish with rather short, conical bills and they forage close to the ground. *Warblers*, as a rule, are small, active, brightly colored birds with short, slender bills. The line over the eye, characteristic of vireos, usually is wanting on warblers; their relatively bright colors aid one in distinguishing them from vireos.

Bandings of birds.—In order to obtain accurate information about the movements, longevity, and habits of birds, the federal government, working through the Fish and Wildlife Service, bands thousands of birds each year. Birds are trapped and aluminum bands numbered and marked "Notify F. & W. Serv., Wash., D.C." are fastened to their legs. They are given their freedom at once. Records are sent to Washington, D.C. where comparisons are made.

Several hundred banding stations scattered widely over the United States are in operation. As many as 30,000 ducks and geese have been banded in one year. One thousand two hundred ducks were banded at one time at Lake Merritt, Oakland.

CONSERVATION OF BIRDS

Why birds are protected.—Ignorance of the value of our birds is common. Inaccurate observation condemns many birds unjustly. The farmer sees the meadowlark gather a few grains during the time of planting but fails to see the same bird eat grasshopper after grasshopper at other seasons and so the birds are hunted. The selfish eye of a fruit grower may see a woodpecker peck a hole in the barn but fails to see the bird eat harmful insects in the orchard.

Students have observed one pair of grosbeaks feed their young more than 800 larvae of insects in one day of eleven hours. Three thousand ants have been found in the stomach of a flicker at one time. Five hundred mosquitoes were counted in the stomach of a nighthawk. A pair of nesting wrens took more than 600 insects from a garden in one day. A swallow may eat hundreds of flies a day. The stomach of a quail held 100 potato beetles. Another had eaten more than 500 chinch bugs.

Bird authorities of Massachusetts estimate one day's work by the birds in that state to be the destruction of at least 20,000 bushels of insects. In every state, millions of insects are destroyed each day. While great numbers are destroyed through other natural agencies, just think, for a moment, of the number of insects the birds in the whole United States destroy in one day and in one year. Not only do birds eat immense numbers of insects and harmful rodents as they forage from daylight to dusk, but they eat thousands of weed seeds each day.

How to protect birds.—Report any violations of the bird laws, watch the cats, never put out poison, arrange feeding and drinking places, and never imprison or aid in the imprisonment of wild birds.

Some bird laws.—Federal laws prohibit the importation of the English sparrow and other injurious birds and make it illegal to hunt or kill any wildlife in the national parks. Among many other birds protected under the Federal Migratory Bird Treaty Act are blackbirds, linnets, and shrikes.

California state law provides that all wild birds, excepting Cooper's hawk, sharp-shinned hawk, duck hawk, great horned owl, jays, *linnet, white pelican, black-billed magpie, crow, *shrike, shag (cormorant), English sparrow, and in certain districts *blackbird, are protected. Where a species is not protected by state law but is protected by federal law (indicated by * above), the federal law holds.

Any person who in the State of California shall at any time hunt, shoot, shoot at, pursue, take, kill or destroy, buy, sell, give away, or have in his possession birds, except those above mentioned, or shall rob the nest, or take, sell or offer for sale, or destroy the eggs of any wild bird, other than those above named, is guilty of a misdemeanor and is liable to fine or imprisonment or both. Game birds are not included under this heading, but are protected by the hunting or game laws.

Similar laws protect the birds in other states.

Hawks and owls have an undeserved bad reputation, due largely to the fact that the hawks are known as flesh eaters and the owls are abroad

at night. The only hawks whose habits are to be questioned seriously are Cooper's hawk, pigeon hawk, goshawk, prairie falcon, duck hawk, and sharp-shinned hawk. Owls generally are beneficial, and the Pacific horned owl is a destroyer of such pests as jackrabbits, cottontails, and pocket gophers.

Analyses of the stomachs of 121 hawks and owls gave evidence that these birds ate little but ground squirrels, rabbits, and mice.

Game birds which are hunted for food and sport may be killed only during the open season established by law.

MIGRATION OF BIRDS

With seasonal changes, many birds become uneasy and, following some instinct, they move southward or northward, mountainward or valleyward as the case may be. They travel singly or in small or large groups.

During migration, birds take certain general directions to their destinations, guided, perhaps by instinct and topographical features. Little is known regarding the forces which guide birds in their migratory flight.

During migrations many birds die or are killed. Thousands of weaklings drop from exhaustion when long flights are taken without a stop. Storms often carry great flocks out of their courses. High buildings take their toll. Dead birds are found often at the base of the Washington Monument. Thus, in a way, migration strengthens the race of birds. The weak die. The strong survive. It is a form of natural selection.

Ornithologists, or bird students, state that at least nineteen species of shore birds breed near the Arctic Circle and visit South America in the winter. More than a hundred species leave the United States to spend the winter in Central or South America.

ACKNOWLEDGMENTS

In preparing statements relating to distribution and status, frequent reference has been made to Grinnell and Miller, 1944, "The Distribution of the Birds of California," *Pacific Coast Avifauna*, 27: 1-608. This excellent and thorough work has greatly lightened our task. Persons interested in additional information on the birds of Yosemite should refer to Grinnell and Storer, 1924, *Animal Life in the Yosemite*, Berkeley, University of California Press, xviii + 752 pp. An earlier publication of *Yosemite Nature Notes*, "Birds of Yosemite" (January 1938) by Beatty and Harwell, included a check list of 203 species with descriptions of 70 of the most common. For a more complete guide to birds of California and the West, *A Field Guide to Western Birds* by Peterson (1941) and/or *Birds of the Pacific States* by Hoffmann (1927) are recommended.

We wish to acknowledge the generous help and encouragement of Douglass Hubbard, Associate Park Naturalist, Yosemite National Park, without whose stimulation this book would not have been prepared. Wayne Bryant, Junior Park Naturalist, Norman Herkenham, Assistant Park Naturalist, and Walter Fitzpatrick, also of Yosemite, have read the manuscript and have made many helpful suggestions. David Johnston of the University of California Museum of Vertebrate Zoology checked the accuracy of the technical names.

BIRD DESCRIPTIONS AND ILLUSTRATIONS

GREBES: Order Colymbiformes

GREBES: Family Colymbidae

EARED GREBE (*Colymbus caspicus*): 12-14 in. In summer head, slender neck, upper breast, and crest, black; tufts of fan-shaped yellowish feathers extend back from eye; rest of upper parts blackish; sides brownish-red; under parts white; bill slender; iris red. Adult in winter: Cheek whitish; front and sides of neck gray; under parts white; top of head, back of neck, and back black. Immature: More brown in back.

Breeds in summer on bodies of fresh water. East of the Sierra breeds south to Mono Lake. W.V. along the coast and on inland bodies of water. Widely distributed in the fall. R. in some areas. C.V. to lakes in Yosemite region. Occasionally on Mirror Lake in Yosemite Valley but more frequent on higher lakes up to 12,000 feet.

PIED-BILLED GREBE (*Podilymbus podiceps*): 12 - 15 in. Upper parts brown, darker on top of head, back of neck and upper back; under parts whitish, marked with brown; bill short, light-colored, and crossed by black band; throat black; white under very short tail. Adult in winter and immature: Generally brown; throat patch absent or faint; band on bill absent. Hatchlings blackish with whitish streaks on head, neck, and back. When frightened may dive or sink beneath the surface with little rippling of water.

Widely R. on bays and estuaries along the coast and on inland ponds, sloughs, and lakes. The principal breeding area is the Great Valley of California. Widely distributed in winter. In the Yosemite region most likely to be seen in winter along the lower course of the Merced River below Yosemite Valley.

PELICAN-LIKE BIRDS:

Order Pelecaniformes

PELICANS: Family Pelecanidae

WHITE PELICAN (*Pelecanus erythrorhynchos*): 55 - 70 in. Plumage generally white, except for brownish-white primaries and tuft of yellowish feathers at top of head; pouch largely yellow, orange at base; bill and feet orange; protuberance on upper mandible and yellow on head absent in winter. Immature: Bill yellow; top of head brownish-gray. Flies with head back on shoulders and long bill resting on neck. Flock flies in "follow-the-leader" fashion in column or V, each bird, in turn, doing same maneuvers as leader.

Breeds principally on interior freshwater lakes, especially those with islets. In winter, ranges widely over southern and west central parts reaching bays along the coast. May be seen flying at considerable height almost anywhere during migration. C.V. to Yosemite Valley.

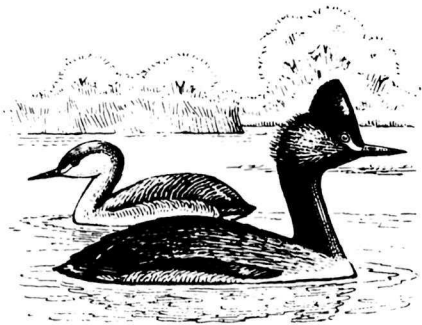
CORMORANTS: Family Phalacrocoracidae

DOUBLE - CRESTED CORMORANT (*Phalacrocorax auritus*): 30-36 in. Black with greenish iridescence on head and neck; throat, pouch, and lores yellowish-orange; delicate white feathers, which are soon lost, above and behind eye during late winter and early spring; sides of bill yellow; bill usually elevated at a slight angle when neck held erect and bird resting or swimming. Immature: Uniformly dark brown above; whitish on belly. Usually nests in colonies on islets or in tall trees near lakes or reservoirs.

R. and breeding along the coast as well as on larger inland bodies of water. C.V. to the Yosemite region.

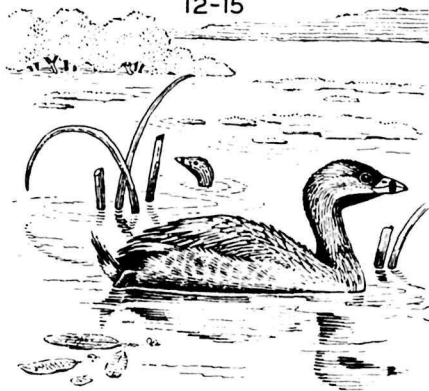
EARED GREBE

12-14

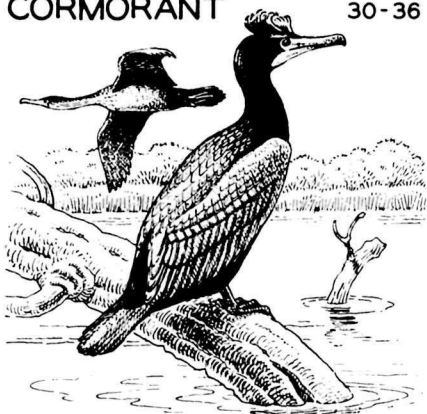


PIED-BILLED GREBE

12-15



DOUBLE-CRESTED CORMORANT 30-36



STORK-LIKE BIRDS:
Order Ciconiiformes

HERONS AND BITTERNS:
Family Ardeidae

GREAT BLUE HERON (*Ardea herodias*): 42-52 in. Above slaty blue; tips of wings darker; top of head white (black in immatures); sides of head black, with several long black feathers during breeding season; long, loose feathers (not on immature) on sides of neck and upper back; below black-and-white-streaked; long legs and neck. In flight legs extended backward, long neck kinked. Voice a low-pitched, hoarse walk. Commonly nests in colonies in tall trees, cliffs, and in both salt and freshwater marshes.

Frequents sloughs, marshes, meadows, lake margins, and tidesflats. Widespread R. In the Yosemite region occasionally seen along the lower Tuolumne River, Merced River in Yosemite Valley and below, and at Merced Lake, Glen Aulin, and Tuolumne Meadows.

GREEN HERON (*Butorides virescens*): 16-18 in. Back and sides of neck and face chestnut; dark wings with bluish cast; top of head black, tinged with green, with feathers long and loose; below brownish-gray; legs greenish-yellow. Flight somewhat crow-like. Voice a hoarse squawk. A solitary nester.

GREAT BLUE HERON

42-52



Favors willow-bordered bodies of fresh water. Summer R.; M. widely. C. V. in the Yosemite region. Recorded at Merced Lake and in Yosemite Valley.

COMMON EGRET (*Casmerodius albus*): 37-42 in. *Plumage entirely white*; long plumes extend from upper back to beyond tail in breeding season; long black legs and feet; long *yellow bill* (yellow reduced in immatures). Often nests in large trees.

Frequents marshes, wet meadows, lake margins, and tideflats. Wanders extensively. C.V. in Yosemite region; occasionally seen in Yosemite Valley.



SNOWY EGRET (*Leucophoyx thula*): 20-27 in. Similar to common egret except smaller; *plumes on back recurved*; legs and bill black; webs of feet yellow. Nests in dense tules.

C.V. in Yosemite region.

GOOSE-LIKE BIRDS: Order Anseriformes

DUCKS, GEESE, AND SWANS: Family Anatidae

CANADA GOOSE (*Branta canadensis*): 23-42 in. Plumage generally brownish-gray above; belly and flanks gray to chocolate (western Canada goose); under tail coverts and rump white; *head and neck black*; *white bib extends well up on sides of head*; partial white collar sometimes present near base of black neck. The four subspecies show a considerable range in size—honker Canada goose, 35-42 in.; western C. g., 35 in.; lesser C. g., 25-34 in.; and cackling C. g., 23-25 in.

Frequents lakes, reservoirs, quiet water of larger streams, marshes, and wet grassland. C. V. to Yosemite region. Has been seen on Mirror Lake and the Merced River.

MALLARD (*Anas platyrhynchos*): 20-28 in. *Head and upper neck glossy, dark green*; *fore-neck and breast ruddy*; narrow white collar, incomplete behind; speculum—a pigmented area of the wing involving the secondary feathers—blue, bordered on each side by white; tail white with black center; flanks gray; bill yellowish; feet reddish-orange. Female: Above generally mottled brown; dark line through eye bordered above with buffy; top of head and back of neck dark brown; below light brown; greenish wing-patch bordered on each side by white. In flight, comparatively slow wingstrokes with downward sweep reaching little below level of body; under side of wings silvery white. Voice of female a loud, frequently repeated quack; that of male weaker. Often seeks

its food with head under water and tail in the air.

Frequents tule-bordered freshwater ponds, rivers, and marshes. Has been noted as a C. V. on the Merced River in Yosemite Valley and in Little Yosemite Valley. Recorded as nesting to an elevation of about 7,500 feet.

CINNAMON TEAL (*Anas cyanoptera*): 15½-17 in. Head and neck dark cinnamon; brown wings with large area of blue; green speculum, bordered by white; upper back chestnut, grading into brown; under surface of wings white; under parts cinnamon changing to black on belly; iris red. Female:

Above dark brown, marked with gray; below grayish; breast spotted with brown; large blue patch on forepart of wing.

S. V. on freshwater lakes and ponds. Widespread in spring and fall migration. C. V. to Yosemite region, most likely to be seen in spring.

BLUE-WINGED TEAL (*Anas discors*): 14-16 in. Head gray with a large white crescent between eye and bill; large blue patch in wing which may appear whitish; below dark gray, spotted with black; bill black; feet yellowish. Female: Mottled brown with blue patch on forepart of wing; not as rusty or as coarsely mottled as female cinnamon teal.

Frequents freshwater ponds and slowly moving streams. C. V. to Yosemite region. Has been observed in Yosemite Valley.

GREEN-WINGED TEAL (*Anas carolinensis*): 12½-15½ in. Generally gray; head brown with iridescent green patch showing in bright sunlight on side of head; conspicuous white mark in front of wing; speculum green; upper breast reddish-brown, spotted with black; remaining under parts white; under tail coverts black with creamy areas laterally; bill lead-colored; feet bluish-gray. Female: No white in wing; speculum green.

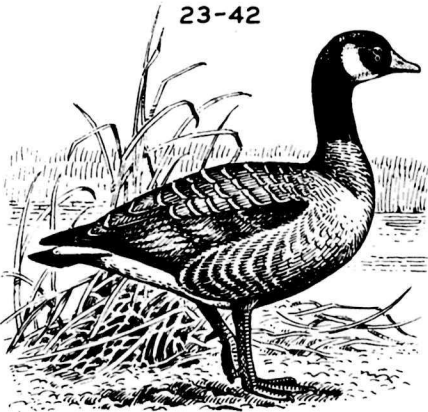
C. V. to the Yosemite region.

PINTAIL (*Anas acuta*): 26-30 in. Head and portion of fore-neck dark brown; hind-neck dark; rest of neck, breast, and belly white; white line on side of neck extending well up onto side of head; long, black, middle tail feathers; area under tail black, bordered laterally by white. Female: Head, neck, and back generally brown; back streaked with buff and black; no blue speculum; below whitish; bill blue-gray; white border on rear of wings, seen in flight. Usually nests on dry ground near ponds or lakes.

C. V. to the Yosemite region.

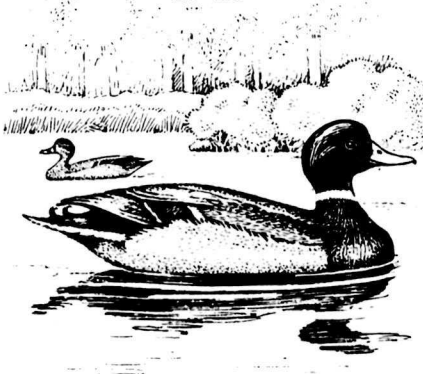
CANADA GOOSE

23-42



MALLARD

20-28



BALDPATE

18-22



BALDPATE (Mareca americana): 18-22 in. Forehead and crown white; sides of head dark, with greenish iridescence; breast and sides brownish tinged with pink; area under tail black; white on flanks posteriorly; broad white area near wing-bend seen in flight, reduced in female, not present in immature; remaining under parts white; bill bluish with black tip. Female: Flanks ruddy brown; head and neck gray; small white area near bend of wing, seen in flight.

W.V. or M. throughout California, chiefly on freshwater marshes, lakes, and streams. C.V. on lakes and slower streams of Yosemite region.

SHOVELLER (Spatula clypeata): 17-20 in. Head and upper neck greenish-black; back whitish with dark area down middle; wing grayish-blue at bend; white of breast and flanks separated by reddish-brown on sides; black region under tail; belly chestnut; long shovel-shaped black bill, wider at tip than at base, giving bird front-heavy appearance in flight; sits low in water. Female: Plumage generally brown, mottled; large blue wing-patch and large bill as in male.

Chiefly on fresh water but also frequents brackish water. Occasionally a few breed in the park. On open streams and lakes in Yosemite region at almost any time of year, but rarely seen.

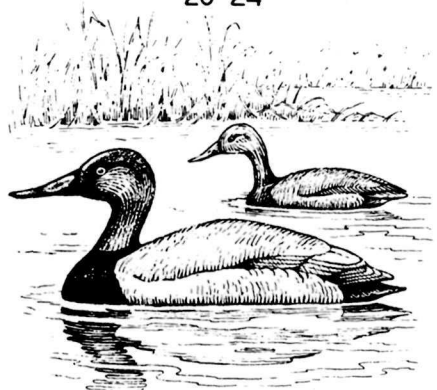
WOOD DUCK

17-20



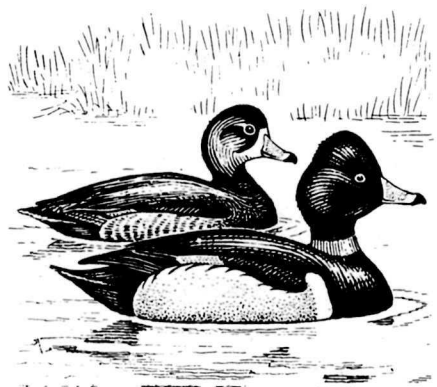
CANVAS-BACK DUCK

20-24



RING-NECKED DUCK

16-18



WOOD DUCK (*Aix sponsa*): 17-20 in. *Feathers on top of head green, extending into crest of violet*; sides of head black with two white lines, one above, other behind eye; *throat white*; wings mottled with black, white, and purple; fan-shaped tail; breast chestnut; under parts generally white; reddish area across base of bill. Female: Top of head dark; face brownish; *white ring around eye extending backward*; *throat and belly white*; breast brownish, mottled with lighter; rear edge of wing in region of secondary feathers white, as in male. Faltering, often noisy in flight; takes wing abruptly; may move head about while flying. Commonly feeds on acorns. Nests in tree cavities.

Frequents slowly flowing rivers, sloughs, and ponds of fresh water, especially where bordered by deciduous woods. R. principally in Sacramento and San Joaquin Valleys. C. V. in Yosemite region. Seen at all months in Yosemite Valley, occasionally nesting there.

CANVAS-BACK DUCK (*Aythya valisineria*): 20-24 in. Back and sides nearly white; head and upper portion of neck reddish-brown; *long dark bill forming with head a gently sloping profile*; tail and rear of back black; breast black; remaining under parts white. Female: Back and sides largely light gray; head and neck light brown; obscure light-colored streak back of eye; throat whitish; breast dark brown; remaining under parts whitish. After taking off slowly, leaving wake behind, travels with great speed. Long bill and neck give bird front-heavy aspect. An expert diver.

Common W. V., chiefly along the coast but also to larger inland bodies of water. C. V. in Yosemite Valley.

RING-NECKED DUCK (*Aythya collaris*): 16-18 in. *Head and upper neck purplish-black*; back and breast blackish; gray of sides and black breast separated by curving white band extending some distance upward; belly white; black area under tail; narrow

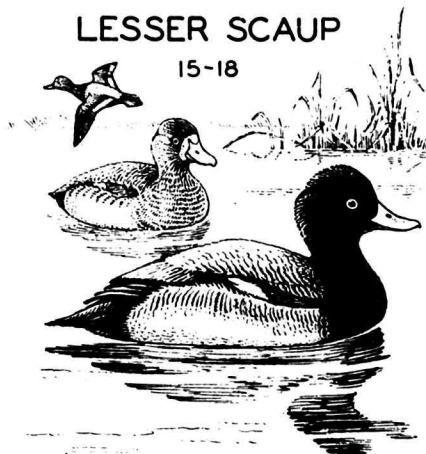
band of white at base of slate-colored bill with wider white band with bluish tinge adjacent to black of tip; narrow chestnut ring on neck sometimes visible; broad gray stripe in wing, seen in flight. Female: Generally brown; *white eye-ring*; small area of white about base of bill; bill similar to male but duller; broad gray wing-stripe.

C. V. to Merced River and Mirror Lake in Yosemite Valley, December to March.

LESSER SCAUP (*Aythya affinis*): 15-18 in. *Head, neck, breast, and anterior back black*; *head with purplish reflections in bright light*; central region of back white with faint, wavy black lines; belly and sides white; black area under tail; white stripe along posterior portion of wing *essentially confined to secondary feathers*; *bill bluish with black tip*; iris yellow. Female: Head, neck, and breast brown; white area about base of bill; below dull white; wing-stripe as in male.

On fresh or salt water, chiefly along the coast in winter. C. V. to Yosemite region.

BARROW'S GOLDEN-EYE (*Bucephala islandica*): 21-23 in. *Head glossy black with purplish iridescence*; *white triangular or crescent-shaped spot between eye and bill*; back of neck white; middle of back and tail black;



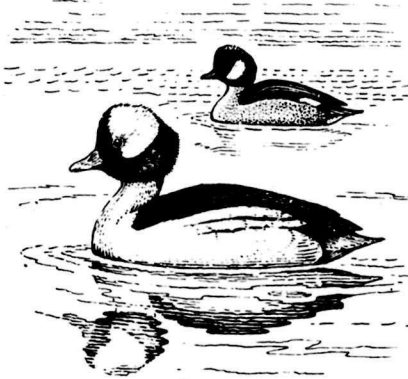
large amount of white in wing seen both when wing extended and closed; white of closed wing crossed by black bar; row of white spots on black scapulars; below white; bill blackish; iris yellow. Female: Head brown; white collar; remaining upper parts generally gray; white patch in wing.

Frequents small lakes in timbered areas of higher mountains in summer; in winter chiefly in coastal waters. S. V. to Sierra. In Yosemite region recorded as nesting at Smedberg Lake, 9,223 feet, and at Table Lake, 7,000 feet; one record for Pleasant Valley.

BUFFLE-HEAD DUCK (*Bucephala albeola*): 13-15 in. Fluffy, black

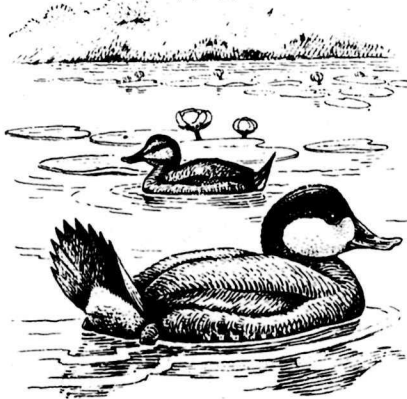
BUFFLE-HEAD DUCK

13-15



RUDDY DUCK

14-17



head crossed just back of eye by large white patch reaching from eye to eye over crown; upper neck and under parts white; extensive white patch in wing; bill bluish-gray. Female: Upper parts dark gray including head; an elongate, white area on side of head; white patch in open wing. In flight may give deep guttural notes; wings vibrate rapidly; appears stocky with large head; takes off heavily, leaving wake behind. Nests in tree cavities.

Frequents bays and saltwater sloughs and, interiorly, fresh and alkaline lakes and ponds. C. V. to Yosemite region.

HARLEQUIN DUCK (*Histrionicus histrionicus*): 15-17 in. General coloration dark with slaty blue, appears nearly black at a distance; conspicuous white markings on head and neck; long white crescent in front of eye, extending well back over eye; several white marks on side of face; narrow white neck-ring; white bar in front of bend of wing; flanks reddish-brown. Female: Dark brown with two or three white patches on side of head, one or two in front of eye, and one in ear region; no white patch in wing.

Frequents swift-flowing streams in summer and rough water of the exposed coast in winter. Uncommon R. Breeds on the western slope of the central Sierra. Breeding record for the Merced River in Yosemite Valley.

RUDDY DUCK (*Oxyura jamaicensis*): 14-17 in. Predominantly rusty red in summer; top of head black; cheeks and chin white; bluish, shovel-shaped bill; tail feathers stiff and pointed, often held erect; white area under tail; under parts silvery with dusky markings. Female: Above, grayish-brown; below whitish; top of head dark brown, sides of head whitish broken by brown line from bill through eye; bill dusky. Male in winter: Similar to female but with blue bill and white cheek-patch. In flight small, with thick neck and flat head. Dives frequently.

Occurs principally on fresh water. C. V. to Yosemite region.

HOODED MERGANSER (*Lophodytes cucullatus*): 16-19 in. Head, neck, and anterior part of back black; *broad white bar from behind eye to near rear margin of head*; white patch extends into fan-shaped area when crest elevated; breast white; two black bars in front of wing; *flanks reddish-brown*; wings with white area, barred with black; iris yellow. Female: Dark head and neck; pale reddish-brown crest; white patch in wing. Entire body held level in flight. Nests in tree hollows.

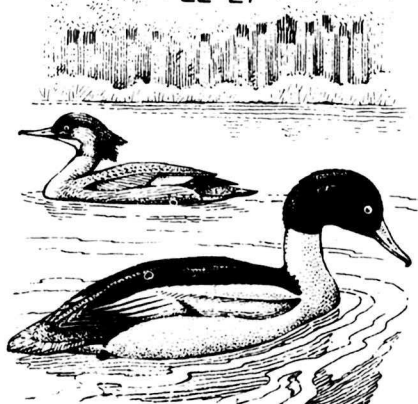
Frequents ponds and slowly flowing streams bordered by willows; occurs on sloughs in marshlands. Several winter and spring records for Yosemite.

COMMON MERGANSER (*Mergus merganser*): 22-27 in. Head and upper neck greenish-black; hind-neck inconspicuously crested; upper back black; lower back and tail gray; neck and under parts white, latter tinged with salmon; *long, narrow, red, serrated, hooked bill*; feet and iris red. Female and immature: *Crest usually conspicuous*; throat white; head and upper neck orange-brown; back and tail gray; white patch in black wing; below white. In flight entire body held horizontally.

W. V. coastwise and interiorly. Breeds on forest-bordered lakes and streams in the Sierra Nevada. In Yosemite breeding records for Hetch Hetchy Reservoir and Yosemite Valley; C. V. in winter.

COMMON MERGANSER

22-27



HAWK-LIKE BIRDS: Order Falconiformes

NEW-WORLD VULTURES: Family Cathartidae

TURKEY VULTURE (*Cathartes aura*): 2-2½ ft. Upper parts blackish; *under parts blackish-brown*; *under side of wings in area of primary and secondary feathers ash-gray*; red, bare head; bill whitish; feet flesh-colored. Voice a low hiss, seldom uttered. Carrion feeder. Nests in cavities in cliffs or in hollow trees.

Uncommon R. in the Sierra Nevada, moving to foothills in winter. Has been observed as high as 10,000 feet on Mount Dana but more commonly seen at lower elevations.

KITES, HAWKS, AND EAGLES: Family Accipitridae

GOSHAWK (*Accipiter gentilis*): 20-26 in. Above bluish-gray; top of head blackish; white line over eye; below white, streaked and waved with dusky; at a distance *under parts appear light gray*; black bars across tail; tip of tail edged with white. Female: Larger than male. Immature: Above brown; below streaked with brown on whitish; tail with dark crossbars and broadly tipped with white.

Nests from 5,000 to 9,000 feet in well-forested mountains. In summer associated with coniferous forests but when in the lowlands usually frequents broken woodland. R. in the Sierra Nevada but often moves to lower elevations in winter. Recorded as nesting near Yosemite Valley.

COOPER'S HAWK (*Accipiter cooperi*): 14-20 in. *Above gray or soft brown, darker on crown and nape*; white on nape feathers obscured by brown unless hawk bends head downward or raises feathers; *long rounded tail* with crossbars of dark brown; tail feathers tipped with white; wings relatively short and broad; *under parts white with closely set crossbars of red-*

dish-brown and longitudinal black streaks. Female: Resembles male but is larger. Immature: Above brown; below white coarsely streaked with brown. Feeds on small mammals and birds.

Frequents wooded streams and canyons both in mountains and lowlands. Permanent R. Nests in Yosemite region, including Yosemite Valley.

SHARP-SHINNED HAWK (*Accipiter striatus*): 10-15 in. Resembles Cooper's hawk but tail *square-tipped*, not rounded as in Cooper's hawk. Female: Larger than male, resembling in size a male Cooper's hawk from which it is distinguished with difficulty. Feeds largely on other birds.

COOPER'S HAWK

14-20



RED-TAILED HAWK

19-24



Frequents deciduous or coniferous woodland in summer. Widespread W.V. at lower elevations. R. in Yosemite region, occasionally nesting in Yosemite Valley.

RED-TAILED HAWK (*Buteo jamaicensis*): 19-24 in. Upper parts dark brown; throat heavily streaked with brown; breast whitish with indistinct brownish band; belly tawny, marked with dark brown; under parts of wings without light area anteriorly, differing in this respect from Swainson's hawk; *tail rusty*. Female: Larger than male. Immature: Similar to adult but tail brownish-gray and barred with dusky. Often seen soaring. Feeds largely on gophers, ground squirrels, and other small mammals.

Widespread R. occurring from the lowlands to the mountains. Most common large soaring hawk in the Yosemite region; observed as high as 12,000 feet, at the summit of Parsons Peak.

SWAINSON'S HAWK (*Buteo swainsoni*): 19-22 in. Light phase: Above dark brown; chin and throat whitish; breast often with broad band of reddish-brown; belly white; *under parts of wings buff anteriorly; from above, tail gray, often with whitish base*. Dark phase: General coloration dark brown, almost black, lighter on flight feathers and some reddish-brown on under parts; no rust in tail as in adult black phase of redtail. Female: Larger than male. In spring and fall migration may be seen in flocks, differing thus from most other hawks.

Frequents dry plains and woodland of foothills and valleys; occasionally in high mountains. An occasional S. V. to high elevations in Yosemite region.

GOLDEN EAGLE (*Aquila chrysaetos*): 30-40 in. Largest land bird of Yosemite region. Generally dark brown; head and neck tinged with golden brown; when seen in flight from below, nearly uniformly dark brown; white at base of tail; tarsi fully feathered; feet greenish-yellow; bill bluish. Fe-

male: Larger than male. Immature: Ash-gray patch toward wingtip; tail white with tip broadly bordered with black. Feeds commonly on ground squirrels and rabbits.

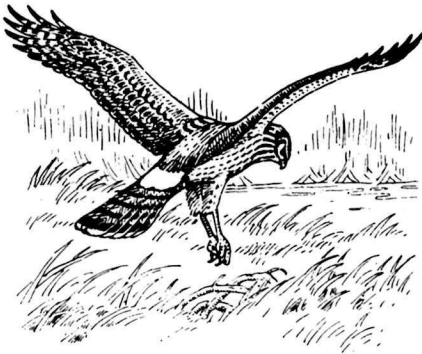
R. throughout the Sierra Nevada. Commonly breeds in the Upper Sonoran and Transition life-zones but occasionally to above timberline. Often seen soaring near rim of Yosemite Valley.

**BALD EAGLE (Haliaeetus leucocephalus):* 30-36 in. *Head and tail white; remaining plumage dark brown.* Immature entirely dusky brown except sometimes for touches of whitish on wing lining (not at bases of pri-

maries as in immature golden eagle) and, when approaching adult plumage, whitish at base of tail feathers; no well-defined dark band at tip of tail. To a considerable extent scavenging in habit, feeding on carrion and dead fish but also captures rabbits and rodents. Occasionally frightens the osprey into dropping its fish prey which is then taken by the eagle.

Frequents ocean shores, lake margins, and rivers for foraging and nesting but ranges widely over diverse terrain. Most likely to be seen at lower elevations in the Yosemite region. Reported as nesting at Bower Cave, Mariposa County, and seen in Merced River Canyon, outside the park.

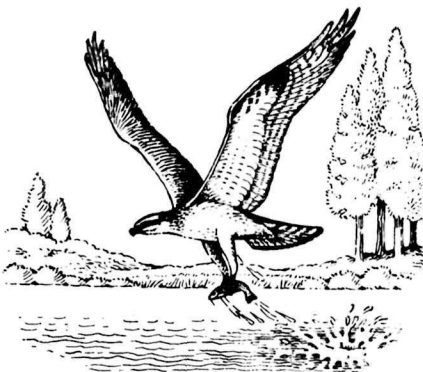
MARSH HAWK ♀
18-24



MARSH HAWK (Circus cyaneus): 18-24 in. Above, bluish-gray; *rump white; tail long, crossed by black bars; tips of wings black; below white with scattered small reddish-brown spots; neck and breast light bluish-gray.* Female: Larger than male; above, dark brown; rump white; below tawny; neck and breast streaked; tail barred; legs and toes orange-yellow. Immature: Similar to female but darker; rich dark brown above and on sides of neck and cheeks; below dark cinnamon-rufous, streaked on breast. Nests on the ground.

Frequents salt and freshwater marshes and grassland from the lowlands to the Canadian life-zone; chiefly W. V. C. V. to Yosemite region.

OSPREY
21-24



OSPREYS: Family Pandionidae

OSPREY (Pandion haliaetus): 21-24 in. *Entirely dark brown above; below generally white; white over eye and on chin; from distance head may appear predominantly white; white of upper throat and breast broken by brown streaks; underside of wing largely whitish with dusky patch near front edge toward tip; legs long, covered with white feathers for much of their length; wings long and slender.* Female: Larger than male. Frequents bodies of water. Captures fish by diving feet first to the surface of the water,

**PRAIRIE
FALCON**

17-20



DUCK HAWK

15-20



SPARROW HAWK

9-12



often from considerable heights. Nest of sticks on ground or a dead tree.

Summer R., principally along the coast and on larger lakes. C. V. to Yosemite region; most likely to be seen at Hetch Hetchy and Lake Eleanor.

FALCONS: Family Falconidae

PRAIRIE FALCON (*Falco mexicanus*): 17-20 in. Above, grayish-brown; inconspicuous white line over eye; below, white with streaks and spots of brown; dark line on cheek; throat white; dark patch at base of wing contrasting with generally light-colored under parts, seen in flight. Female: Larger than male. Immature: Generally gray.

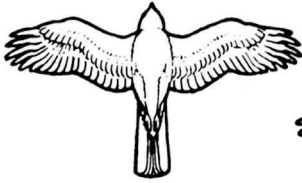
Widely distributed R. but nowhere common. Frequents dry, open terrain and rocky ledges. Nests at lower elevations but wanders to above timberline in summer. C. V. to Yosemite region; observed at Yosemite Valley and in the high Sierra.

DUCK HAWK (*Falco peregrinus*): 15-20 in. Head dark above and at sides; throat white or buffy bordered on each side with black bar; remaining upper parts slaty blue to brownish-black; rest of under parts buffy or whitish crossed with narrow black bars. Female: Larger than male; under parts strongly marked with dark brown bars on light brown. Immature: Below profusely streaked with black on buff. Feeds on other birds caught in flight.

Frequents cliffs. Widespread R. except in southeastern deserts. C. V. in Yosemite region. Often seen near brink of Upper Yosemite Fall.

SPARROW HAWK (*Falco sparverius*): 9-12 in. Top of head and back reddish-brown; back crossbarred with black; tail rusty with broad black band at tip; tip of tail edged with buffy; forward part of wings (when folded) and band bordering top of head bluish-gray; two vertical black bars on side of face; below buffy with black spots on sides and belly. Female: Resembles

- VULTURES, HAWKS, and EAGLES -



BIRD HAWKS
(Short wings)



BUZZARD HAWKS and EAGLES
(Broad wings)



FALCONS
(Slender, pointed wings)

GENERALIZED FLIGHT FORM
OF CERTAIN BIRDS OF PREY -



CALIFORNIA
CONDOR



BALD EAGLE (Young)



BALD EAGLE
(Adult)



TURKEY
VULTURE



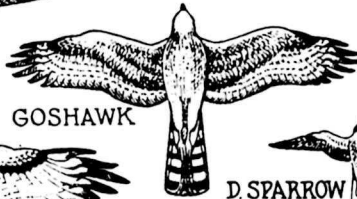
GOLDEN EAGLE (Young)



GOLDEN
EAGLE
(Adult)



WESTERN
RED-TAIL



GOSHAWK



MARSH
HAWK
(Female)



FERRUGINOUS
ROUGH-LEG



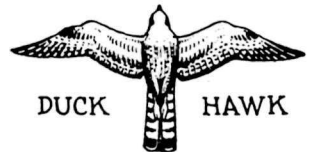
D. SPARROW HAWK PIGEON HAWK



COOPER'S HAWK



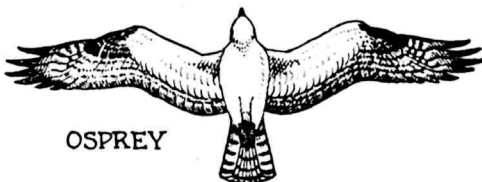
SWAINSON'S HAWK



DUCK HAWK



SHARP-SHINNED HAWK



OSPREY



PRAIRIE FALCON

male except larger, no slate on wings, and under parts streaked heavily with dark brown; rump and tail crossed by black bars. Immature: Resembles female. May be seen poised in the air on rapidly beating wings. Feeds on small rodents and insects which it catches on the ground.

Frequents open country such as plains, deserts, fields, and unforested hillsides. Uses dead trees, rocks, fence posts, telephone poles and wires as perches. R. at lower elevations; often ranges higher in mountains in summer. R. in Yosemite region where in summer it ranges as high as the Hudsonian life-zone. To be seen about meadows in Yosemite Valley.

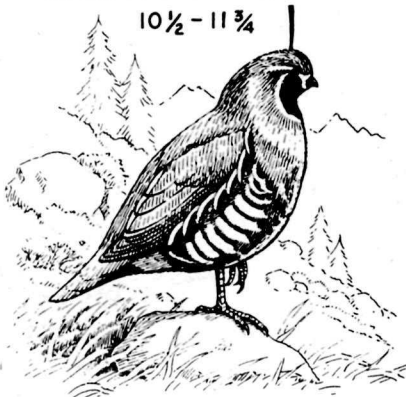
SOOTY GROUSE

16-19



MOUNTAIN QUAIL

10½ - 11¾



FOWL-LIKE BIRDS: Order Galliformes

GROUSE: Family Tetraonidae

SOOTY GROUSE (*Dendragapus fuliginosus*): 16-19 in. Generally dark gray; wings relatively short and broad; under parts gray; tail blackish, tipped with light gray band; bare skin above and below eye yellow to orange; legs feathered. Female: Above brown mottled with black and buff; breast brown, barred with buff; belly whitish. Song a low-pitched series of a half-dozen hoots, becoming fainter toward the end. A single note like *broop* or *boont*, of ventriloquial quality. Whirring sound produced in flight. Feeds largely on fir needles. Nests on ground.

R. in coniferous forests (chiefly of Douglas-fir and white and red firs) of the Sierra up to an elevation of 11,000 feet. Fairly common R. in Yosemite region in Canadian and upper Transition life-zones; ranges into the Hudsonian zone in late summer.

SAGE GROUSE (*Centrocercus urophasianus*): 22-30 in. Above variegated brown, black, gray, and buff; below whitish, marked on throat and breast with black; belly black; tail long with stiff, pointed feathers; bill and feet blackish. Female: Smaller, with shorter tail. Resembles small turkey. Whirring sound produced in flight.

Inhabits sagebrush flats, depending upon this plant for food. C. V. to Yosemite region east of Sierran crest. Reported from near Granite Lake and Mount Conness.

QUAIL AND PHEASANTS: Family Phasianidae

MOUNTAIN QUAIL (*Oreortyx picta*): 10½-11¾ in. Above brownish-gray tending toward slaty anteriorly; throat chestnut, bordered on sides of neck with white; breast slaty; sides reddish-brown broken by white and black patches; plume long and slender, tipping toward back or held erect. Imma-

ture: Chiefly brown; sides of throat black; plume short. Call a single, strong, mellow, whistled *woork*, given at intervals.

R. on mountain slopes covered with brush (manzanita, chinquapin, snow-bush, etc.) and broken forest. In higher mountains migrates on foot to lower elevations in winter. In Yosemite, R. in the Canadian and Transition life-zones. Occurs with the California quail in the lower Transition zone, as in Yosemite Valley.

CALIFORNIA QUAIL (*Lophortyx californica*): 9½-11 in. Above grayish-brown; forehead tawny; top of head brown; feathers of belly edged with

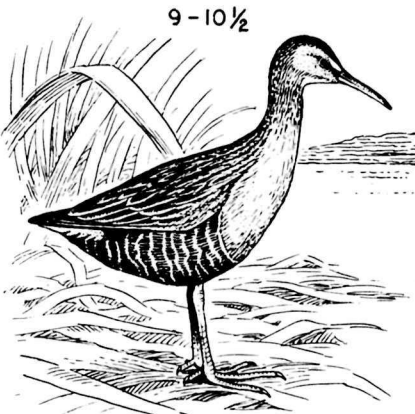
black giving scaled appearance; belly buff, with rusty patch in middle; sides brown, with whitish streaks; bib of black with white border; plume black tipping forward toward bill. Female: Lacks black bib and is generally duller; plume smaller. California state bird. As with mountain quail, birds gather in covies.

Favors brushland broken by tracts of grass or weedy ground. Found at lower elevations in the Yosemite region, in the Upper Sonoran life-zone and occasionally in the lower Transition life-zone, as in Yosemite Valley.

CALIFORNIA QUAIL



VIRGINIA RAIL



CRANE-LIKE BIRDS:
Order Gruiformes

RAILS: Family Rallidae

VIRGINIA RAIL (*Rallus limicola*): 9-10½ in. Above dark brown; sides of head gray; *white line over eye reaches bill; breast cinnamon*; posterior portion of belly black crossed by lines of white; wings short; bill long, slightly curved near tip, brownish. Immature: Dull black above; chin and throat white; remaining under parts black and white. When walking jerks head and neck. Secretive.

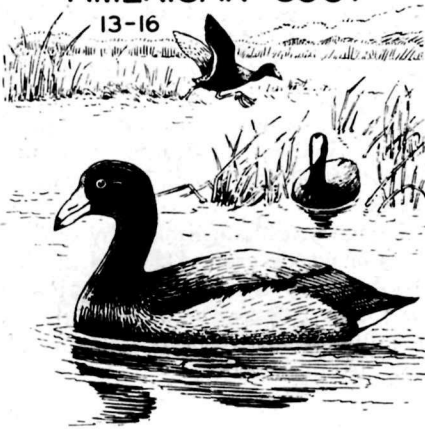
Frequents freshwater marshes and sometimes salt marshes. C. V. to Yosemite region in summer. Has been seen in Yosemite Valley.

AMERICAN COOT (*Fulica americana*): 13-16 in. *Head and neck black, setting off whitish bill; bill with dark spots at tip; most of rest of body slate-gray; white area under tail; iris red; feet greenish with lobed toes.* Immature: Below whitish; no dark spots on bill; iris brown. Very young birds black with orange-red bill and orange on throat, head, and back. Moves head back and forth when swimming.

R. on lakes and marshes. In winter withdraws from higher altitudes to lowlands. C. V. to Yosemite region; on Merced River, Mirror Lake, and high Sierran lakes.

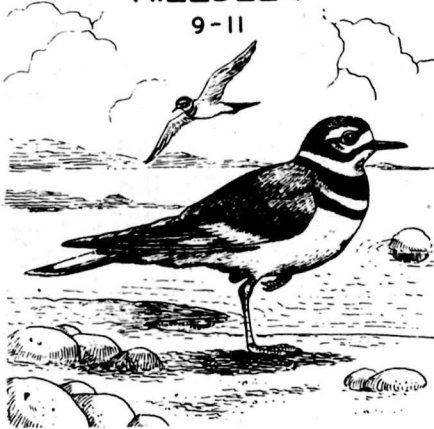
AMERICAN COOT

13-16



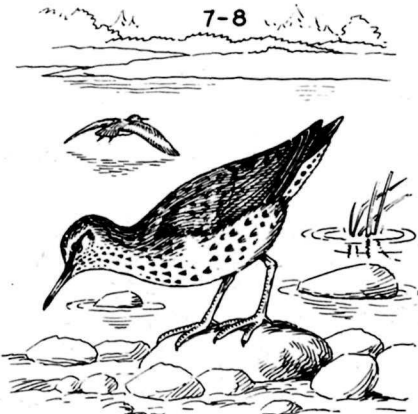
KILLDEER

9-11



SPOTTED SANDPIPER

7-8



PLOVER-LIKE BIRDS:
Order Charadriiformes

PLOVERS: Family Charadriidae

KILLDEER (*Oxyechus vociferus*): 9-11 in. Above brown; rump and base of tail feathers rusty; below white; *two black bands on chest; white band around neck*; white thumb-marks on tail feathers diminishing in size toward center. Runs along the ground as though balancing a package on its head. Immature: Generally duller with more rust above. Voice a shrill, high-pitched *kill-dee, kill-dee*, accent on last syllable; may be heard calling late at night. Eggs often laid on bare ground in gravelly or sandy place where difficult to see because of their resemblance to the background.

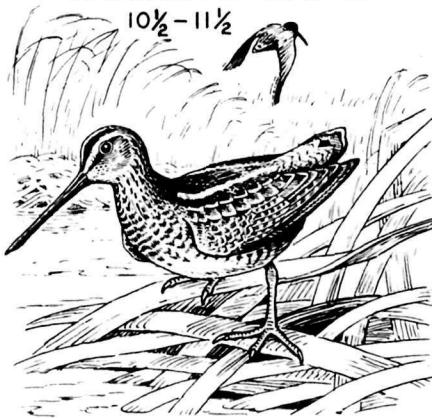
Frequents meadows, cultivated lands, and shores of lakes, ponds, and streams. Widespread, abundant R., withdrawing from higher elevations and more northerly areas in winter. S. V. to wet meadows in Yosemite region such as Tuolumne Meadows and parts of Yosemite Valley.

SNIPE, SANDPIPERS, ETC.:
Family Scolopacidae

SPOTTED SANDPIPER (*Actitis macularia*): 7-8 in. Above brown; faint white line over eye; line of white spots in wing when extended; tail short, brown, outer feathers barred with brown and white; *below white with round dusky spots*; spots absent in immature birds and in adults in winter; bill orange-yellow, slightly curved downward. Bobs and teeters. In flight wings curve downward in shallow arc and wingtips vibrate. Voice *peet weet*, the first note the higher. Eggs often laid on bare gravelly or sandy ground.

Frequents rocky ocean shores in winter. Summers in mountains, frequenting sand- and gravelbars along streams and lake shores. S. V. to Yosemite region. Seen along the Merced River in Yosemite Valley (where it nests) or in Tuolumne Meadows.

WILSON'S SNIPE



WILSON'S SNIPE (*Capella delicata*): 10½-11½ in. Plumage generally brown; crown crossed by black and white stripes; brown line from bill to eye; long, slender, straight bill; tail reddish-brown with black bars and whitish tip; belly whitish; breast light brown marked with darker brown spots. Seldom seen away from cover, where it is well concealed.

Breeds chiefly east of the Sierra and to the north. C. V. to Yosemite region, having been observed in Yosemite Valley and on the Tuolumne River at 9,000 feet.

AVOCETS AND STILTS:

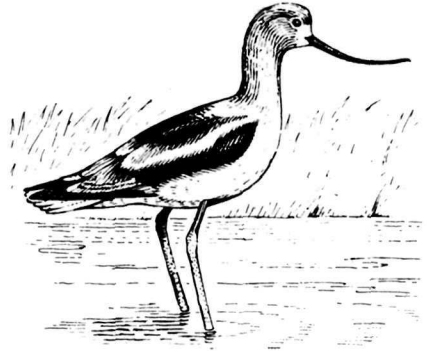
Family Recurvirostridae

AMERICAN AVOCET (*Recurvirostra americana*): 16-20 in. Head, neck, and breast washed with light cinnamon-brown; eye-ring and base of bill white; white patch down middle of back bordered on each side with black, black areas in turn bordered with broad white stripes; belly white; bill long, upturned; iris red. Adult in winter and immature: Head, neck, and chest grayish.

Frequents expanses of shallow water as in marsh or grazing lands; inhabits coastal shores. C. V. to Yosemite region. A single record for Yosemite Valley and one for Tenaya Lake. Often seen at Mono Lake in summer.

AMERICAN AVOCET

16-20



PHALAROPES:

Family Phalaropodidae

WILSON'S PHALAROPE (*Steganopus tricolor*): 8½-10 in. Female: Top of head, stripe down back of neck, and upper back ash-gray; black stripe back of eye extends down side of neck and blends with rich chestnut on lower neck; base of tail and under parts white; feet black; no light-colored wing stripe. Male: Similar to female but duller; top of head, wings, and back brown; sides of neck dull reddish-brown. Adult and immature in fall: Above ash-gray; white line over eye; under parts white; line back of eye, dusky.

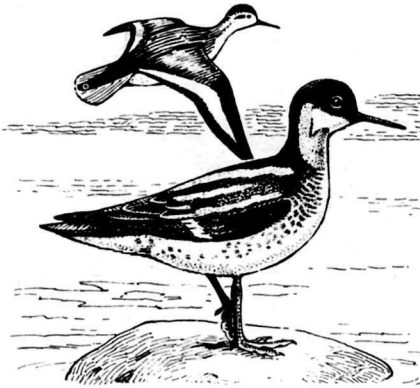
The phalaropes show a reversal of the usual situation among birds. The female is the brighter and is the aggressor in courtship. The male incubates the eggs and cares for the young.

Frequents marshes and wet meadows where there is open shallow water. C. V. to Yosemite region where it has been observed in Yosemite Valley. Common S. V. on Mono Lake.

NORTHERN PHALAROPE (*Lobipes lobatus*): 7-8 in. Female: Back, hind-neck, and head slaty or lead-colored; back streaked with rusty; sides of neck and upper breast rufous; eyelids, chin, throat, and remaining under parts white; white bar in extended

NORTHERN PHALAROPE

7-8



wing. Male: Resembles female but less reddish-brown and back marked with more black and white. Adult in winter and immature: Upper parts streaked with black and white; top of head and behind eye dusky; white line over eye.

Often seen in flocks. Head is moved back and forth when swimming. As with other phalaropes, a whirling motion of the body is often employed in feeding. This may stir up small aquatic animals that are common in their diet.

Most common along the coast but also on sloughs and ponds inland. C. V. to Yosemite region; observed in Yosemite Valley. Large numbers in spring and late summer on Mono Lake.

RING-BILLED GULL

18-20



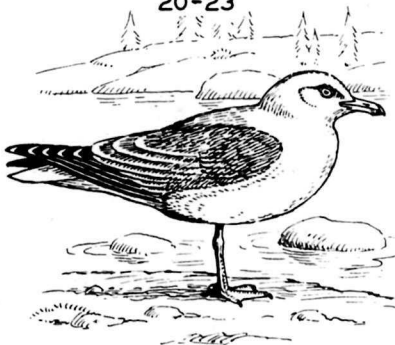
GULLS AND TERNS:
Family Laridae

RING-BILLED GULL (Larus delawarensis): 18-20 in. Resembles California gull, but *bill yellow encircled by black band near tip*, back lighter gray, feet yellow, and *iris light yellow*. Immature: Differs from California gull in having narrower and better defined dark band at tip of tail.

C. V. on interior bodies of water. Occasionally seen in Yosemite Valley.

CALIFORNIA GULL

20-23



CALIFORNIA GULL (Larus californicus): 20-23 in. Head, neck, tail, and under parts white; back gray; primaries black, tipped with white; a large white spot inside tip of second primary and sometimes also first; *bill pale yellow with red spot preceded by black spot near end of lower mandible*; feet greenish-gray; *iris dark brown*. In a flock of gulls, many may be seen that are mottled with grayish-brown and whitish, with blackish primaries and black at the tip of the flesh-colored bill; others approach more nearly the plumage of the adults. Such birds are immatures, 1 to 3 years old.

Along the coast and about inland bodies of water. C. V. to the Yosemite region. Observed on Tenaya Lake (8,141 feet) and Young Lake (10,000 feet) and on other lakes of the high Sierra. Abundant at Mono Lake.

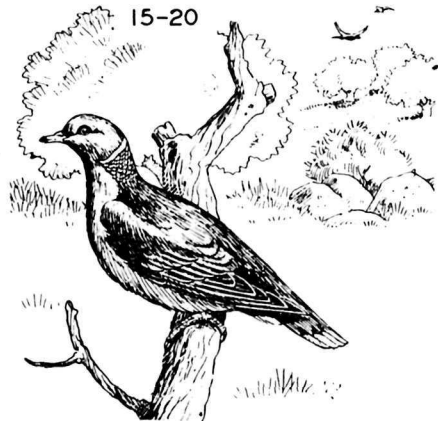
PIGEON-LIKE BIRDS:
Order Columbiformes

PIGEONS AND DOVES:
Family Columbidae

BAND-TAILED PIGEON (*Columba fasciata*): 15-20 in. Above bluish-gray; back of neck has dark green area, margined anteriorly with white band; lower abdomen whitish; breast and upper abdomen pinkish-brown; *dusky band across tail; resembles domestic pigeon in size and shape.* Clapping sound made by wings when bird takes flight. Travels in flocks. Voice a deep, mellow *too whoo*. Feeds on acorns, berries, etc.

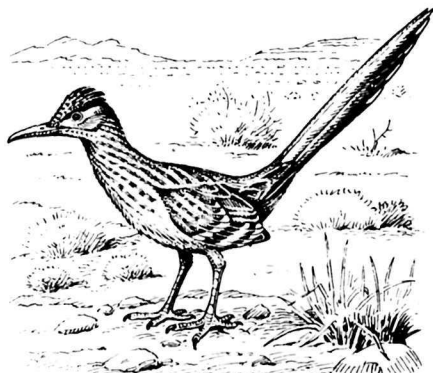
BAND-TAILED PIGEON

15-20



CALIF. ROAD-RUNNER

20-24



Frequents oak woods, often where mixed with conifers. Permanent R. largely west of the Sierran divides. Considerable shifting about of flocks in winter. Occurs in mountains (Transition life-zone) in summer and in or near foothills (Upper Sonoran life-zone) in winter. S. V. to the Yosemite region but some birds to be seen in Yosemite Valley almost any season.

MOURNING DOVE (*Zenaidura macroura*): 11-13 in. Above soft olive-brown; wings marked with oval black spots; top of head gray; below pinkish-brown; central tail feathers long, outer ones tipped with white; *tail long and pointed.* Whistling noise made by wings when bird takes flight. Voice a plaintive, mellow *coo-ah, coo, coo*, the second syllable higher than the rest.

Frequents chiefly open deciduous woodland or grassland and chaparral but also ranges onto the open ground of plains and deserts. R. in the Sierran foothills and San Joaquin Valley. C. V. to Yosemite region, in Yosemite Valley and at higher elevations to 10,300 feet, as near Vogelsang Lake.

CUCKOO-LIKE BIRDS:
Order Cuculiformes

**CUCKOOS, ROAD-RUNNERS,
ETC.:** Family Cuculidae

CALIFORNIA ROAD-RUNNER (*Geococcyx californianus*): 20-24 in. Above dusky brown, streaked with tawny and rusty; crested; long tail with outer feathers tipped with white; in flight white crescent seen in short rounded wings; two toes in front and two behind producing X-shaped footprint. *Usually runs rather than flies.* Song resembles the whining of a dog; alarm note a guttural, rattling *brrrr*.

Found chiefly in the Lower and Upper Sonoran life-zones, most commonly in the former. Frequents open ground interspersed with brush and scattered larger bushes or small trees. Sparse R. in foothills near western edge of park.

SCREECH OWL

8-10



HORNED OWL

18-25



PYGMY OWL

7-7½



OWLS: Order Strigiformes

HORNED OWLS, ETC.:

Family Strigidae

SCREECH OWL (Otus asio): 8-10 in. Above gray, finely streaked with black; below lighter, streaked and barred with black; "ear" tufts at sides of head, wanting in immature in summer; large yellow eyes. Song a low-pitched whistle with notes near one pitch; notes stacatto, beginning slowly, accelerating, and dropping slightly in pitch. Nests in tree cavities, often those dug by large woodpeckers.

Frequents oak woodland, broken coniferous forest, and willow and cottonwood stream-borders. R. below about 5,000 feet elevation in the western part of the Yosemite region. Found in Yosemite Valley, especially among canyon live oaks.

HORNED OWL (Bubo virginianus): 18-25 in. Above mottled with gray and brown; throat white; rest of under parts with narrow wavy black bars on whitish; horn-like "ear" tufts; large yellow eyes. Voice a deep, resonant, low-pitched *whoop too-whoop whoop whoop*, all essentially on one pitch. The female has a higher pitched voice of more variable pattern.

R. in a variety of habitats from wooded areas to desert cliffs, occurring from sea level to timberline. Widely distributed in the Yosemite region, largely below the Hudsonian life-zone but occasionally in this zone. Observed at Ten Lakes and at 10,700 feet on the Lyell Fork.

PYGMY OWL (Glaucidium gnoma): 7-7½ in. Above dark, brownish-gray with whitish spots, most abundant on head; throat white; below white, streaked with fine black lines; tail long for owl, barred with white, projecting back at angle when bird is perched; no "ear" tufts; eyes yellow. Voice a slow series of mellow whistled notes often on one pitch, occasionally interrupted

with a rapid series—*whoot, whoot, whoot, too-too-too-too-too-too, whoot, whoot*, etc. May be heard in the daytime. Often nests in woodpecker holes. Most active in early morning, late afternoon, and at dusk. Smallest owl in Yosemite.

Frequents open coniferous and deciduous woods chiefly in the Transition and occasionally in the Canadian life-zone in the mountains where it is a permanent R. Common in the Yosemite region.

SPOTTED OWL (*Strix occidentalis*): 18-19 in. Upper parts rich brown, spotted with white; eye discs light brown, tinged with yellow, bordered with dark brown; no "ear" tufts; under parts yellow brown, heavily barred and spotted with white; tail barred and tipped with whitish; eyes dark. Call resembles the barking of a dog.

R. in dense forests of the Transition life-zone of the Sierra to about 7,000 feet. Has been observed in Yosemite Valley.

GREAT GRAY OWL (*Strix nebulosa*): 24-33 in. Large, light gray facial discs marked faintly with dusky concentric rings; eyes yellow; no "ear" tufts; above dark brown with light gray mottling; under parts light gray streaked lengthwise with dark brown. Voice a deep reverberating *whoo* given at irregular intervals. Yosemite nesting records near Glacier Point and at Crane Flat. Largest owl in Yosemite region.

R. with some wandering in winter. Chiefly in coniferous forests of the Sierra Nevada from Madera County northward. Probably permanent R. in Yosemite region where it has been observed in fir and pine woods in the Canadian zone.

AMERICAN LONG-EARED OWL (*Asio wilsonianus*): 13-16 in. Above mottled dark brown, buffy, and gray; below yellowish-brown and white with

streaks and bars of dark brown; cat-like face; brown patch on tawny lining of wing near tip seen in flight; long "ear" tufts immediately over eyes. Song a low, pigeon-like *whooo*, given singly, often with lengthy intervals. Cat-like meowing notes may be heard if the birds are disturbed at the nest. Often uses abandoned crow or magpie nests for nesting.

Frequents thick foliage, particularly willow thickets, groves of aspen or cottonwoods, or dense stands of young conifers. R. in the Yosemite region below the Canadian life-zone. Observed in Yosemite Valley and at Swamp Lake.

AM. LONG-EARED OWL

13-16



SHORT-EARED OWL

13-17



SHORT-EARED OWL (*Asio flammeus*): 13-17 in. Above mottled yellowish-brown and dark brown, streaked on head and neck; below buffy streaked with dark brown, conspicuously so on chin and breast; *buffy patches on upper surface of wings*; under surfaces of wings buffy with dark mark toward tip; facial discs dark around eyes, fading into gray; *inconspicuous "ear" tufts*. Forages in the daytime.

Usually occurs in marshy land and open fields. Rare C. V. to Yosemite region. Has been seen at 11,000 feet on Mount Clark.

SAW-WHET OWL (*Aegolius acadicus*): 7-8½ in. Above brown, spotted with white; "ear" tufts absent; top of head and neck with fine white streaks on brown; white over eyes; under parts with strong, reddish-brown bars on whitish; white spots on wing; tail inconspicuous, with white bars. Immature: Chocolate brown above; tawny below, with dark streaks; sooty face with white "eyebrows." Call a long series of staccato notes, near one pitch but varying in volume.

Frequents woodland and coniferous forests of the Transition and Canadian life-zones. Sparse R. in Yosemite region. Recorded as nesting in Yosemite Valley.

GOATSUCKER-LIKE BIRDS: Order Caprimulgiformes

GOATSUCKERS: Family Caprimulgidae

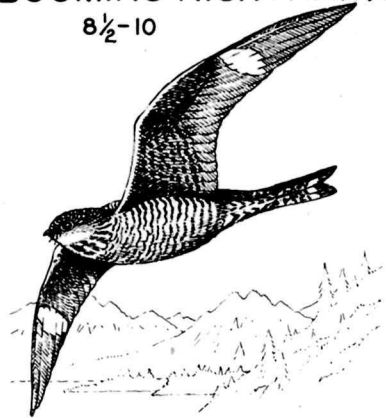
BOOMING NIGHTHAWK (*Chordeiles minor*): 8½-10 in. Above black, marked with gray and brown; *tail forked*; white band crosses outer tail feathers near tip, wanting in female; white across throat, buffy in female; *white band midway between tip and bend in long, slender wings*; under parts gray, crossbarred with dusky. Forages in the air usually at dusk, catching insects with its large, widely opened mouth. Flight erratic. Voice a

harsh, rasping *speeink*. May dive toward the ground with extended, fixed wings. At the bottom of the swoop the wings are bent suddenly downward and a startling sound, "whoof," is produced by the rush of air through the primary feathers. Eggs laid on bare ground.

Frequents open coniferous forests of high mountains in summer, usually where there is open rocky ground for nesting. S. V. in the Transition, Canadian, and Hudsonian life-zones in the Yosemite region. Seen chiefly in high mountain areas such as Tuolumne Meadows, at Merced and Vogelsang Lakes, and occasionally in Yosemite Valley.

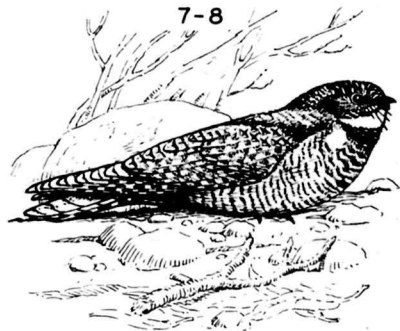
BOOMING NIGHTHAWK

8½-10



POOR-WILL

7-8



POOR-WILL (*Phalaenoptilus nuttalli*): 7-8 in. Grayish-brown, marked with black and silvery gray; darker below; *white band on throat bordered with black; white tips on outer tail feathers*; tail short, cut straight across; *no white wing-bars* seen in flight as in nighthawks; mouth large, bristled. Forages later and at a lower elevation than the booming nighthawk. Song a plaintive whistle, *poor-will*, the second note slurred, longer and lower than first.

Frequents rocky, gravelly terrain or bare soil, grown scatteringly to bushes and trees. Frequents the Lower Sonoran to the Transition life-zone, from San Joaquin Valley to Yosemite Valley. S.V. at lower elevations in Yosemite.

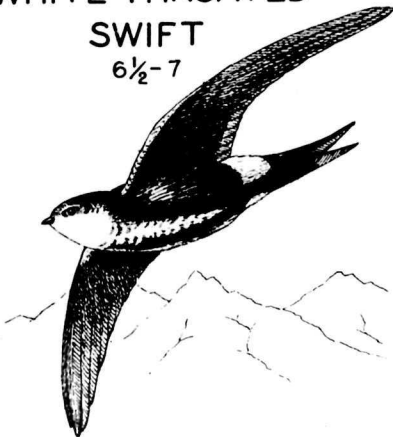
VAUX'S SWIFT

4½



WHITE-THROATED SWIFT

6½-7



**SWIFTS AND HUMMINGBIRDS:
Order Micropodiformes**

SWIFTS: Family Micropodidae

VAUX'S SWIFT (*Chaetura vauxi*): 4½ in. Above dark brown, lighter on rump and tail; throat and breast light gray; rest of under parts sooty; tail short, not forked. Flight strong, swift, erratic, consisting of glides with wings extended stiffly from body and distinctly bowed downward, alternating with rapid wingbeats. Nests in burned-out, hollow tree trunks, mostly redwoods.

In summer found along the coast from Santa Cruz Co. northward and occasionally in the Sierra. M. throughout, including Sierra. C. V. to Yosemite region. Recorded in Yosemite Valley.

BLACK SWIFT (*Nephoecetes niger*): 7 in. General coloration black; at close range small amount of white may be seen about face; undersides of wings may appear silvery at certain angles; slender curving wings; tail slightly forked. Voice a high-pitched twitter. Nests in cliffs near waterfalls or in sea-bluffs.

S. V., breeding in the Transition life-zone of the central coast of California, and the central and southern Sierra Nevada. Seen in Yosemite Valley and found nesting in Tenaya Canyon.

WHITE-THROATED SWIFT (*Aeronautes saxatalis*): 6½-7 in. *Chin, throat, breast, middle line of belly, and patches on flanks white*; flank patches show from above; rest of plumage essentially black; tail slightly forked; wings long and slender. In flight, one sees flashes of white on breast and rump. Song, a twittering series of descending notes resembling song of a canyon wren. A remarkably fast flier.

Frequents the vicinity of cliffs (often of granite) where it roosts and nests. Breeds chiefly in the Lower and Upper Sonoran life-zones and into the Transition zone. S. V. in the Yosemite region, usually near sheer cliffs. Common about Yosemite Valley.

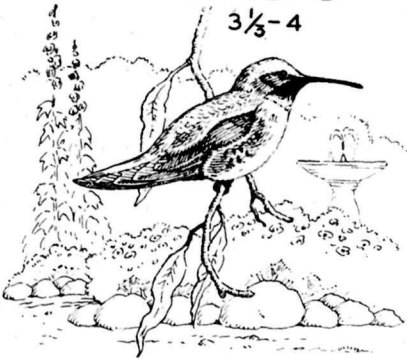
HUMMINGBIRDS:
Family Trochilidae

BLACK-CHINNED HUMMINGBIRD (*Archilochus alexandri*): $3\frac{1}{3}$ -4 in. Above green with bronze iridescence; *chin black*, bordered by iridescent violet band which, in turn, is bordered by *white collar*; below ash-gray, tinged chiefly on sides with dull green. Female: White thumb-marks on outer tail feathers; under parts, including throat, chiefly white; throat with faint-dark flecks.

Inhabits mountains, foothills, canyons, and gardens in lowlands during the summer. Nests chiefly in deciduous

**BLACK-CHINNED
HUMMINGBIRD**

$3\frac{1}{3}$ -4



ANNA'S HUMMINGBIRD

4



trees along stream bottoms in the Upper Sonoran life-zone. In Yosemite region, S. V. at lower elevations, higher in late summer. Observed at El Portal, Yosemite Valley, and Mono Lake.

ANNA'S HUMMINGBIRD (*Calypte anna*): 4 in. Above greenish; *forehead and throat iridescent crimson*; throat with elongated feathers on each side; under parts dusky with green tinge. Female: Throat usually flecked with crimson; white thumb-marks on tips of outer tail feathers. *Largest hummingbird of the region.*

Frequents broken chaparral and woodland. Breeds chiefly in the Upper Sonoran life-zone but widely distributed when not breeding. In the Yosemite region R. in the foothills and a S. V. to the Transition life-zone.

RUFIOUS HUMMINGBIRD (*Selasphorus rufus*): $3\frac{1}{2}$ -4 in. *Above rufous* with faint greenish tinge to head and sometimes back; throat iridescent coppery red or brilliant crimson bordered below with white band; below rich brown; rufous on sides. Female: Above green, tinged with rufous; throat sometimes with some red; faint rufous on sides; white thumb-marks on outer tail feathers.

M. chiefly in lowlands and foothills when moving north, and along the mountains when returning south. M. in the Yosemite region. Most likely to be seen at higher elevations in July and August when in southbound migration. Seen above 12,000 feet, Parsons Peak.

ALLEN'S HUMMINGBIRD (*Selasphorus sasin*): $3\frac{1}{2}$ in. *Back metallic green*; tail reddish-brown; throat coppery red; below rich brown except white on breast. Female: Essentially like female rufous hummingbird.

S. V. in Transition and Canadian life-zones of Sierra during postbreeding southward migration, when it ranges widely. C. V. to Yosemite region. Has been observed in Yosemite Valley and up to Badger Pass and Gin Flat.

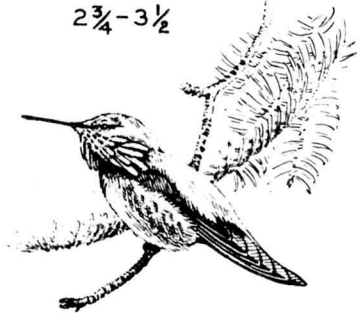
CALLIOPE HUMMINGBIRD

(*Stellula calliope*): 2¾-3½ in. Above metallic green; below white; sides greenish-brown; iridescent throat patch of reddish-purple feathers which, especially when bird is excited, radiate like spread fingers of one's hand. Female: Head and back green, washed with bronze; white throat, flecked with dusky; under parts washed with reddish-brown; tail feathers tipped with white. Smallest hummingbird in the United States.

S. V. in the Transition and Canadian life-zones in the Yosemite region. Seen from March to September in Yosemite Valley where it breeds.

CALLIOPE HUMMINGBIRD

2¾-3½



BELTED KINGFISHER

11-14



ROLLER-LIKE BIRDS:

Order Coraciiformes

KINGFISHERS: Family Alcedinidae

BELTED KINGFISHER (*Megasceryle alcyon*): 11-14 in. Above slaty blue; white band around neck; brownish-blue band across breast; prominent slaty blue crest; bill long and strong; below white; sides with gray and, sparingly, brown. Female: Chestnut band across belly and chestnut on sides. Call loud, harsh, rattling sound, often heard in flight. Nests in holes in earthen banks near water.

Attracted to both salt and fresh water where it feeds on small fishes. Frequents lakes, ponds, larger streams, and the seacoast. Widespread R. chiefly west of the deserts. Frequently seen along streams in the Yosemite region to an elevation of about 8,600 feet in Tuolumne Meadows. Nests in the banks of the Merced River in Yosemite Valley.

WOODPECKER-LIKE BIRDS:

Order Piciformes

WOODPECKERS: Family Picidae

RED-SHAFTED FLICKER (*Colaptes cafer*): 13-14 in. Crown brownish; back barred with black; throat bluish-gray; lining of wings and tail reddish-orange; large, black crescent on spotted breast; white spot on rump; male has red stripe on side of head. Omnivorous, feeding on insects, berries, and plant materials. Often seen on the ground searching for ants, grasshoppers, etc. Nests in self-made cavities in cottonwoods, willows, oaks, and conifers.

Widespread R. in Yosemite region. In late summer and fall may be seen nearly to timberline. Observed at 10,200 feet near Parsons Peak.

PILEATED WOODPECKER (*Dryocopus pileatus*): 17-18 in. Top of head including crest and bar on cheek bright

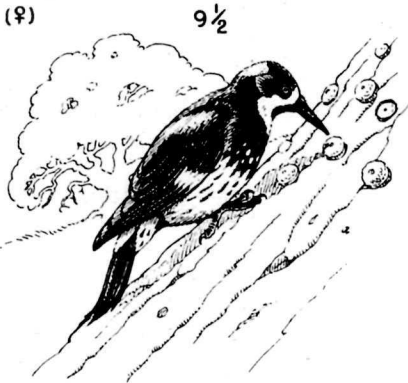
RED-SHAFTED FLICKER



red; red on head reduced and red cheek absent in female; white line above and below eye; long, wide stripe of white on neck; otherwise generally black except *white patches in wings, more extensive on under side*. Immature: Crest salmon. Feeds on beetle larvae, ants, and occasionally plant materials. Nests in dead conifers and large aspens.

Inhabits coniferous forests, especially of white and red firs and Douglas-fir. R. in the Yosemite region in the Transition and Canadian life-zones. To be seen in Yosemite Valley at all seasons of the year.

ACORN WOODPECKER



ACORN WOODPECKER (*Melanerpes formicivorus*): 9 1/2 in. Forehead white; crown red; sides of head and upper parts black; rump and wing patches white; breast with black band from which black streaks run down on belly. In flight, one sees flashes of black and white—white band in wings and white patch on rump. Female: Resembles male except has black area between white on forehead and red on head.

Frequents woodland areas chiefly in the Upper Sonoran life-zone but also in the Transition life-zone. Attracted to oak trees upon which it depends to a large extent for food and sites for nesting holes. Often stores acorns in dead trees, the bark of trees, fence posts, etc. Widespread common R. largely west of the Sierran divides, as at lower elevations in the Yosemite region. A conspicuous bird on the floor of Yosemite Valley where it is found associated with the black and canyon live oaks. Sometimes seen flycatching.

LEWIS'S WOODPECKER



LEWIS'S WOODPECKER (*Asyndesmus lewis*): 10 1/2-11 1/2 in. Above black, tinged with green; no white in wings; breast gray, approaching rose color on belly; gray collar on nape; dark red on forehead, sides of head, and chin. In flight resembles a crow.

Erratic occurrence as R. from year to year. Frequents broken deciduous woodland or coniferous forest. Breeds chiefly in the Upper Sonoran and Tran-

sition life-zones. Likely to be seen almost anywhere in the Yosemite region except in the denser forests. Has been seen at 9,500 feet above Ten Lakes and in Yosemite Valley.

YELLOW-BELLIED SAPSUCKER (*Sphyrapicus varius*): 8-9 in. Red-naped yellow-bellied sapsucker, subspecies *nuchalis*: Top of head bright red, encircled by narrow black line which separates *crimson line across nape* from red on crown; back and wings black, boldly marked with white; black tail with white markings down middle; throat crimson, red color reduced in female; black patch on breast,

solid on male, flecked with gray in female; under parts whitish, tinged with yellow; sides flecked or streaked with blackish; white patch at wing bend.

Sierra yellow-bellied sapsucker, subspecies *daggetti*: *Head, neck, and breast dark red*; back black, mottled with white; distinctive *white stripe along bend of wing*, prominent even on immature birds which lack reddish of head and breast; white stripe from bill to under eyes.

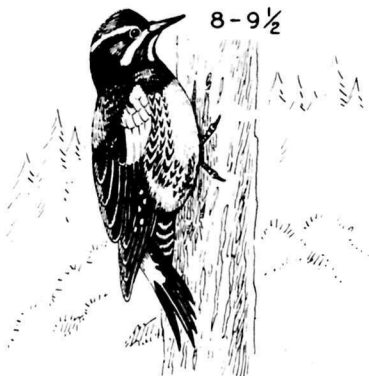
Sapsuckers circle trunks and large branches of trees with small holes when foraging for sap and the tender growth layer (cambium) beneath the bark. They are especially fond of willows.

The red-naped yellow-bellied sapsucker breeds in the northeastern part of California and winters in the south. Occasional W. V. to the Yosemite region. The Sierra yellow-bellied sapsucker breeds in northern California south through the Cascade-Sierran mountain system to certain of the higher mountains of southern California, dispersing in winter to lower elevations. It is R. in the Transition and Canadian life-zones in the Yosemite region. Seen in Yosemite Valley all year.

**YELLOW-BELLIED
SAPSUCKER**



**WILLIAMSON'S
SAPSUCKER**



WILLIAMSON'S SAPSUCKER (*Sphyrapicus thyroideus*): 8-9½ in. *Top of head, back, and tail black*; large white patch at wing bend; red streak on chin and throat; yellow area on belly below black chest; sides and under tail feathers with black marks on whitish; white streak under and one above eye; *rump white*. Female: Much different from male, at one time considered a different species. Wings, back, and sides streaked with whitish and black; head brown; throat streaked; black band on chest; belly yellow; rump white. Feeds principally on sap and cambium, obtained by drilling rows of small holes.

Breeds chiefly in the coniferous forests of the Canadian life-zone. Often associated with lodgepole pine and red fir. Inhabits high mountains in summer and slightly lower levels in winter.

R. in the Canadian and Hudsonian life-zones in the Yosemite region; occasional on the floor of Yosemite Valley in winter.

HAIRY WOODPECKER (*Dendrocopus villosus*): $8\frac{1}{2}$ - $10\frac{1}{2}$ in. Upper parts black with *broad white patch down middle of back*; white line above and one below eye; *outer tail feathers white, without bars*; nape with red stripe or crescent, red missing in female; feathers sometimes appear shaggy or roughened; resembles downy woodpecker but larger, and outer tail feathers unmarked.

Frequents broken or open mixed deciduous and coniferous forest, especially where there are dead snags. R. in foothills and mountains. Breeds chiefly in the Transition and Canadian life-zones. Widespread R. in the Yosemite region except in the Lower Sonoran life-zone and above timberline.

DOWNY WOODPECKER (*Dendrocopus pubescens*): 6-7 in. Resembles hairy woodpecker but much smaller and *white outer tail feathers barred inconspicuously with black*.

Frequents chiefly stream-border growth of willows, cottonwoods, and alders. In the Sierra Nevada it breeds most commonly in the Upper Sonoran and Transition life-zones. R. in the Yosemite region up to an elevation of 5,750 feet, as on the Yosemite Falls Trail.

NUTTALL'S WOODPECKER (*Dendrocopus nuttalli*): 7 in. Nape and sometimes crown feathers red; *back black, crossbarred with narrow white stripes* ("convict" stripes or "ladder" back); under parts solid white; sides spotted with black; no red on head in female. Voice a series of staccato notes given rapidly and largely on one pitch.

Often associated with oaks. R. chiefly in the Upper Sonoran life-zone. Frequents foothills and canyons west of the Sierran crest. C. V. to lower elevations in the Yosemite region. Occasionally seen in Yosemite Valley.

HAIRY WOODPECKER

$8\frac{1}{2}$ - $10\frac{1}{2}$



NUTTALL'S WOODPECKER

7



WHITE-HEADED WOODPECKER

9



WHITE-HEADED WOOD-PECKER (*Dendrocopus albobarvatus*): 9 in. *White head and upper breast; scarlet nape, absent in female; white patch in black wing; rest of body black.* Nests in dead stubs. Forages to a large extent on insects infesting the bark of living coniferous trees.

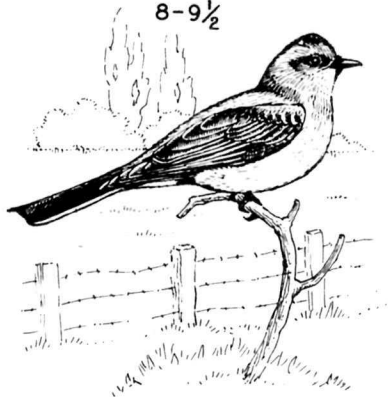
R. in coniferous forests, chiefly in the Transition and lower Canadian life-zones. Present in considerable numbers in the Yosemite region in the zones mentioned; common at Mariposa Grove, Glacier Point, and in Yosemite Valley.

ARCTIC THREE-TOED WOOD-PECKER (*Picoides arcticus*): 9-10 in. *Above black, except golden yellow on crown, wanting in female; wings barred with white spots; outer tail feathers white; black stripe from bill along side of head, bordered above by white line that passes below eye; under parts largely white; sides barred strongly with black; two toes in front, one behind (two toes behind in other woodpeckers in Yosemite region).*

Usually associated with red fir, lodgepole pine, or hemlock. Found chiefly in the Canadian and Hudsonian life-zones. Sparse R. in the Yosemite region. Observed near Mono Meadow, Siesta Lake, Tenaya Lake, Tuolumne Meadows, and McGee Lake at an altitude of 8,600 feet.

WESTERN KINGBIRD

8-9½



PERCHING BIRDS: Order Passeriformes

TYRANT FLYCATCHERS: Family Tyrannidae

WESTERN KINGBIRD (*Tyrannus verticalis*): 8-9½ in. Head and nape ash-gray; throat whitish, grading gradually to darker on breast, running to *yellow on belly* and under tail; upper parts dark gray; crown patch in male scarlet, often concealed; *outer web of outer tail feather white; tail black, cut straight across.* Sometimes flies after other birds. Often perches on wires and telephone poles. In feeding commonly flies out from perch and returns.

Frequents dry open terrain usually with few widely spaced trees. Breeds chiefly in the Lower and Upper Sonoran life-zones. Found usually below 5,000 feet in the Yosemite region. Occasionally seen in Yosemite Valley in the summer and fall, and at Mono Lake.

ASH-THROATED FLYCATCHER (*Myiarchus cinerascens*): 8-8½ in. Upper parts grayish-brown; top of head brown; wings with two whitish bars; throat whitish grading on breast to ash-gray; belly tinged with pale yellow; *crown feathers long, often raised, giving appearance of crest; outer edges of primaries and under side of tail ru-*

ASH-THROATED FLYCATCHER

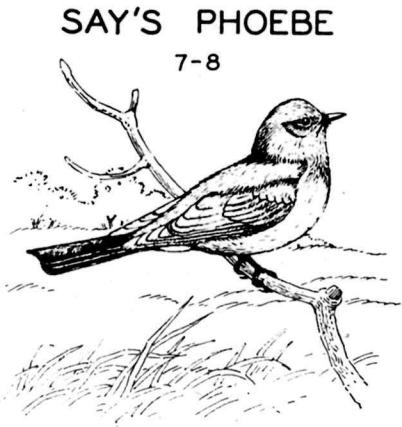
8-8½



fous. Nests in abandoned woodpecker holes or other cavities in trees.

S. V. in brushlands, usually where there are a few trees. Breeds in the Lower and Upper Sonoran life-zones. C. V. at lower elevations in the Yosemite region. Occasionally seen in Yosemite Valley.

BLACK PHOEBE (*Sayornis nigricans*): 6½ in. Head, breast, and upper parts black; belly and under tail coverts white; weakly crested. Immature: Head and neck dark brown. Flies after insects and returns to perch. Nest of mixed mud and grass placed on sides of buildings, bridges, cliffs, etc., over or near water.



Closely associated with water, running or quiet, often where there are trees, cliffs, or high banks. Widespread R. breeding chiefly in the Upper Sonoran life-zone. S. V. to lower elevations in the Yosemite region; breeds in Yosemite Valley, along Merced River.

SAY'S PHOEBE (*Sayornis saya*): 7-8 in. Above grayish-brown; tail blackish, cut straight across when open, slightly emarginate at rest; belly and region under tail rust-brown. Plaintive call, *pee-er*.

Frequents open arid terrain. Breeds chiefly in the Lower and Upper Sonoran life-zones. C. V. at low elevations in the Yosemite region. Observed in Yosemite Valley.

TRAILL'S FLYCATCHER (*Empidonax trailli*): 5-6 in. Above gray-brown or olive-gray; head slaty; under parts light gray, tinged with yellow posteriorly; two light-colored, inconspicuous wing-bars; eye-ring whitish. Song *psit-tweeer* given repeatedly; also a soft staccato *whit* given two or three times.

In the breeding season, closely restricted to willows. Widespread S. V. ranging from the Lower Sonoran to the Canadian life-zone. Widespread at lower elevations in winter. Common S. V. to Yosemite region; present in Yosemite Valley.

HAMMOND'S FLYCATCHER (*Empidonax hammondi*): 5½ in. Above brownish- or olive-gray, darker on head; two whitish wing-bars; breast dark gray, otherwise under parts pale yellowish. Song, *see'wit*, *pseet*, *swerz*, etc., the three notes emphatic and often repeated. Call a weak *pit*.

Summers in the Sierra Nevada, breeding in the Canadian life-zone where it is frequently found high (often 20 to over 100 feet) in coniferous trees, particularly red firs and dense stands of lodgepole pine. In migration far less restricted, frequenting deciduous woods, chaparral, and conifers. Has been seen as high as 10,500 feet on Mount Clark in the Yosemite region.

WRIGHT'S FLYCATCHER (*Empidonax oberholseri*): 5¼-6 in. Resembles Hammond's flycatcher but lighter and with broader bill. The two flycatchers are distinguished with difficulty. Song a group of three or more lispings notes, *se-peat, wurt'zel, see'pit*, the middle note not as low or monosyllabic as the Hammond's. The song is generally more vigorous and varied than the latter's. Call note *pit* or *see'pit*.

Frequents mixed brushland (manzanita, snow-brush, etc.) and deciduous or coniferous trees. Forages and nests in low growth. Breeds chiefly in the Canadian life-zone where S. V. in Yosemite region. M. through lowlands in spring and fall.

WESTERN FLYCATCHER (*Empidonax difficilis*): 5½-6 in. Above brownish- or olive-gray; throat yellowish; breast yellowish, tinged with brown; belly yellow; wings with two whitish bars; eye-ring whitish; upper mandible black; lower mandible pinkish or yellow. Call a bright lispings *swee'ip* with rising inflection. Song three-parted, *see'rip, sip, see'rip*, repeated at intervals.

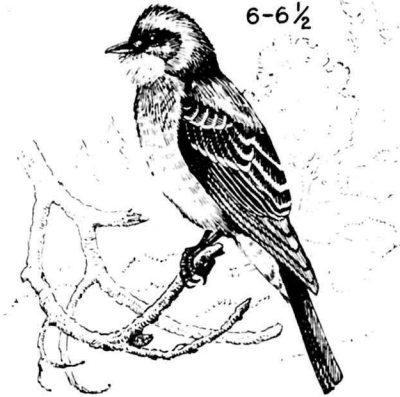
Frequents shaded stream and lake borders. Partial to wooded canyon bottoms. Breeds chiefly west of the main Sierran axis in the Upper Sonoran and Transition life-zones. S. V. in Yosemite region; present in Yosemite Valley.

WOOD PEWEE (*Contopus richardsoni*): 6-6½ in. Above dark gray-brown; under parts grayish, lighter on throat and abdomen with dark wash on each side; no eye-ring; inconspicuous crest and wing-bars; bill dark above and light below. Sits in an upright, straight-backed position on the lower limbs of trees; commonly holds tail on line with back. Often perches and nests on a dead limb.

Frequents broken deciduous or coniferous woods or a mixture of the two. Tends to avoid densely foliated trees. S. V. from the Upper Sonoran to the Hudsonian life-zone. Widespread during migration, reaching desert areas. Common species in the Yosemite re-

WOOD PEWEE

6-6½



WESTERN FLYCATCHER

5½-6



OLIVE-SIDED FLYCATCHER

7¼-8



gion. Its monotonous *pee-ur* may be heard throughout Yosemite Valley in summer.

OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*): 7¼-8 in. Above sooty-brown except patch of white on each side of rump; white patches sometimes hidden; *dark sides separated by whitish streak that extends from white of throat to yellowish-white of belly; large head with partial crest; tail short.* One of the larger flycatchers. Song a clear, strong *wher, whee, whew*, the second note the highest, the third with a slurring drop in pitch. Song also suggests *What peeves you?* Call a short *tip-tip* or *tit, tit, tip*, on one pitch and often repeated.

Breeds in broken coniferous forests, chiefly in the Transition and Canadian life-zones. Seeks high perches, often dead stubs of coniferous trees. S. V. to Yosemite region. Present but not common in Yosemite Valley.

LARKS: Family Alaudidae

HORNED LARK (*Eremophila alpestris*): 7-8 in. Upper parts mottled with gray and pinkish-brown; *forehead yellowish; black bar on each side of crown continuing back to include two hornlike tufts of feathers, one on each side of head, inconspicuous or wanting*

HORNED LARK

7-8



in winter; *tail black* with narrow edge of white on outer tail feathers; *throat yellow; black crescent on breast; black bars on face.* Female: Similar but smaller and colors duller.

Frequents open level or gently rolling country where there may be few or no trees, such as short-grass prairies, desert flats, mountain meadows, and fallow fields. R. in the Lower and Upper Sonoran life-zones. In the Yosemite region may be seen at lower elevations to the west and in summer on high mountain meadows. Occasionally seen in Yosemite Valley. Seen on fenceposts in the foothill grasslands along State Highway 140.

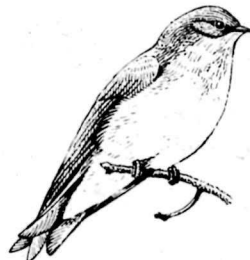
VIOLET-GREEN SWALLOW

5½



ROUGH-WINGED SWALLOW

5-5¾



SWALLOWS: Family Hirundinidae

VIOLET-GREEN SWALLOW (*Tachycineta thalassina*): 5½ in. Above greenish with purplish cast; top of head dark brownish-green with bronze tinge; wings and tail dusky; rump purplish tending to blue-green over tail; below white; sides of head white; sides of rump white, showing plainly in flight.

Frequents the vicinity of cliffs and rocky canyon walls and broken woods and forest margins. Breeds chiefly in the Upper Sonoran and Transition life-zones. S. V. in the Yosemite region in the zones mentioned; most common swallow in Yosemite Valley.

TREE SWALLOW (*Iridoprocne bicolor*): 5-6 in. Above bluish tinged with green, or black with steel-blue iridescence; below white. Nests in abandoned woodpecker holes in trees near water.

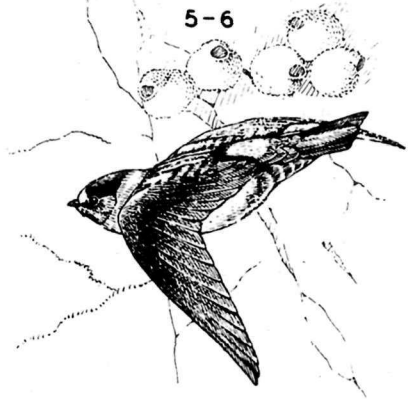
Frequents streams, sloughs, ponds, lakes, and wet meadows where it forages chiefly above water. Breeds chiefly in the Upper Sonoran and Transition life-zones. C. V. to lower elevations in the Yosemite region. Has nested in Yosemite Valley.

ROUGH-WINGED SWALLOW (*Stelgidopteryx ruficollis*): 5-5¾ in. Upper parts brown; chin, throat, and breast grayish-brown, belly and under tail coverts white; no iridescent colors. Nests in crevices or holes in bank, often those dug by rodents or kingfishers.

Frequents low earthen banks along slowly flowing streams or even along dry gullies. Breeds chiefly in the Lower and Upper Sonoran life-zones. Of local occurrence as S. V. in the lower, western part of the Yosemite region. Occasional in Yosemite Valley.

CLIFF SWALLOW (*Petrochelidon albifrons*): 5-6 in. Forehead creamy white; crown and back blue-black; nape gray; wings and tail dark brown; throat and side of head reddish-brown; spot of blue on throat; rump pale rust

CLIFF SWALLOW



or tan; tail tip nearly straight; belly light gray. The light under parts and forehead and the tan rump aid in identifying the bird in flight. Often produces a grating noise in flight. Nest gourd-shaped, composed of mud pellets, often attached to a niche in a cliff or beneath the eaves of a building. Of San Juan Capistrano fame.

Attracted to cliffs, high banks, and the walls of buildings, usually not far from a source of mud for nest building and quiet water for drinking. Nests chiefly from the Lower Sonoran to the Transition life-zone. S. V. to the western part of the Yosemite region. Has been observed in the Hetch Hetchy area.

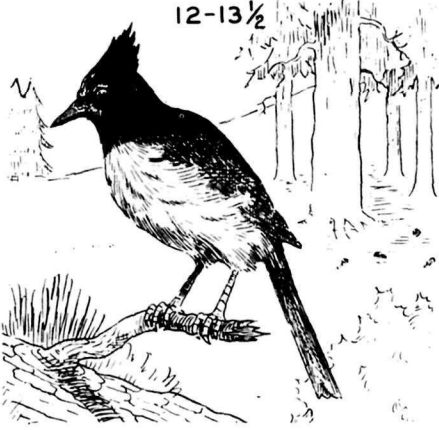
JAYS, MAGPIES, AND CROWS:
Family Corvidae

STELLER'S JAY (*Cyanocitta stelleri*): 12-13½ in. Forepart of body black; head strongly crested; often some light blue streaks on forehead which may extend to crest; under parts light blue; wings and tail deep blue crossbarred with black. Capable of a great variety of sounds, suggesting that it has a well-developed "language."

Inhabits chiefly coniferous forests of the Transition and Canadian life-zones, occasionally invading the lowlands in winter. Essentially R. with some down-mountain movement in winter. Abun-

STELLER'S JAY

12-13½



dant in the Yosemite region. One of the boldest and most conspicuous birds of the floor of Yosemite Valley.

SCRUB JAY (*Aphelocoma californica*): 11½-12 in. Head without crest; upper parts blue except middle of back grayish-brown; under parts grayish, lightest on throat; blue-black band (often not complete) on breast; white line over eye; sides of face blackish.

Frequents chiefly the broken woodland and chaparral of the Upper Sonoran life-zone. Widespread R. in the western foothills of the Sierra, including the Yosemite region, but absent from higher elevations. Occasional in Yosemite Valley.

SCRUB JAY

11½-12



BLACK-BILLED MAGPIE (*Pica pica*): 17-22 in. Bill black, otherwise resembles yellow-billed magpie, but is slightly larger.

Frequents chiefly open terrain with clumps of willows, aspens, cottonwoods, or other trees with nesting sites and shelter. Water in the form of a stream, wet meadow, or lake is often not far removed. Breeds in the Upper Sonoran and Transition life-zones. R. east of the Cascade-Sierran divides south to the upper part of the Owens Valley. Occasionally enters the eastern part of the Yosemite region. Has been seen in Lyell Canyon.

YELLOW-BILLED MAGPIE

16-18



YELLOW-BILLED MAGPIE (*Pica nuttalli*): 16-18 in. Head, throat, breast, back, and rump black; large bar of white on shoulder; belly white; large white patches toward tips of outspread wings; bill yellow; long central tail feathers. Omnivorous. Builds a bulky nest of sticks and mud.

Frequents broad expanses of open ground where there is a scattering of oaks, sycamores, cottonwoods, or other trees. Found in the Lower and Upper Sonoran life-zones, usually near water. R. in the Great Valley and western foothills of the Sierra as in the western part of the Yosemite region. Rarely observed in Yosemite Valley.

AMERICAN CROW (*Corvus brachyrhynchos*): 17-21 in. Whole bird glossy black; tip of tail rounded when spread. Often seen in flocks. Call, familiar *caw, caw*. Omnivorous.

Frequents areas with a broad expanse of open ground, in valleys and in rolling hills, but trees are requisite for nesting and roosting. Breeds in the Lower Sonoran to the Transition life-zones. R. throughout the Great Valley. Absent or C. V. in heavily forested or mountainous country and in the deserts. Occasional at lower elevations in the western part of the Yosemite region. C. V. to Yosemite Valley.

PINON JAY (*Cyanocephalus cyanocephalus*): 10-12 in. Whole body dull blue, more vivid on head; streaks of whitish on throat; tail relatively short; bill long and slender. Crow-like in flight. Often seen in flocks. Omnivorous but feeds to a considerable extent on pinon nuts.

Frequently associated with pinon and juniper but ranges into grasslands and open forests of other types. Breeds in the arid Upper Sonoran and Transition life-zones. R. east of the Cascade-Sierran divides, but in fall and winter may wander far to the west. C. V. to Yosemite region where occasionally seen in Tuolumne Meadows and above the rim of Yosemite Valley.

CLARK'S NUTCRACKER (*Nucifraga columbiana*): 12-13 in. Body light gray; black wings with white-tipped secondary feathers forming conspicuous white patch at rear edge of wing; *most outer tail feathers white*, central tail feathers black. Harsh call. Omnivorous but feeds to a large extent on pine nuts.

R. chiefly in the Canadian and Hudsonian life-zones in areas usually characterized by meadows, rocky slopes, and trees of relatively small stature. Frequents most of the higher mountain masses, generally from 8,000 feet up to timberline. In the Yosemite region common in the Hudsonian zone but may be seen at lower elevations as at Glacier Point and at other localities on the rim of Yosemite Valley, especially in late summer and fall.

TITS: Family Paridae

MOUNTAIN CHICKADEE (*Parus gambeli*): 5-5¾ in. Upper parts gray, tinged with brown; *top of head and throat black; white line over eye*; black line through eye; cheeks and belly white, sides tinged with brown. Call a lisping *chick-a-dee-dee* or a sweet, clear, high-pitched, plaintive song, *phoe-dee-dee*, the first note considerably higher than the last two. Characteristic of chickadees is the habit of clinging with

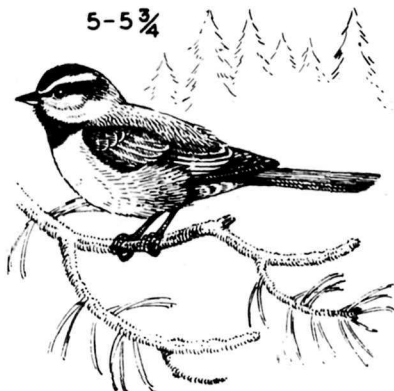
CLARK'S NUTCRACKER

12-13



MOUNTAIN CHICKADEE

5-5¾



PLAIN TITMOUSE

5-5½



head downward as they forage at the tips of branches. Nests in natural tree cavities or abandoned woodpecker holes.

Frequents chiefly open coniferous forests or the margins of dense stands, in the high Upper Sonoran to the Hudsonian life-zones. R. chiefly in the Canadian and Hudsonian life-zones in the Yosemite region but also in the Transition zone. Seen in Yosemite Valley and occasionally nests there.

PLAIN TITMOUSE (Parus inornatus): 5-5½ in. Upper parts olive or brownish-gray; under parts lighter; *crested*; conspicuous dark eye. Wheezy chickadee-like call. Nests in abandoned woodpecker holes or in natural cavities in trees.

Frequents open woodland, chiefly of oaks or pinon and juniper. R. largely in the Upper Sonoran life-zone. Occurs at low elevation in the western part of the Yosemite region. Rare in Yosemite Valley.

BUSH-TIT

4-4¼



BUSH-TIT (Psaltriparus minimus): 4-4¼ in. Back light grayish-brown; top of head brown; under parts paler; *long, slender tail*. Call a chattering *tst, tst*, as it slips through the brush. Often hangs head downward as it forages at the tips of branches. Usually the birds travel in small flocks. Nest long and pendant with a small opening at one side near the place of attachment.

Frequents areas of chaparral or mixed brush and small trees chiefly in the Upper Sonoran life-zone. Widespread R. but absent from higher mountains, deserts. R. at lower elevations in the western part of the Yosemite region. Has been seen near Glacier Point and commonly in Yosemite Valley.

WHITE-BREASTED NUTHATCH

5-6



NUTHATCHES: Family Sittidae

WHITE-BREASTED NUTHATCH (Sitta carolinensis): 5-6 in. *Top of head and nape black*; back blue-gray; tail short; under tail coverts reddish-brown; outer tail feathers black with white

spots; breast and sides of head whitish; relatively *long, slender bill*. Call a somewhat nasal *hank, hank*. Creeps both up and down tree trunks and branches. Does not use tail as support in climbing as do woodpeckers. Nests in abandoned woodpecker holes or constructs its own nesting chamber.

Frequents chiefly rough-barked trees such as oaks and conifers. R. from the Upper Sonoran to the Hudsonian life-zone, concentrating in the lower zones in winter. Occasionally seen in Yosemite Valley.

RED-BREASTED NUTHATCH (*Sitta canadensis*): 4½ in. *Top of head and line through eye black*; white stripe over eye; upper parts bluish-gray; tail dark with white spots on outer feathers; *below buff or reddish-brown*, lighter in immature and in female. Carries tail on line with back when foraging. Call, a nasal *gna gna*.

Frequents chiefly conifers in the Canadian life-zone. It especially favors firs in which it often forages at considerable heights. Partially R., many individuals descending in winter to lower levels and to the south. In the Yosemite region common in summer in the Canadian zone but also found in the Transition and Hudsonian zones. To be seen in Yosemite Valley almost all year.

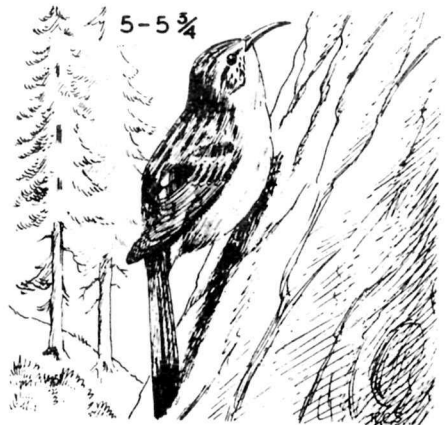
PYGMY NUTHATCH (*Sitta pygmaea*): 4-4½ in. Above light bluish-gray; *head darker or brownish with dark line through eye*; white on nape inconspicuous; under parts white or buffy; *tail short*, outer tail feathers with black and white. Inhabits the trunks and main branches of trees. Often seen feeding in pine-needle clusters. Usually travels in small flocks.

Frequents pine trees and other conifers in the Transition life-zone, often foraging at high levels in trees. Uncommon R. in the Yosemite region in the Transition and Canadian life-zones. Occasionally seen in late summer and fall around the rim of Yosemite Valley. Rare in Yosemite Valley.

RED-BREASTED NUTHATCH 4½



BROWN CREEPER



CREEPERS: Family Certhiidae

BROWN CREEPER (*Certhia familiaris*): 5-5¾ in. Head and upper parts brown, becoming brighter on rump; *long, curved bill*; under parts whitish; buffy bar in wing seen in flight. *Climbs upward* in series of jerking movements often in a spiral about trunks and branches. Tail feathers stiff and pointed, aiding in creeping on vertical surfaces. Call a dainty, wiry, high-pitched *see', see', se-teettle-te, see'*, the first two notes and the last higher than the rest. Nests in crevices beneath loose bark.

Frequents trunks and larger branches chiefly of coniferous trees, usually where

in dense mature stands. Redwoods, incense-cedars, and pines are frequented. R. in the Transition and Canadian life-zones, dispersing irregularly to lower elevations in winter. Common in Yosemite Valley, especially in dense stands of incense-cedar and ponderosa pine.

WREN-TITS: Family Chamaeidae

WREN-TIT (Chamaea fasciata): 6½ in. Above brown, darker on head; below buffy, tinged with pink; long slender tail; iris white; ruffled appearance of feathers gives bird a chubby shape. Song, *phu-phu-phu-phu-phu-phu-phu*, the first two to four notes given deliberately, the others following in quick succession all essentially on the same pitch. Sometimes guttural scolding notes are heard as the birds "float" through the brush.

Seeks broken or continuous tracts of brush where it is more often heard than seen. Usually travels in pairs. An inhabitant of the Upper Sonoran and Transition life-zones west of the Sierran divide. In the Yosemite region to be found chiefly at low elevation in the western part but in late summer and fall ranges up into Yosemite Valley.

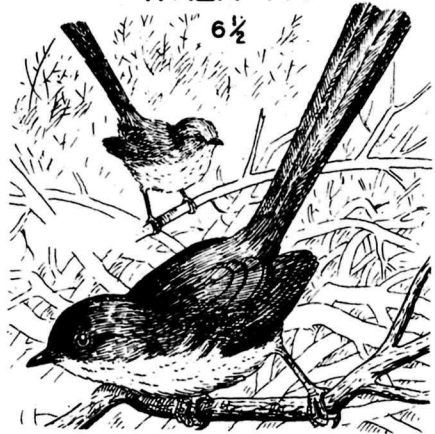
DIPPERS: Family Cinclidae

AMERICAN DIPPER (Cinclus mexicanus): Also known as water ouzel. 7-8½ in. *Body slate-gray*, tinged with brown above; *short, stubby tail*. Upon alighting on a rock in a stream, it usually *bobs up and down*. It frequently dives into the water, and walks along the bottom, the wings assisting. Such excursions are to procure small aquatic animals for food. Nest of moss, with opening at the side.

Frequents cool, shaded, clear, swift-flowing mountain streams, especially where there are rock walls or cliffs that provide nesting sites. Sometimes places nest behind a waterfall. R. in the Transition to the Hudsonian life-zone. May be seen in Yosemite Valley, where it is one of the most interesting and best loved birds.

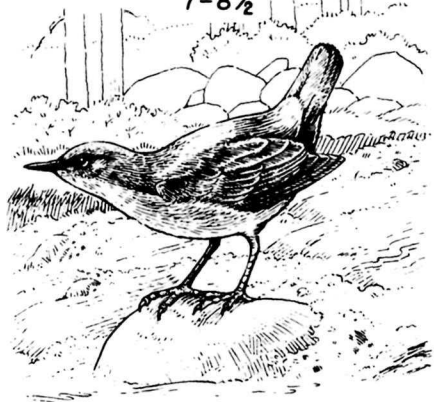
WREN-TIT

6½



AMERICAN DIPPER

7-8½



HOUSE WREN

4½ - 5¼



WRENS: Family Troglodytidae

HOUSE WREN (*Troglodytes aedon*): $4\frac{1}{2}$ - $5\frac{1}{4}$ in. Above grayish-brown; below gray, tinged with brown; *wing and tail with wavy dusky bars*; no conspicuous eye-stripe or white in tail; *tail short*, frequently held at an abrupt angle with body. Call, a scolding *kerr*. Nests in abandoned woodpecker holes or other cavities.

Frequents bushes, chaparral, and chiefly deciduous trees, the latter especially for nesting. S. V. largely in the Upper Sonoran to the Transition life-zone. Upmountain movement after breeding carries some birds to high elevations as to 9,200 feet at the head of Lyell Canyon in the Yosemite region.

WINTER WREN (*Troglodytes troglodytes*): 4 in. Resembles house wren but is darker, smaller, and has shorter tail; inconspicuous line over eye; *belly brownish and heavily barred*. *Bobs when excited*. *Our smallest wren*. Song a prolonged series of thin high notes suggestive of a squeaky wheel. Often nests in cavities in or beneath logs.

Frequents the damp, shady forest floor where there are tangles of roots, ferns, and matted vegetation (often including moss) chiefly in the Transition and Canadian life-zones. Of local occurrence in summer in the Yosemite region as at the Merced Grove of Big Trees, foot of Vernal Fall, and near Happy Isles, but chiefly a W. V.

BEWICK'S WREN (*Thryomanes bewicki*): 5 - $5\frac{1}{2}$ in. Above dark brown; below grayish-white becoming white on throat; *outer tail feathers black, tipped with white*; central feathers gray-brown barred with dusky; *white line over eye*.

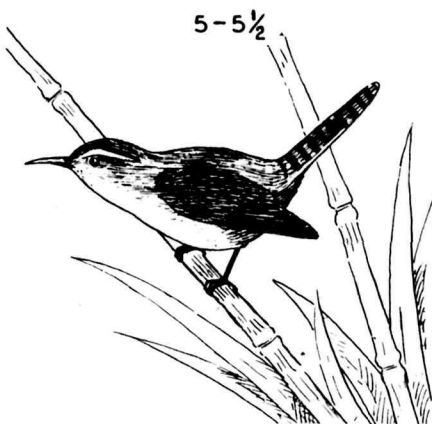
Frequents continuous or broken chaparral and tracts of woodland with brush clumps, chiefly in the Upper Sonoran life-zone. There is shifting of some birds up- or downmountain, depending upon locality, in late summer, fall, and winter. R. at lower elevations in the extreme western part of the Yosemite region. C. V. to Yosemite Valley.

LONG-BILLED MARSH WREN (*Telmatodytes palustris*): $4\frac{1}{2}$ - $5\frac{1}{2}$ in. Above brownish; *patch of black on back crossed by longitudinal white lines*; *white line over eye*; rump brown; below whitish, brownish on sides; tail feathers brown, barred with dusky.

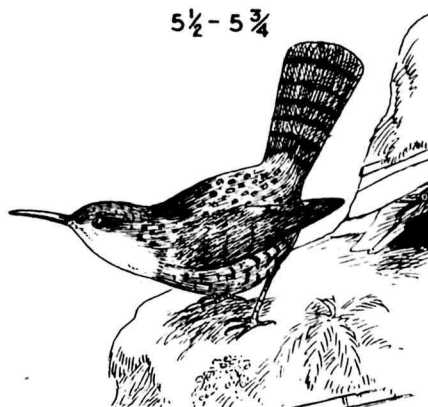
Frequents marshlands, especially where tules grow. Usually nests over water. Ranges from the Lower Sonoran to the Transition life-zone. Sparse C. V. and W. V. to lower elevations in western part of Yosemite region. Has been seen in Yosemite Valley.

CANYON WREN (*Catherpes mexicanus*): $5\frac{1}{2}$ - $5\frac{3}{4}$ in. Above brown, with fine black and white spots; *throat and*

BEWICK'S WREN



CANYON WREN



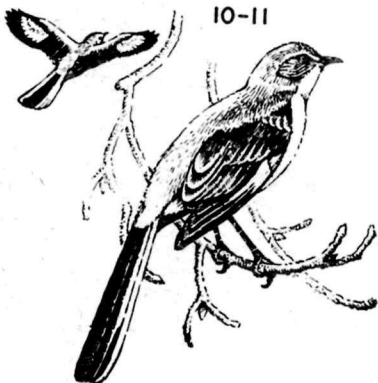
breast white, contrast in colors marked; *sides and belly rich rufous*; very narrow black bars on bright reddish-brown tail; *long, slender, slightly curved bill*. Call a series of clear, whistled notes on a descending scale. Sometimes bobs.

Frequents rocky, often shaded areas in canyons. R. chiefly in the Upper Sonoran life-zone but also in the Lower Sonoran and Transition zones. Largely in the western part of the Yosemite region in the zones mentioned but has been observed as far east as Merced Lake: Often heard and sometimes seen about sheer cliffs and talus slopes of Yosemite Valley.

ROCK WREN (*Salpinctes obsoletus*): 5-6 in. Above with often indistinct sprinkling of dusky and white on light brown; tail tipped with buffy; outer tail feathers black near tip; body and head somewhat flattened; *bill long and slender*; toes long. Bobs.

Found especially in rugged, rocky locations, where it forages in crevices or in the open; also may enter fissures in logs and holes in the ground. More independent of water than the canyon wren. Found chiefly in the Lower and Upper Sonoran life-zones but also on up to the Hudsonian zone. R. at lower elevations and S. V. in the higher mountains. Widespread in the Yosemite region having been seen at 10,500 feet in Mono Pass.

MOCKINGBIRD



MOCKINGBIRDS AND THRASHERS: Family Mimidae

MOCKINGBIRD (*Mimus polyglottos*): 10-11 in. Dark gray above; whitish below; *large white patch in wing*; long dusky tail with *outer tail feathers white*; flashes of white in wings and tail in flight; eye pale yellow. Song greatly varied, including imitations of other birds.

Frequents nearly level terrain and foothills where there are scattered bushes and small trees. R. chiefly in the Lower and Upper Sonoran life-zones. To be seen at lower elevations in the western part of the Yosemite region. C. V. to Yosemite Valley.

SAGE THRASHER (*Oreoscoptes montanus*): 8-9 in. Above grayish-brown; *below whitish* faintly tinged with buffy, *streaked with rows of dark brown wedge-shaped spots*; *outer tail feathers edged and tipped with white*; straight, slender bill *shorter than head*; iris yellow. When perched frequently jerks its tail.

Frequents flats and gentle slopes covered with sagebrush and in winter other types of brushland. S. V. chiefly in the sagebrush country east of the Sierra. W. V. in the San Joaquin Valley. C. V. to Yosemite region. Frequents area near Mono Lake.

***CALIFORNIA THRASHER** (*Toxostoma redivivum*): 11½ - 13 in. Above brown; throat grayish-white; breast light brown grading to buff on belly; tail long, rusty beneath at its base; long, curved bill; relatively short wings.

Frequents chaparral, staying in or near cover and foraging on the ground in the leaf litter and soft earth where plant food, insects, and spiders are found by digging with the bill. Also forages in the upper story of plant growth for fruits and berries. R. in the Lower and Upper Sonoran life-zones on the lower brushy slopes in the western part of the Yosemite region to El Portal.

THRUSHES: Family Turdidae

ROBIN (*Turdus migratorius*): $8\frac{1}{2}$ - $10\frac{1}{2}$ in. Back gray; head and tail blackish; below reddish-brown, "red-breast"; throat white, streaked with blackish; eyelids and spot in front of eye white; bill yellowish. Female: Breast, head, and tail colors paler. Immature: Under parts, and back speckled, suggesting the relationship to the thrush family. Nest bulky, of grasses, twigs, pine needles, weed stems, etc., well plastered with mud.

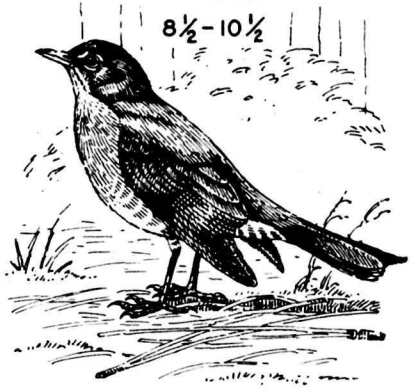
Frequents meadows, stream borders, and lawns where there are scattered trees. Common S. V. in the Transition life-zone but also in the Canadian and Hudsonian life-zones. Common at lower levels in winter. Abundant in Yosemite Valley where it nests. May be sparsely present there in winter but more common at lower elevations.

VARIED THRUSH (*Ixoreus naevius*): 9-10 in. Resembles robin; above dark slate; head darker; orange stripe over and extending behind eye; orange-brown bars and patch in dusky wing; black collar on orange breast. Female: Breast band duller. Immature: Collar incomplete or absent; breast speckled.

Frequents dense growth of conifers, oaks, or high chaparral, often in canyons. Prefers shaded locations. In the Transition and Canadian zones in summer and ranges into the Upper Sonoran zone in winter. W. V. to the western slope of the Yosemite region below the level of the heavy snows. Occurs in Yosemite Valley.

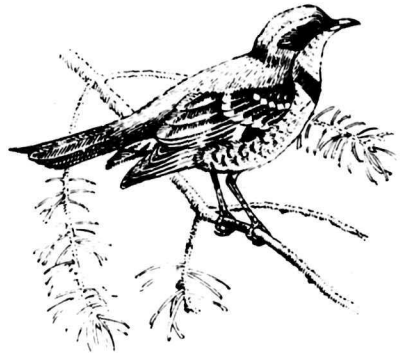
HERMIT THRUSH (*Hylocichla guttata*): $6\frac{1}{2}$ - $7\frac{1}{2}$ in. Above soft brown; tail reddish-brown, which it raises slowly on alighting or depresses and raises often when at rest; below whitish; throat and breast dotted with blackish-brown. A timid, trim bird with slender legs and beak. Stands rather high from the ground in contrast to the squat-like position of the fox sparrow

ROBIN

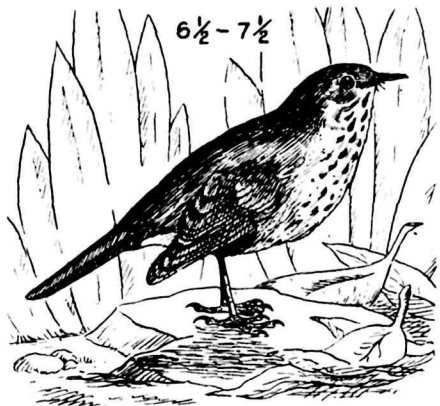
 $8\frac{1}{2}$ - $10\frac{1}{2}$ 

VARIED THRUSH

9 - 10



HERMIT THRUSH

 $6\frac{1}{2}$ - $7\frac{1}{2}$ 

to which it bears some resemblance. Often jerks its wings nervously.

Frequents chiefly dense well-shaded forests where the ground is leaf-littered but largely unobstructed by close growth of bushes. S. V. in the Sierra chiefly in the Transition and Canadian life-zones, but also in the lower Hudsonian life-zone. W. V. below the level of heavy snows. Occasionally nests on the floor of Yosemite Valley but more common at higher elevations as at Mariposa Grove, Glacier Point, and Tuolumne Meadows.

SWAINSON'S THRUSH (*Hylocichla ustulata*): $6\frac{1}{2}$ - $7\frac{1}{2}$ in. Above gray or olive-brown; wings and tail somewhat darker; *no rust in tail*; belly white; sides tinged with brown; *upper breast light buff spotted with wedge-shaped marks*; eye-ring and cheeks buffy.

Frequents willows, aspens, alders, and other dense growth along streams and about damp meadows. Enters the damp understory vegetation of dense forests. Chiefly in the Upper Sonoran, Transition, and Canadian life-zones. Common S. V. largely throughout, west of the desert divides. Widespread M. S. V. chiefly in the Transition zone in the Yosemite region. Has nested in Yosemite Valley; often seen near Mirror Lake.

MEXICAN BLUEBIRD (*Sialia mexicana*): $6\frac{1}{2}$ -7 in. Above dark blue except sometimes for rust area in middle of back; *breast rusty* grading into gray on belly; tail slightly forked. Female: Above gray or brownish, tinged with blue; wings blue, with light bars; breast faintly rusty. Nests in abandoned woodpecker holes or other cavities. Feeds on mistletoe and other berries and on insects.

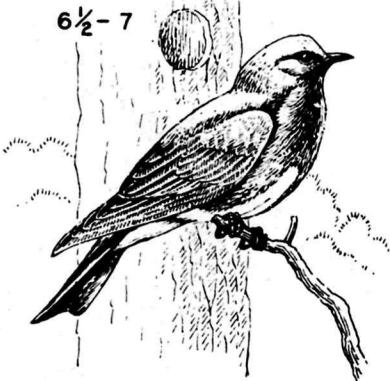
Frequents broken well-spaced timber, open woodland, or brushland. When breeding found chiefly in the Upper Sonoran and Transition life-zones but enters adjacent zones. Spreads to lowlands in winter. Likely to be seen at any time of the year in the western foothills in the Yosemite region. In fall seen at higher altitudes as in Yosemite Valley and in higher locations.

MOUNTAIN BLUEBIRD (*Sialia currucoides*): $6\frac{1}{2}$ - $7\frac{3}{4}$ in. *Almost entirely blue*, lighter below, grading to whitish on belly; *tail forked*. Female: Soft gray-brown above, tinged with blue; rump, tail, and wings bluish.

Frequents chiefly open terrain of short grass or turf where rocks, scattered bushes, or small trees provide perches. In the Sierra, S. V. in high Transition to the Hudsonian life-zone, especially the latter. Of irregular occurrence in the lowlands in winter. In

MEXICAN BLUEBIRD

$6\frac{1}{2}$ - 7



TOWNSEND'S SOLITAIRE

8 - $9\frac{1}{2}$



Yosemite region, frequent in high Sierra, occasional in Yosemite Valley.

TOWNSEND'S SOLITAIRE (*Myadestes townsendi*): 8-9½ in. Above dull gray; lighter below; wings and tail darker than rest of upper parts; *edge and tip of outer tail feathers white; white eye-ring*. In flight, one sees white in tail and narrow *buffy bar in wing*. Nests on or near the ground in a hollow at the base of a tree, stump, cliff, or elsewhere.

Frequents mountain slopes where at least partly forested, often with pine or fir. Of irregular occurrence in the lowlands in winter. In the Sierra S. V. or R. in the high Transition to the Hudsonian life-zone. In Yosemite Valley occasionally seen in winter and may nest there in spring.

**GNATCATCHERS, KINGLETS,
AND OLD-WORLD WARBLERS:**
Family Sylviidae

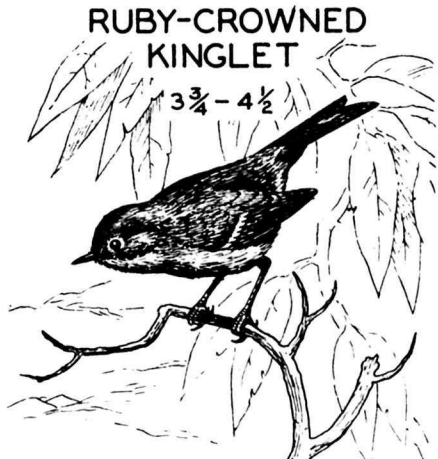
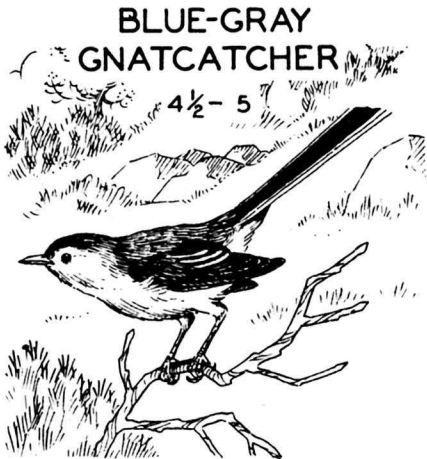
BLUE-GRAY GNATCATCHER (*Poliioptila caerulea*): 4½-5 in. Upper parts bluish-gray; indistinct white eye-ring; blackish forehead, wanting in winter and in female; *long blackish tail; outer tail feathers white* for most of their length; *bill slender*. Call often a single, wheezy *c-h-e-e*, like escaping steam. Active, nervous movements.

Frequents brush and oak-covered slopes. Common S. V. in the Lower and Upper Sonoran life-zones. Breeds in the foothills of the Sierra. Winters in the lowlands. In the Yosemite region in the Upper Sonoran zone and after the nesting season at higher elevations, including Yosemite Valley and Glacier Point.

GOLDEN-CROWNED KINGLET (*Regulus satrapa*): 3½-4 in. Upper parts olive-gray to olive-green; *conspicuous orange crown bordered by yellow and black*, wholly yellow in female; under parts whitish, tinged with brown especially on sides; *white line over eye*. Forages out on small branches and among needles chiefly in coniferous trees. Often travels in small groups.

S. V. largely in the Canadian and Transition life-zones. W. V. to lowlands west of the Sierra. In the Yosemite region present in summer chiefly in the Canadian zone. Recorded to 8,700 feet elevation on the slopes of Mount Hoffmann. Usually in Yosemite Valley throughout the year.

RUBY-CROWNED KINGLET (*Regulus calendula*): 3¾-4½ in. Upper parts grayish-olive; *red crown-patch (often concealed)*; *white ring around dark eye*; under parts gray, tinged with yellow; two whitish bars on wing. *Jerks*



wings nervously as it flits about among the branches. Commonly solitary.

In summer frequents continuous or broken stands of coniferous forest chiefly in the Canadian life-zone; less restricted in winter. Disperses widely to the lowlands in winter. In the Yosemite region during the breeding season, altitudes of occurrence are chiefly between 5,500 and 9,000 feet. Passes through Yosemite Valley, occasionally nesting there.

WAGTAILS: Family Motacillidae

WATER PIPIT (*Anthus spinoletta*): 6-7 in. Above grayish-brown; buffy line over eye; outer tail feathers largely

WATER PIPIT

6-7



CEDAR WAXWING

6½-8



white; below buffy; breast and sides with dusky streaks; slender bill. *Has habit of wagging its tail upon alighting.* Fore-and-aft movements of the head may occur as the bird walks. Often seen in flocks.

Frequents fields, beaches, or other open ground. Common W. V. at low elevations in the western part of the Yosemite region. Has been observed in the fall on Mount Lyell at an elevation of 12,000 feet.

WAXWINGS: Family Bombycillidae

CEDAR WAXWING (*Bombycilla cedrorum*): 6½ - 8 in. Back brown; rump and tail grayish; throat and eye-stripe black; tail tipped with yellow; secondary wing feathers often marked with red "scaling-wax" spots; belly yellowish; crested. Usually seen in flocks. Call a high-pitched *keep keep*. Feeds on berries and other fruits, buds, flower parts, and insects.

When breeding frequents willows, alders, and other streamside growth or cutover forests in the Transition life-zone of the humid coast. An irregular M. and widespread W. V. Occasional in fall, winter, and spring at lower elevations in the Yosemite region. Flocks have been seen in Yosemite Valley in some years.

SILKY FLYCATCHERS:
Family Ptilonotidae

***PHAINOPEPLA** (*Phainopepla nitens*): 7-7¾ in. Slender, glossy, black bird with conspicuous white wing-patches; prominent loose crest. Female dark gray; patches in wings light gray. Feeds on mistletoe berries and other fruits and occasionally engages in fly-catching, at which it is expert in all seasons. When bird alights, the tail is jerked.

Most likely to be seen in summer in the blue oak belt of the western part of the Yosemite region where it is especially attracted to trees with mistletoe clumps. Inhabits the Lower and Upper Sonoran life-zones.

SHRIKES: Family Laniidae

LOGGERHEAD SHRIKE (*Lanius ludovicianus*): 8-10 in. Upper parts gray; rump and upper tail coverts paler; wings and tail black, marked with white; black mask from bill to well behind eye; bill hooked; under parts whitish. Known as the butcherbird because of habit in feeding of dismembering insects or other prey which it impales on thorns or other sharp objects.

Frequents terrain providing areas of bare ground or that grown sparsely to grass or other low growth, where visibility is good and where nest sites and perches are provided by scattered trees or large bushes. Not uncommon about human habitations. Inhabits chiefly the Lower and Upper Sonoran life-zones. Some wandering. Several records for Yosemite Valley. Often seen at lower elevations in the Yosemite region, as in the western foothills.

VIREOS: Family Vireonidae

HUTTON'S VIREO (*Vireo huttoni*): $4\frac{1}{4}$ - $4\frac{3}{4}$ in. Above olive-gray; below yellowish; two whitish wing-bars; head color lightens between eye and bill; whitish eye-ring, interrupted above. Does not jerk wings like ruby-crowned kinglet.

Frequents chiefly non-deciduous oaks in the Upper Sonoran and Transition life-zones. R. on the western slope of the Sierra. Has been observed in the Yosemite region up to 5,800 feet.

SOLITARY VIREO (*Vireo solitarius*): 5-6 in. Above gray, tinged with olive; below white; sides tinged with yellowish; white lores and ring around eye; whitish wing-bars. Song: Jimmy—come here! Hurry up!

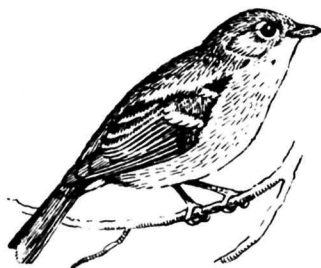
Frequents oak and coniferous forests chiefly in the Transition life-zone but also in adjacent zones. S. V. in the Sierra; in lower, warmer areas in winter. In the Yosemite region has been recorded as far east as Indian Canyon and Merced Lake. Fairly common on the floor of Yosemite Valley.

LOGGERHEAD SHRIKE

8-10



HUTTON'S VIREO

 $4\frac{1}{4}$ - $4\frac{3}{4}$ 

SOLITARY VIREO

5-6



WARBLING VIREO (*Vireo gilvus*): 5-6 in. *Above olive-gray; below white; tinge of yellow on sides; white line over eye.* Song a series of warbled notes, often repeated. Usually solitary.

Frequents deciduous trees such as willows, cottonwoods, and alders. Seeks higher levels in trees than the other vireos. In the Sierra S. V. chiefly in the Upper Sonoran to the Canadian life-zone. Found on both slopes of the Yosemite region but most common on the western slope.

WOOD WARBLERS:
Family Compothlypidae

ORANGE-CROWNED WARBLER (*Vermivora celata*): 4¼-5 in. *Top of head with orange, usually obscure; indistinct yellowish line over eye to bill; upper parts olive-green, brightest on rump; wings darker, without bars; under parts dull yellow to whitish.*

Frequents underbrush in areas of mixed woodland; in summer chiefly in the Upper Sonoran to the Canadian life-zone. More widely distributed during migration. In the Yosemite region S. V. on both slopes of the Sierra. Not common in Yosemite Valley. Upmountain movements may occur after breeding. Individuals have been seen at 10,500 feet on Mount Clark.

NASHVILLE WARBLER (*Vermivora ruficapilla*): 4-4¾ in. *Top and sides of head ash-gray with indistinct chestnut patch on crown; back olive-green; white eye-ring; below yellow; lower belly whitish.* Female: All plumage reduced in color.

Frequents open forests with an understory of bushes. Forages well up in trees but nests on or near the ground. S.V. chiefly in the Transition and lower Canadian life-zones along the west slope of the Sierra. Widespread M. In the Yosemite region, as at Yosemite Valley, to be found among the black oaks and maples.

YELLOW WARBLER (*Dendroica aestiva*): 4-5 in. *Body brilliant yellow*

YELLOW WARBLER

4-5



WARBLING VIREO

5-6



below, with scattered rufous streaks on chest and belly, faint or absent in female; above greenish-yellow; wings and tail dusky; yellow spots in tail. A descending, high-pitched, twittering song.

Frequents canyons and streambanks especially where grown to broadleaf trees such as willows, cottonwoods, aspens, alders, etc. S. V. in the Lower Sonoran to the Transition life-zone on both slopes of the Sierra. Common in Yosemite Valley.

AUDUBON'S WARBLER (*Dendroica auduboni*): 4¾-5¼ in. *Upper parts bluish-gray, streaked with black; wings with broad white patch; white*

marks on tail feathers; patch on *crown*, each side near wing-bend, throat, and rump yellow; breast blackish; black of breast obscure and yellow markings paler in female; immature birds, as a rule, show conspicuously only yellow rump-patch and white in tail. Forages well up in the trees.

In summer frequents chiefly conifers in the Transition to the Hudsonian life-zone but habitat more varied in winter. Widespread in summer in the Yosemite region in the zones mentioned. In winter common visitant to the Upper Sonoran zone. Often to be seen throughout the year in Yosemite Valley.

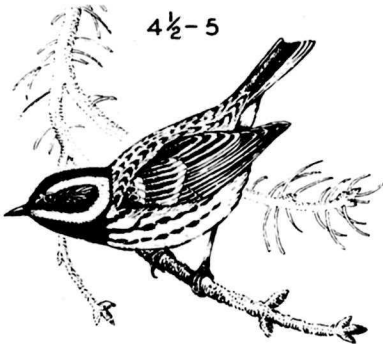
AUDUBON'S WARBLER

4¾ - 5¼



BLACK-THROATED GRAY WARBLER

4½ - 5



BLACK-THROATED GRAY WARBLER (*Dendroica nigrescens*): 4½-5 in. Head largely black; two white bands on side of head, one below, other above eye, joining to encircle black cheek-patch; yellow spot in front of eye; back bluish-gray, marked with black spots; white under parts; sides with black lines; white wing-bars; white outer tail feathers. Female: Gray streaks on head; black collar bordering white throat.

In many areas attracted to oaks, especially canyon live oaks, but also frequents conifers and chaparral. S. V. to the lower western slopes of the Sierra, in the Upper Sonoran and Transition life-zones. To be found among the canyon live oaks of the talus slopes along the base of the north and south walls of Yosemite Valley.

TOWNSEND'S WARBLER (*Dendroica townsendi*): 4½ - 5 in. Above olive-green marked with black; white wing-bars; top of head and throat black with ring of yellow around black cheek-patch; breast and sides yellow; belly white; sides streaked with black; white in tail. Female: Throat largely yellow.

Frequents upper foliage of live oaks, laurels, and conifers. M. along the west slope and eastern base of the Sierra. C. V. to the Yosemite region. Has been seen frequently in Yosemite Valley.

HERMIT WARBLER (*Dendroica occidentalis*): 4½-5 in. Head brilliant yellow; throat black; back gray with black streaks; few or no streaks on white under parts; white wing-bars; white outer tail feathers. Female: Head dull yellow, mottled on top with blackish; throat with dusky spots on white. Commonly forages and nests 20 feet or more above the ground.

Frequents conifers. S. V. in the Sierra, chiefly in the Transition and Canadian life-zones. Widespread M. Seen in the Mariposa Grove, along the Pohono Trail, and commonly in Yosemite Valley.

TOLMIE'S WARBLER (*Oporornis tolmiei*): $4\frac{3}{4}$ - $5\frac{1}{2}$ in. Head, neck, and upper breast slaty, deepening on breast and in front of eye; under parts yellow; upper parts olive-green; eyelids white. Often jerks tail nervously. Female: Top of head brownish; throat and breast pale gray. Nest of grasses constructed near ground.

Frequents thickets, "soft" chaparral, and heavy understorey usually near streams or damp places chiefly in the Transition and lower Canadian life-zones. S. V. in the Yosemite region in the zones mentioned and as M. along both the east and west sides of the Sierra. To be found in thickets of thimbleberry, ceanothus, and ferns on the floor of Yosemite Valley.

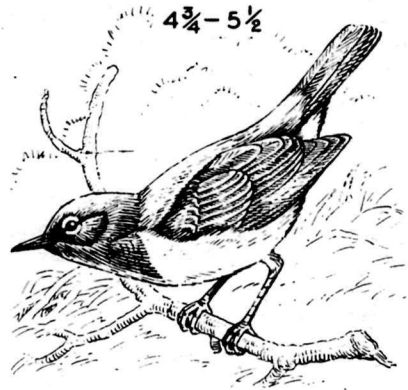
YELLOW-THROAT (*Geothlypis trichas*): $4\frac{1}{2}$ - $5\frac{1}{2}$ in. Black mask bordered with ashy above; back olive-green or yellowish-brown; throat and breast yellow. Female: No black mask; belly whitish. Song, *whit-tsit-tsee*, *whit-tsit-tsee*, often repeated many times in a lively, rolling phrase. Nest on or near the ground, often over water.

When breeding frequents thick tangles of plant growth such as tules, sedges, blackberry vines, and willow thickets near fresh or brackish water, chiefly of marshes and sloughs. Widespread S. V. largely in the Lower and Upper Sonoran life-zones. Widespread common M. C. V. to the Yosemite region. Has been recorded in Yosemite Valley.

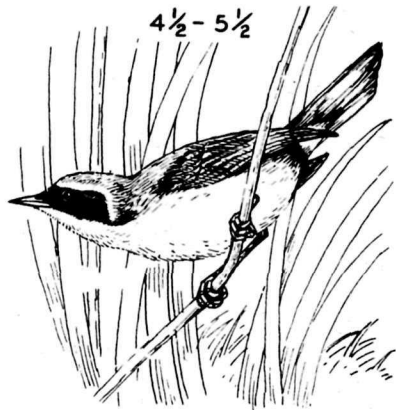
CHAT (*Icteria virens*): $6\frac{1}{2}$ - $7\frac{1}{2}$ in. Upper parts olive-brown; head darker with white eye-ring and line between eye and bill; throat, breast, and upper belly yellow; tail long; lower belly white. Song highly varied, suggestive of a mockingbird or thrasher rather than a warbler.

Frequents willow clumps and other dense growth chiefly in the Lower Sonoran to the lower Transition life-zone. S. V. in the lowlands to the west of the Yosemite region. C. V. to the Yosemite region.

TOLMIE'S WARBLER



YELLOW-THROAT



PILEOLATED WARBLER



PILEOLATED WARBLER (*Wilsonia pusilla*): 4½-5 in. Black "cap" on head, less evident or missing on female; forehead yellow; below bright yellow; back and wings greenish-yellow; prominent black eyes; no wing-bars or belly-streaks.

Frequents low, often shaded plant growth in moist areas. Breeds in the mountains and foothills; widespread during migration. S. V. to the Sierra from the Upper Sonoran through the Canadian life-zone, chiefly in Transition and Canadian. In Yosemite region frequents boggy meadows bordered by willow and dogwood. Also found in spring along the eastern base of the Sierra and as a M. in the western foothills.

WEAVER FINCHES: Family Ploceidae

ENGLISH SPARROW (*Passer domesticus*): 5½-6¼ in. Throat and upper breast black; crown gray; band behind eye and on nape brown; under parts dirty white; back, wings, and rump chestnut-brown, streaked with dusky. Female: Upper parts and sides brown, chestnut wanting; back, tail, and wings blackish; breast not streaked; no throat-patch.

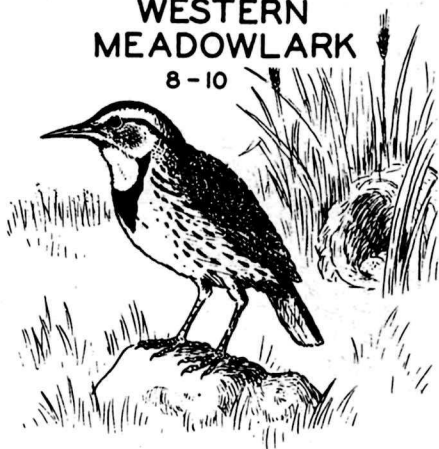
Widespread introduced exotic, common on streets and near buildings in most towns and about farms. Highly adaptable with respect to environment and foraging method, but prefers association with civilization. Occasionally wanders into Yosemite region in summer. Has been observed at El Portal and Yosemite Valley in vicinity of buildings.

AMERICAN ORIOLES AND BLACKBIRDS: Family Icteridae

WESTERN MEADOWLARK (*Sturnella neglecta*): 8-10 in. Upper parts brown, marked with dusky and buff; under parts yellow with black crescent on breast; buffy line through crown; yellow or buffy line over eye; outer tail feathers white; short tail.

WESTERN MEADOWLARK

8-10



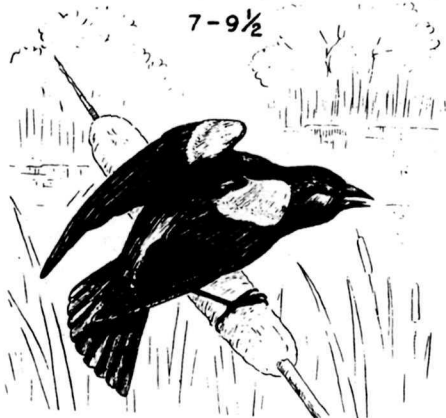
R. in open grasslands, breeding in the Lower Sonoran to the Transition life-zone. Seen in the San Joaquin Valley into the Sierran foothills. In the Yosemite region after the breeding season may be found to high altitudes as on top of Half Dome and near Ten Lakes, 9,700 feet. Occasionally seen in Yosemite Valley.

YELLOW-HEADED BLACKBIRD (*Xanthocephalus xanthocephalus*): 8-11 in. Head, neck, and breast yellow; rest of plumage black except large white patch on black wing. Female: Smaller than male; grayish-brown, faintly streaked below; throat, upper chest, and line over eye yellowish; no wing-patch.

Frequents tule marshes and adjacent meadows or cultivated ground chiefly in the Lower Sonoran to the Transition life-zone. C. V. to the Yosemite region. Has been recorded occasionally in Yosemite Valley.

RED-WINGED BLACKBIRD (*Agelaius phoeniceus*): 7-9½ in. Entire plumage black; wing-bend patch scarlet, bordered by buffy or orange in all except one subspecies; feathers of back edged with rusty in winter. Female: Crown dark brown with buffy streaks; buffy stripe over eye; back brown; under parts streaked with dark brown, tinged with buffy in winter.

RED-WINGED BLACKBIRD



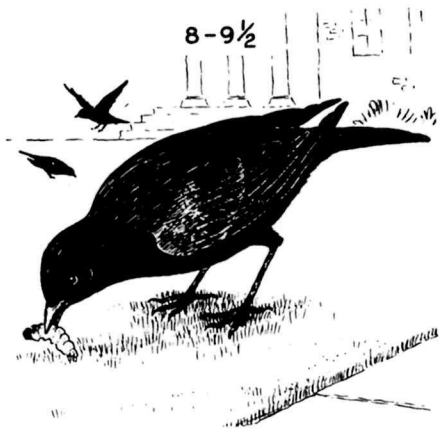
BULLOCK'S ORIOLE

7½-8½



BREWER'S BLACKBIRD

8-9½



Frequents marshes, moist fields, and margins of ponds, lakes, and slowly flowing streams where grown to tules, sedges, and willows. Inhabits the Lower Sonoran to the Transition life-zone during the breeding season. Found locally in the Yosemite region below the Canadian life-zone. Common in open wet meadows of Yosemite Valley in spring and early summer, where they nest, the males to be seen conspicuously guarding the nests.

BULLOCK'S ORIOLE (*Icterus bullocki*): 7½-8½ in. Forehead, line over eye, cheeks, and most of under parts orange running to yellowish on belly and outer tail feathers; rump yellowish; top of head, upper back, much of wings, and central area in tail black; wing marked with broad patch of white; black stripe on throat extends down from bill; black line runs from bill through eye to occiput. Female: Upper parts gray, washed on head with yellow; tail yellowish-brown; wings brown with whitish bars; sides of throat and breast yellowish, remaining under parts whitish except yellow beneath tail.

Frequents streamside and oak woodland in the Lower Sonoran to the Transition life-zone. Common S. V. at lower elevations on the west side of the Sierra. C. V. to Yosemite Valley.

BREWER'S BLACKBIRD (*Euphagus cyanocephalus*): 8-9½ in. Whole plumage glossy black; iris white. Female: Head and neck grayish-brown; remainder of plumage dark brown to blackish; iris brown. Usually seen in flocks.

Frequents grasslands, meadows, stream and lake borders, lawns, and cultivated fields, usually where there are scattered trees for roosting and nesting. Inhabits the Lower Sonoran to the Canadian life-zone. In the Yosemite region nests as high as the floor of Yosemite Valley and in summer and fall ranges upward nearly to timberline. Migrates to lowlands in winter. One of the most abundant birds in Yosemite Valley in spring and summer.

COWBIRD (*Molothrus ater*): 7-8 in. Whole body glossy black except head, neck, and breast chestnut-brown; eye dark; short conical bill; feet black. Female: Smaller than male; grayish-brown; throat and sides of head lighter; faintly streaked. Has habit of frequently pointing its beak directly upward. Lays its eggs in the nests of other birds.

Frequents lowlands where meadows and pastures are situated near tracts of willows and cottonwoods. Inhabits chiefly the Lower and Upper Sonoran life-zones but occasionally enters the Transition zone. C. V. to the Yosemite region. Commonly seen in Yosemite Valley.

COWBIRD

7-8



WESTERN TANAGER

6¼-7



TANAGERS: Family Thraupidae

WESTERN TANAGER (*Piranga ludoviciana*): 6¼-7 in. Most of head scarlet; wings black with yellowish bars; upper back and tail black; rest of body yellow. Female: Above olive-green or brownish-gray, tinged with yellow; below dull yellow; wings and tail brownish rather than black; whitish wing-bars; hint of scarlet on head and throat. Metallic call *tuweet tuweet* or *prit-it prit-it*, often given repeatedly.

Frequents fairly open coniferous forests with associated broad-leaved trees. Principally in the Transition and Canadian life-zones in summer. Widespread M. S. V. in the Yosemite region, observed as far east as Merced Lake. Common on the floor of Yosemite Valley and at Mariposa Grove. (See cover.)

FINCHES, SPARROWS, ETC.:

Family Fringillidae

BLACK-HEADED GROSBEAK (*Pheucticus melanocephalus*): 6½-7¾ in. Head black; neck, rump, breast, and sides brownish-orange running to yellow on belly; wings with white patch and two white wing-bars; white marks in outer tail feathers; large, stubby bill. Female and immature: Head dark brown with whitish stripe over each eye and similar or orange band through

BLACK-HEADED GROSBEAK

6½-7¾



center of crown; colors less intense. An elaborate song, similar in many respects to that of the robin.

Frequents chiefly oak woodland, willow-cottonwood association, and open coniferous forests, often near a stream. Inhabits the Lower Sonoran to the Transition life-zone in summer. Common S. V. in the Yosemite region. Often seen about habitations in Yosemite Valley.

LAZULI BUNTING (*Passerina amoena*): 5-5½ in. *Head, neck, lower back, and rump bright blue*; blue of upper back tinged with brown; black line extends from eye to bill; wings and tail dusky; tail with bluish cast; *white wing-bar; breast rusty*; remainder of under parts whitish. Female: Upper parts brown; under parts lighter; two buffy wing-bars.

Frequents areas with scattered clumps of brush, weed thickets, or other low vegetation on hillsides, often near streams. S. V. in the Lower Sonoran to the Transition life-zone. On both slopes of the Sierra in the Yosemite region. On the west slope ranges as high as Yosemite Valley.

EVENING GROSBEEK (*Hesperiphona vespertina*): 7½-8½ in. *Generally brownish-yellow* except black wings, crown, and tail; *large white*

EVENING GROSBEEK



wing-patch; forehead and line over eye yellow; head and breast sooty brown; *short, thick bill*. Female: Plumage generally brownish-gray; head darker; neck and lower back tinged with yellow; wings and tail generally black but with white markings.

Breeds in coniferous forests of the Transition and Canadian life-zones, especially where there are firs. S. V. throughout the Sierra. Occasional in Yosemite Valley.

PURPLE FINCH (*Carpodacus purpureus*): 5¼-6 in. *Rosy red on head, nape, throat, upper belly, and rump*; lower belly whitish with vague dark streaking; brown wings and tail; *tail quite deeply forked*. Female: Grayish-brown, streaked; *brown patch back of eye* bordered above and below by broad pale stripes. Song resembles that of the house finch, lively and rollicking, not abruptly ended after a few notes as in Cassin's finch.

In summer in the high Upper Sonoran and Transition life-zones, frequenting oak woodland and coniferous forest. Favors rather moist, shaded localities. In the Yosemite region in the zones mentioned. Occasional in Yosemite Valley.

CASSIN'S FINCH (*Carpodacus cassinii*): 6-6½ in. Resembles purple finch but *distinct crimson crown clearly set off from brown of neck and back* and less intense red on breast. Female: Above olive-gray, streaked with sooty or brown; below whitish narrowly streaked with dusky; faint light streak over eye. Song, similar to that of the house finch but abruptly terminated after a few rollicking notes.

Frequents open semiarid coniferous forests, chiefly of the Canadian and Hudsonian life-zones but also in the Transition zone and occasionally lower. Sparingly to lowlands in winter. In the Yosemite region R. in forested areas mostly between 6,000 and 10,000 feet. Occasionally observed in Yosemite Valley.

HOUSE FINCH (LINNET) (*Carduelis mexicanus*): 5½ in. Upper parts grayish-brown and faintly streaked; head, throat, breast, wing-bend, and rump red; belly light gray, with narrow dark stripes, especially on sides; bill short and stout; tail forked. Female: Red absent; upper parts grayish-brown; below whitish with streaks of brown. Often seen in flocks. Commonly nests near dwellings. Song a prolonged rollicking series of notes varying in pitch and often ending with a rising inflection.

Frequents a great variety of situations chiefly in the Lower and Upper Sonoran life-zones. Inhabits woodland, forest and chaparral borders, deserts, and cultivated lands. R. at lower elevations in the Yosemite region. C. V. to Yosemite Valley.

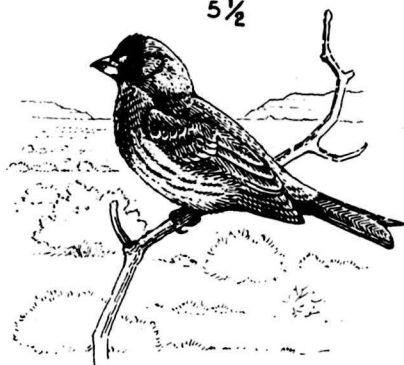
CALIFORNIA PINE GROSBEAK (*Pinicola enucleator*): 8-9½ in. Head, neck, breast, and rump rose-red; back gray tinged with rosy; wings dark brown with two white wing-bars; large beak; forked tail. Female: Plumage generally gray with hint of red on head and rump. Feeds on berries and needle buds and seeds of coniferous trees.

Frequents chiefly broken coniferous forest often near meadows or a stream in the high Canadian and Hudsonian life-zones. Sparse R. in the high Sierra Nevada. In the Yosemite region has been observed at elevations from 8,500 feet up to timberline.

SIERRA NEVADA ROSY FINCH (*Leucosticte tephrocotis*): 5½-6½ in. Black head-cap, bordered with ash-gray; above grayish-brown; middle area of wings, rump, and belly with varying amounts of rose-red; throat and breast rich brown, darkest on chin; bill and feet black; bill yellow in fall and winter, in male. Female: Resembles male, but colors duller, less rosy; bill lighter. Feeds on insects frozen in the snow or taken on the wing; also eats the seeds of sedges and other plants.

HOUSE FINCH

5½



Closely restricted to the Arctic-alpine and high Hudsonian life-zones where it frequents alpine turf, snowfields, talus, and cliffs. R. and breeding in the high Sierra, including the Yosemite region.

PINE SISKIN (*Spinus pinus*): 4½-5 in. Above grayish-brown, streaked with dusky; below lighter, streaked; yellow area in wing and at base of tail; tail short, emarginate. Often seen in flocks, flying in jerky, undulating fashion. Forages for seeds and buds in conifers and other trees and in flower heads about meadows.

Frequents chiefly coniferous trees in the Transition to the Hudsonian life-zone. R. in the Yosemite region; seen in Yosemite Valley in summer.

ARKANSAS GOLDFINCH (*Spinus psaltria*): 4 in. Above dull olive-green; below yellow; top of head, wings, and tail black; wings with white area; white patches in middle of outer tail feathers. Female: Lacks black cap; less yellow. Often associated with thistles. Twittering call as it flies, often in an indirect, undulating manner. Feeds in weed clumps and bushes on seed-heads of composites and other plants.

Frequents open terrain with scattered trees and bushes. R. in the Lower Sonoran to the Transition life-zone. C. V. to Yosemite Valley.

ARKANSAS GOLDFINCH



RED CROSSBILL (*Loxia curvirostra*): 5½-6½ in. Body generally brick red, brightest on head and rump; wings and tail dusky; tips of bill crossed; tail forked. Immature males often with orange, instead of red, and patches of olive and gray. Female: Dull olive-gray with yellowish on under parts and rump; wings and tail dusky. May be seen in small groups high in trees. Beak adapted for prying apart scales of pine and fir cones to obtain seeds.

Frequents coniferous forests of the Transition to the Hudsonian life-zone. In the Yosemite region, R. in the Canadian and especially the Hudsonian life-zones. Reported as nesting in Tulumme Meadows.

GREEN-TAILED TOWHEE

6¼-7

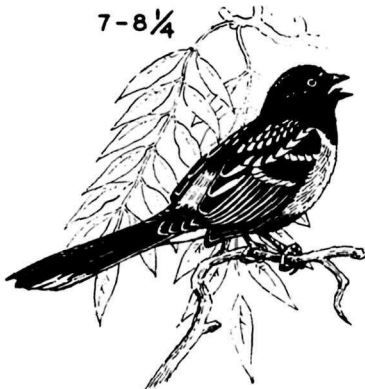


GREEN-TAILED TOWHEE (*Chlorura chlorura*): 6¼-7 in. Above olive-green; tail yellowish-green; forehead dark gray; crown reddish-brown; white line from bill to eye and also in malar region; throat and belly white, separated by olive-gray breast; edge of wing yellow. Immature: Lacks reddish-brown crown. Call a cat-like mew, mew.

Inhabits chiefly chaparral growth of the Transition, Canadian, and Hudsonian life-zones. Scattered trees may be present but forests are largely avoided. Thickets of ceanothus, manzanita, and sagebrush are frequented. S. V. in the Yosemite region; often seen in the Mariposa Grove, along the Pohono Trail, and occasionally in Yosemite Valley.

SPOTTED TOWHEE

7-8¼



SPOTTED TOWHEE (*Pipilo maculatus*): 7-8¼ in. Head and throat black; wings black, spotted and barred with white; tail black with white thumb-marks on outer tail feathers; sides rusty-brown; belly white; eyes red. Call a nasal, inquiring yeah with rising inflection. Often forages in ground cover of dead leaves and twigs; jumps and scratches with both feet at once.

Frequents chaparral, streamside thickets, and understory brush of open forests. In summer inhabits chiefly the Upper Sonoran and Transition life-

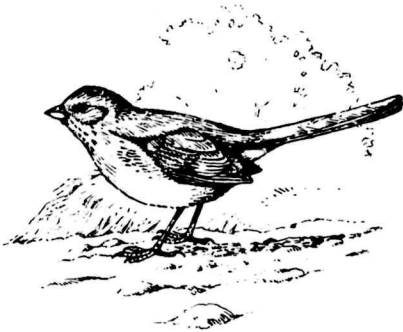
zones. In Yosemite region has been recorded as high as 7,700 feet, at Glen Aulin. R. in Yosemite Valley and western foothills.

BROWN TOWHEE (*Pipilo fuscus*): 8¼-9½ in. Body generally brown; eyelids, throat, and under tail feathers reddish-brown; chin lightly streaked with dusky; tail long.

Frequents open brushland, mixed woodland and underbrush, streamside growth, hedges, and shrubbery about homes. Inhabits the Lower and Upper Sonoran life-zones, and sparingly enters the Transition zone. R. in the western foothills. C. V. at lower elevations of the park as at El Portal.

BROWN TOWHEE

8¼-9½



SAVANNAH SPARROW

4¾-6



SAVANNAH SPARROW (*Passerculus sandwichensis*): 4¾-6 in. Above brown with streaks of dusky; below narrowly streaked with brown except on throat and belly; line over eye whitish to yellowish; white stripe through crown; dark spot on breast; legs light pink; tail slightly forked.

Frequents sagebrush, grassland, and marshes. In winter may be seen in cultivated or fallow fields. S. V. in the Lower Sonoran to the Transition life-zone. Ranges sporadically into the Yosemite region, largely from the east side, in late summer and fall. Has been recorded at 9,700 feet above Ten Lakes and in Yosemite Valley.

VESPER SPARROW (*Poocetes gramineus*): 5½-6¼ in. Above light grayish-brown, streaked with dusky; below soiled white with brown streaks on breast and flanks; suggestion of chestnut on bend of wing; obscure, dark spot on breast; two outer tail feathers white.

VESPER SPARROW

5½-6¼



LARK SPARROW

5½-6¼



Frequents open grassland or areas with low annuals and scattered low bushes. In summer inhabits chiefly the Upper Sonoran and Transition life-zones but locally enters the Canadian life-zone. S. V. on the east side of the Sierra. W. V. to the western part of the Yosemite region. Several records for Yosemite Valley.

LARK SPARROW (*Chondestes grammacus*): 5½-6¼ in. Upper parts brownish-gray streaked with black; top of head rich brown with white stripe through center; white streak over eye and another in malar region setting off chestnut patch on side of head; white throat marked at sides with black, setting off white malar band; under parts whitish; black spot on breast; tail rounded, with all but central feathers black, broadly tipped with white. Female with head markings duller and immature with streaked breast and without dark breast-spot.

Frequents open woodland, broken brushland, orchards, or other open ter-

rain with scattered trees or bushes, chiefly in the Lower and Upper Sonoran life-zones. R. in the western foothills in the Yosemite region. C. V. to Yosemite Valley.

RUFOUS-CROWNED SPARROW (*Aimophila ruficeps*): 5-5¾ in. Rufous red cap; throat white with black malar stripe; belly gray or buffy, unstreaked; back grayish-brown, streaked with rusty; buffy line over eye. Immature: Lacks reddish-brown crown and has streaked breast.

Frequents sparse low brush of grassy hillsides in the Upper Sonoran life-zone. Especially attracted to sagebrush. R. in the western foothills of the Yosemite region. C. V. to Yosemite Valley.

BELL'S SPARROW (*Amphispiza belli*): 5-6¼ in. Head gray, with white spot in front of eye; white eye-ring; throat white with narrow to broad black malar stripe, solid or broken, setting off white patch between it and dark cheek-patch; breast and belly whitish, streaked on sides; dark spot on breast; back grayish-brown, streaked.

Frequents arid to semiarid lowlands with chaparral or sagebrush and other bushes of desert type. Inhabits chiefly the Upper Sonoran life-zone. Frequents the foothills of the Yosemite region on the east and west sides of the Sierra. C. V. to Yosemite Valley.

RUFOUS-CROWNED SPARROW

5-5¾



BELL'S SPARROW

5-6¼



SLATE-COLORED JUNCO (*Junco hyemalis*): 5½-6½ in. Head, breast, and back slate-gray, contrasting with white belly; two outer tail feathers completely white, third partly so; no reddish or brown coloration in adult male. Female: Browner above; below pale. Immature: Often with faint brownish or buff on sides.

Frequents a great variety of habitats but often found where there is forest or brush cover of open type. Rare M. and W. V. throughout California except the Colorado Desert. Regular W. V. in the Yosemite region. Has been observed in Yosemite Valley.

OREGON JUNCO

5-6



OREGON JUNCO (*Junco oregonus*): 5-6 in. *Head, neck, and breast black*, brownish or slaty in female and immatures; back light brown to reddish-brown; under parts white, tinged with brownish or pinkish on sides; *outer tail feathers white*; bill whitish. Song suggests tinkle of bells; call a metallic *tck*. Nests on the ground or in trees.

Frequents a wide variety of habitats in the mountains but seems to prefer fairly moist woodland or forests with a broken understory. Abundant S. V. in the Yosemite region from the Transition zone to timberline. In winter descends to the foothills. Some remain in Yosemite Valley in winter.

CHIPPING SPARROW (*Spizella passerina*): 5 - 5½ in. Above brown, streaked with black; *crown chestnut*; whitish line over eye and black line extending from bill through eye; *under parts light gray, unstreaked*; relatively long, notched tail. Immatures: Streaked below and crown may be divided by pale line. Call a whirring series of short notes near one pitch.

Frequents open woodland or coniferous forests with little understory vegetation. Inhabits the Lower Sonoran up through the Hudsonian life-zone in summer. S. V. in the Yosemite region, most commonly in the Upper Sonoran and Transition life-zones. To be seen in Yosemite Valley.

CHIPPING SPARROW

5 - 5½



WHITE-CROWNED SPARROW

5¾ - 7



WHITE-CROWNED SPARROW (*Zonotrichia leucophrys*): 5¾-7 in. *Head with black and white stripes*; white stripe from above bill through middle of crown; *white stripe over eye stopping short of or reaching bill*; upper back gray-brown, streaked; rump lighter brown, unstreaked; under parts whitish, darker on breast and sides. Immature: Head stripes chestnut-brown and gray; gray of under parts tinged with brownish. Song is sweet and plaintive.

Frequents grassy areas with scattered bushes and trees. In the Sierra seems to favor willow thickets in mountain meadows. In winter in shrubbery, broken tracts of chaparral, etc. In the Sierra, S. V. in the Transition to the Hudsonian life-zone. Widespread in the lowlands in winter. In the Yosemite region nests chiefly in the Hudsonian zone but a few nesting records for Yosemite. Common in Tuolumne Meadows area. Fall and winter visitant to Yosemite Valley.

GOLDEN-CROWNED SPARROW (*Zonotrichia atricapilla*): 6-7 in. Crown yellow bordered by black; back brown, streaked with black; two white wing-bars; under parts light grayish-brown. Immature: Yellow of crown faint and largely confined to forehead. Often gives plaintive call *Oh, come here*, on a descending scale.

Frequents broken brushland and tracts of grassy or weedy ground where there is a scattering of bushes and trees. W. V. to western foothills. In the fall, enters the Yosemite region from the lowlands and ranges up through the Canadian life-zone. C. V. to Yosemite Valley.

FOX SPARROW (*Passerella iliaca*): 6¼-7¼ in. Above varying from soft, rich, reddish-brown to grayish; sides and breast irregularly streaked with heavy arrow-like black to rufous spots; rump and tail reddish-brown; bill heavy, grayish to yellowish. Compare with hermit thrush. Excellent singer, first two notes loud and clear followed by trills. Forages in thickets and on the ground, in areas where there is abundant leaf litter, scratching with both feet at the same time.

Frequents chaparral, streamside tangles, and underbrush of woodland and forest. In the Yosemite region S. V. to the Canadian life-zone on both slopes of the Sierra. Seen along the rim of Yosemite Valley and in the upper part of Mariposa Grove. Some subspecies M. and W. V. chiefly in the Upper Sonoran zone.

LINCOLN'S SPARROW (*Melospiza lincolni*): 5-6 in. Above brownish-gray, more or less irregularly streaked; breast buffy, narrowly streaked with black, sometimes with dark spot in middle; belly whitish, largely unstreaked; sides grayish with narrow black streaks; narrow eye-ring.

Seeks damp meadows and stream borders in mountains in summer, chiefly in the Canadian life-zone but also in adjacent zones. In the Yosemite region in summer in the zones mentioned to

GOLDEN-CROWNED SPARROW

6-7



FOX SPARROW

6¼-7¼



LINCOLN'S SPARROW

5-6



SONG SPARROW

5-6¾



9,000 feet at the head of Lyell Canyon. Nests regularly in meadows of the upper Mariposa Grove. In winter and fall at lower elevations, occasionally including Yosemite Valley.

SONG SPARROW (*Melospiza melodia*): 5-6¾ in. Above varying from brownish-gray to rusty with darker streaks; tail dark brown to rusty; below light gray streaked with dark brown or rusty, most profusely on breast; *brown or rusty spots radiate from larger breast spot*; breast spot may be poorly defined or absent in young; *indistinct whitish stripe over eye* with black one on side of throat, setting off white malar stripe. Many subspecies differing in color and size.

Frequents tangles of brush, weeds, and other low growth, usually near water or over damp ground. Often becomes established in shrubbery about

dwelling. Breeds over a wide zonal range from the Lower Sonoran to the Hudsonian life-zone. R. at lower elevations in the Yosemite region, sparingly including Yosemite Valley and Wawona. W. V. largely below 4,500 feet on the west slope of the Sierra. In the fall stragglers may reach 9,000 feet on the east slope.

Species Recorded in Yosemite National Park but of Infrequent or Uncertain Occurrence

Arctic loon, white-tailed kite, sora rail, solitary sandpiper, willet, black-necked stilt, red phalarope, barn owl, barn swallow, bohemian waxwing, blue grosbeak, American goldfinch, Lawrence's goldfinch, Brewer's sparrow, Harris's sparrow, white-throated sparrow.



FAMILY CHARACTERISTICS OF BIRDS

THE CHARACTER OF THE BILL AND FEET OF A BIRD OFTEN MAY SERVE AS A GUIDE TO ITS HABITS AND AN INDICATION OF ITS RELATIONSHIP TO OTHER BIRDS. FOR EXAMPLE, SEED-EATING SPECIES HAVE SHORT STOUT BILLS THAT ARE USED IN CRACKING SEEDS, WOODPECKERS HAVE LONG CHISEL-LIKE BILLS FOR DRILLING INTO WOOD, AND OWLS HAVE HOOKED BEAKS FOR TEARING APART ANIMALS THEY CAPTURE WITH THEIR LONG CURVED TALONS. OFTEN ALL THE MEMBERS OF A BIRD FAMILY HAVE SIMILAR BEAK AND FOOT STRUCTURE BUT THIS IS NOT INVARIABLY TRUE BECAUSE THE MEMBERS OF A FAMILY MAY HAVE BECOME ADAPTED TO DIFFERENT MODES OF LIFE.

The illustrations (plates 2-4, figures 1-45) depict variation in beak and foot structure. The families shown with the species representing them are as follows:

Grebes: Order COLYMBIFORMES

1. Grebes: Family COLYMBIDAE—Western grebe

Pelican-like birds: Order PELECANIFORMES

2. Pelicans: Family PELECANIDAE—White pelican (Foot as in figure 3)
3. Cormorants: Family PHALACROCORACIDAE—Double-crested cormorant

Stork-like birds: Order CICONIIFORMES

4. Herons and Bitterns: Family ARDEIDAE—Green heron (note comb on middle toenail)

Goose-like birds: Order ANSERIFORMES

5. Ducks, Geese, and Swans: Family ANATIDAE—Buffle-head duck

Hawk-like birds: Order FALCONIFORMES

6. New-World Vultures: Family CATHARTIDAE—Turkey vulture
7. Kites, Hawks, and Eagles: Family ACCIPITRIDAE—Red-tailed hawk

Fowl-like birds: Order GALLIFORMES

8. Quail and Pheasants: Family PHASIANIDAE—Gambel's quail

Crane-like birds: Order GRUIFORMES

9. Rails: Family RALLIDAE—American coot

Plover-like birds: Order CHARADRIIFORMES

10. Plovers: Family CHARADRIIDAE—Killdeer
11. Snipe, Sandpipers, etc.: Family SCOLOPACIDAE—Least sandpiper
12. Avocets and Stilts: Family RECURVIROSTRIDAE—American avocet
13. Phalaropes: Family PHALAROPODIDAE—Northern phalarope
14. Gulls and Terns: Family LARIDAE—Ring-billed gull (immature)

Pigeon-like birds: Order COLUMBIFORMES

15. Pigeons and Doves: Family COLUMBIDAE—Mourning dove

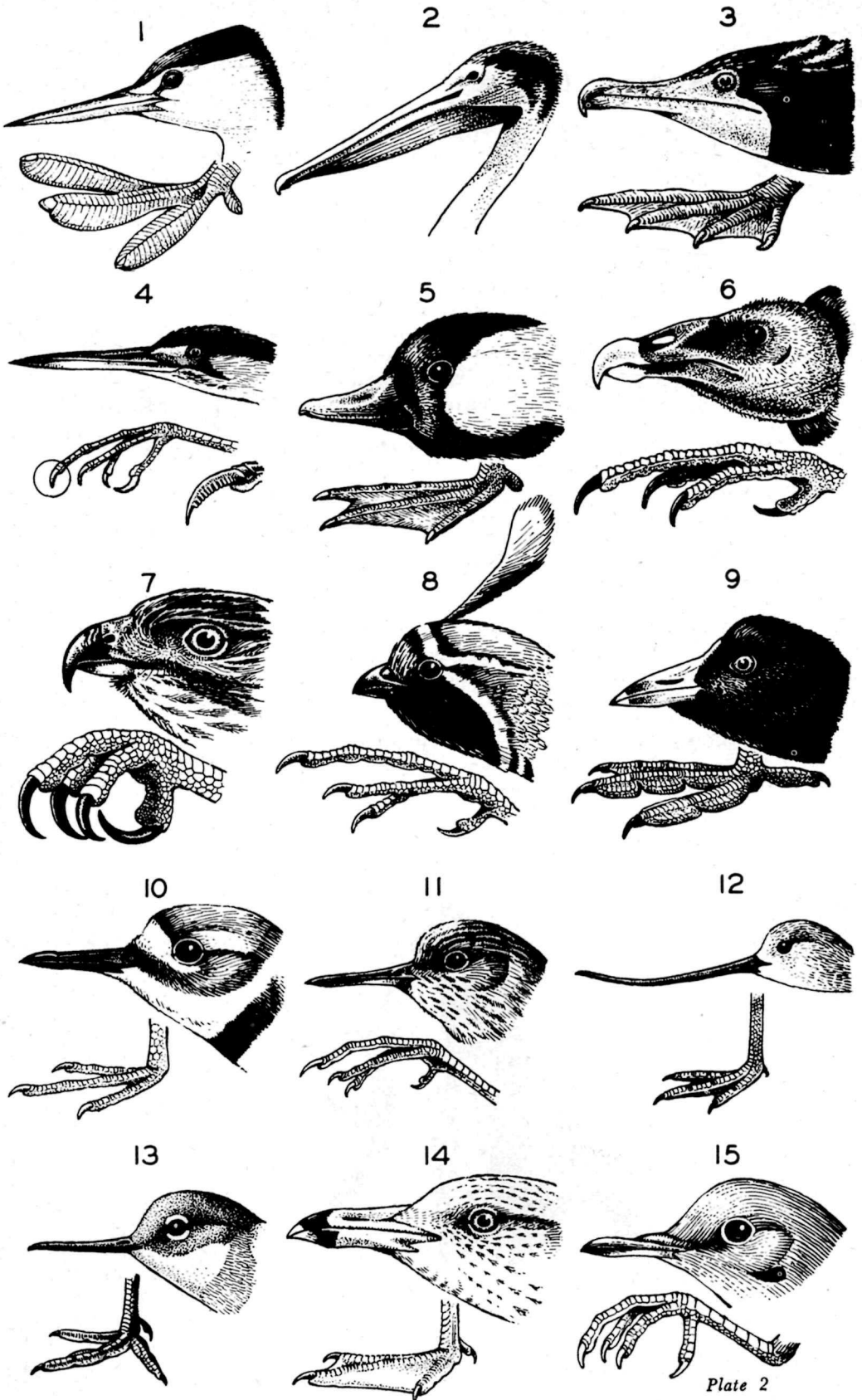


Plate 2

Cuckoo-like birds: Order CUCULIFORMES

16. Cuckoos, Road-runners, etc.: Family CUCULIDAE—California road-runner

Owls: Order STRIGIFORMES

17. Barn Owls: Family TYTONIDAE—Barn owl (Note comb on front toenail)
 18. Horned Owls, etc.: Family STRIGIDAE—Screech owl (Foot similar to Tytonidae but no comb on nail)

Goatsucker-like birds: Order CAPRIMULGIFORMES

19. Goatsuckers: Family CAPRIMULGIDAE—Booming nighthawk (Note comb on middle toenail)

Swifts and Hummingbirds: Order MICROPODIFORMES

20. Swifts: Family MICROPODIDAE—Vaux's swift (Note bare spine-like shafts of tips of tail feathers)
 21. Hummingbirds: Family TROCHILIDAE—Allen's hummingbird (female)

Roller-like birds: Order CORACIFORMES

22. Kingfishers: Family ALCEDINIDAE—Belted kingfisher

Woodpecker-like birds: Order PICIFORMES

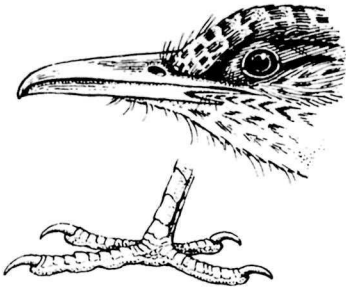
23. Woodpeckers: Family PICIDAE—Yellow-bellied sapsucker (Note the *zygodactyl* foot—two toes in front, two behind)

Perching birds: Order PASSERIFORMES

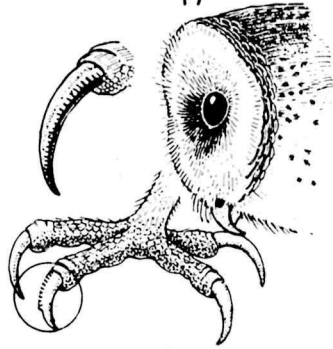
- *24. Tyrant Flycatchers: Family TYRANNIDAE—Say's phoebe
 25. Larks: Family ALAUDIDAE—Horned lark
 26. Swallows: Family HIRUNDINIDAE—Violet-green swallow
 27. Jays, Magpies, and Crows: Family CORVIDAE—Scrub jay
 *28. Tits: Family PARIDAE—Plain titmouse
 *29. Nuthatches: Family SITTIDAE—White-breasted nuthatch
 *30. Creepers: Family CERTHIDAE—Brown creeper (The tail feathers are stiffened and pointed)



16



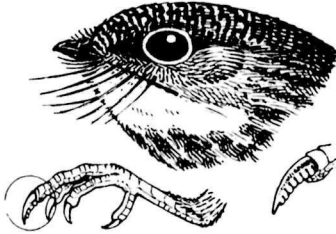
17



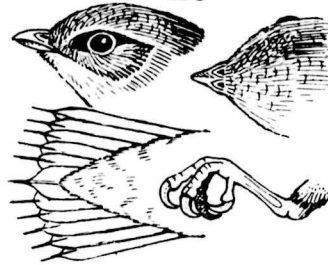
18



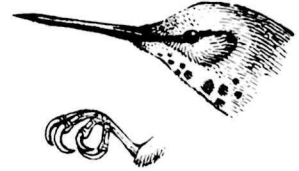
19



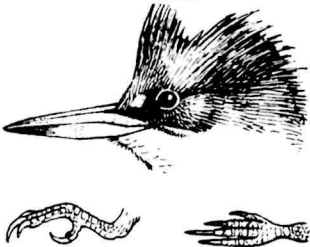
20



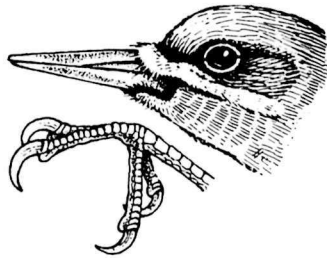
21



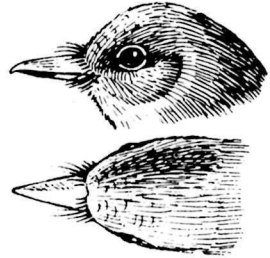
22



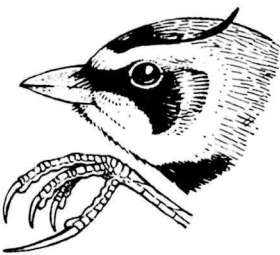
23



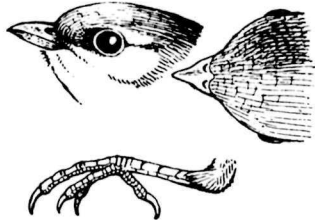
24



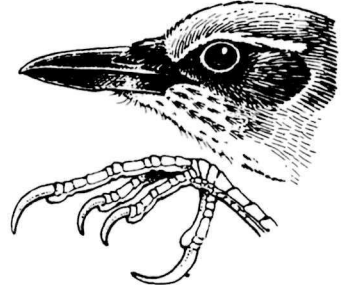
25



26



27



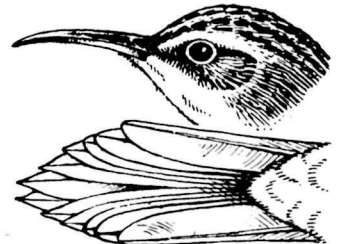
28



29



30



- *31. Wren-tits: Family CHAMAEIDAE—Wren-tit
- *32. Dippers: Family CINCLIDAE—American dipper
- *33. Wrens: Family TROGLODYTIDAE—Bewick's wren
- *34. Mockingbirds and Thrashers: Family MIMIDAE—California thrasher
- 35. Thrushes: Family TURDIDAE—Hermit thrush
- *36. Old-World Warblers, Gnatcatchers, Kinglets: Family SYLVIIDAE—Golden-crowned kinglet
- 37. Wagtails: Family MOTACILLIDAE—Water pipit
- *38. Waxwings: Family BOMBYCILLIDAE—Cedar waxwing
- *39. Shrikes: Family LANIIDAE—Loggerhead shrike
- *40. Vireos: Family VIREONIDAE—Solitary vireo
- *41. Wood Warblers: Family COMPSOHLYPIDAE—Yellow-throat
- *42. Weaver Finches: Family PLOCEIDAE—English sparrow
- *43. American Orioles and Blackbirds: Family ICTERIDAE—Scott's oriole
- *44. Tanagers: Family THRAUPIDAE—Western tanager
- *45. Finches, Sparrows, etc.: Family FRINGILLIDAE—White-crowned sparrow

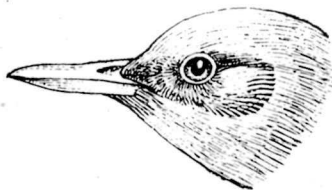
* The species representing these families have a foot structure similar to that shown in figures 27 and 35.



31



32



33



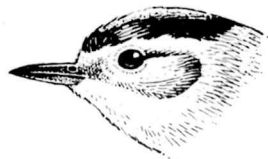
34



35



36



37



38



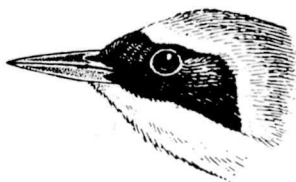
39



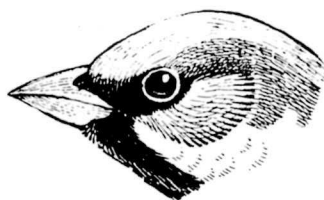
40



41



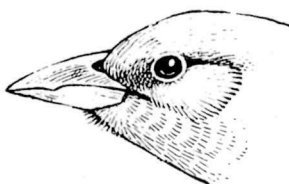
42



43



44



45



IDENTIFICATION KEY

Descriptions are of male birds in breeding plumage unless otherwise noted. To aid in the identification, the birds are segregated as follows:

INDEX TO KEY CHARACTERS

- I. Categories based on color (including black and white)
 - (1) Birds with conspicuous reddish or scarlet markings
 - (2) Birds with conspicuous orange, chestnut, or rusty markings
 - (3) Birds with conspicuous yellow or greenish-yellow markings
 - (4) Birds with conspicuous blue markings
 - (5) Birds with conspicuous black markings
 - (6) Birds with conspicuous white in tail, wings, or both
- II. Categories based on characteristics other than color
 - (7) Birds with line over, under, through, or near the eye
 - (8) Birds with collar-band or breast-patch
 - (9) Birds with eye-ring
 - (10) Birds with forked tail
 - (11) Birds with crest or plume
 - (12) Woodpeckers and other climbers
 - (13) Birds that hold the tail erect
 - (14) Birds that bob or teeter
 - (15) Ducks and duck-like birds

The bird seen should be placed under the most appropriate of these headings. A decision as to size is the next step. The size of the bird is compared with the length of a junco, about 6 inches, Brewer's blackbird, about 10 inches, or crow, about 18 inches. It follows that the observer should, at the start, know or soon become acquainted with these key birds.

Since it is often difficult to determine size (length from tip of bill to tip of tail) of the bird in the field, the observer may need to check the identification in two or more size groups. The lengths cited throughout are approximate.

Birds not easily identified or that fit readily into a number of categories are sometimes described in two or more of the categories listed above. Birds easily identified are described but once. Descriptions of birds in the key are not complete. As a check on identification refer to the more detailed descriptions in the text.

Hummingbirds, hawks, and owls do not appear in the key. These birds are easily recognized as to group, hence reference can be made directly to the descriptions of species and each account read until identification is made. Certain of the rare Yosemite species have been omitted from the key.

I. CATEGORIES BASED ON COLOR (INCLUDING BLACK AND WHITE)

- (1) BIRDS WITH CONSPICUOUS REDDISH OR SCARLET MARKINGS
 - A. About size of Junco (6 in.)
 - Body reddish; tail slightly forked; tips of bill crossed; chunky—RED CROSSBILL
 - Head, rump, breast red; tail forked—PURPLE HOUSE, OR CASSIN'S FINCH
 - Body dark brown; back of head light gray; wings and rump pinkish; high Sierra—SIERRA NEVADA ROSY FINCH
 - B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 - Head reddish; body yellow; wings and tail black—WESTERN TANAGER
 - Head, throat, breast red; woodpecker—YELLOW-BELLIED SAPSUCKER
 - Red patch on wing-bend, otherwise black—RED-WINGED BLACKBIRD
 - Foreparts and rump rose-red; white wing-bars; tail forked; high Sierra—PINE GROSBEAK
- (2) BIRDS WITH CONSPICUOUS ORANGE, CHESTNUT, OR RUSTY MARKINGS
 - A. About size of Junco (6 in.)
 - Crown rusty; black line through eye; breast not streaked—CHIPPING SPARROW
 - Tail rusty; long, slender, slightly curved bill; white breast—CANYON WREN
 - Tail rusty; slender legs and beak; nervous twitching of wings; breast spotted—HERMIT THRUSH
 - B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 - Crown reddish-brown; tail yellowish-green; throat and belly white—GREEN-TAILED TOWHEE
 - Under parts orange except yellow belly; head black; white in black wings and tail; bill thick—BLACK-HEADED GROSBEAK
 - Sides reddish-brown; head black; below white; eye orange—SPOTTED TOWHEE
 - Tail rusty; bill thick; breast spotted—FOX SPARROW
 - C. About size of Brewer's Blackbird (10 in.)
 - Chestnut patch in middle of belly; plume tipped forward—CALIFORNIA QUAIL
 - Throat and sides with chestnut; long, slender plume tipped backward or upright; mountains—MOUNTAIN QUAIL
 - Rusty toward base of tail; white tips to tail feathers; white in slender wings; vociferous—KILLDEER
 - Tail orange-brown; wings bluish in male; black lines on face—SPARROW HAWK
 - Breast orange; above dark brown; bill yellow—ROBIN
 - Breast brownish-orange with black band—VARIED THRUSH
 - D. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.) or larger
 - Lining of wings and under surface of tail orange; rump white—RED-SHAFTED FLICKER
 - Tail rusty; soaring flight—RED-TAILED HAWK

(3) BIRDS WITH CONSPICUOUS YELLOW OR GREENISH-YELLOW MARKINGS

- A. Smaller than Junco (6 in.)
1. With conspicuous black markings
 Head-cap black; no white in wings and tail; generally yellow—PILEOLATED WARBLER
 Throat black; head yellow; belly white; wing-bars—HERMIT WARBLER
 Crown black; back grayish-green; below yellow—ARKANSAS GOLDFINCH
 Yellow spot on rump, head, sides; gray above, streaked with black; white thumb-marks on tail—AUDUBON'S WARBLER
 2. Without black markings
 Above yellowish-green; under parts bright yellow; conspicuous black eyes; very active; spreads tail—IMMATURE or FEMALE PILEOLATED WARBLER
 Almost entirely yellow; wings and tail dusky—YELLOW WARBLER
 Rusty crown-patch; head gray; eye-ring; below yellow—NASHVILLE WARBLER
 Below greenish-yellow; above olive-green; obscure orange patch on crown—ORANGE-CROWNED WARBLER
 Head and neck slaty; below yellow—TOLMIE'S WARBLER
 Below faint yellow; above olive or gray; eye-ring—EMPIDONAX FLYCATCHER (pages 110, 111)
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Crown golden; generally brown above and light below—GOLDEN-CROWNED SPARROW
 Above greenish-yellow; below yellow; wings and tail dusky—FEMALE WESTERN Tanager
 Forehead and line over eye yellow; white patch on black wing; thick bill—EVENING GROSBEAK
 Belly yellow; tail black with white outer feathers—WESTERN KINGBIRD
- C. About size of Brewer's Blackbird (10 in.)
 Below yellow; black crescent on breast; white outer tail feathers—WESTERN MEADOWLARK

(4) BIRDS WITH CONSPICUOUS BLUE MARKINGS

- A. About size of Junco (6 in.) or smaller
 Head, neck, and back blue; white wing-bar; breast chestnut—LAZULI BUNTING
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Generally blue; tail forked—MOUNTAIN BLUEBIRD
 Above blue; breast rusty—MEXICAN BLUEBIRD
- C. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
 Generally blue; head and neck black; crested—STELLER'S JAY
 Generally blue; brown patch on back; not crested—SCRUB JAY
 Above blue; blue band on breast; crested—BELTED KINGFISHER
 Similar to preceding but sides rusty and two bands on breast—FEMALE BELTED KINGFISHER
- D. Larger than Crow (18 in.)
 Above slaty blue but tips of wings darker; long legs and neck (42-50 in.)—GREAT BLUE HERON

(5) BIRDS WITH CONSPICUOUS BLACK MARKINGS

- A. About size of Junco (6 in.) or smaller
 Head, neck, and throat black; white outer tail feathers—JUNCO
 Crown and nape black; under parts white; climber—WHITE-BREASTED NUTHATCH
 Head black with two white stripes, one above, other below eye; black cheeks—BLACK-THROATED GRAY WARBLER
 Throat and head black; cheeks white—MOUNTAIN CHICKADEE
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Conspicuous white stripe along bend of wing; back and wing black with white spotting; head, neck, and breast red—YELLOW-BELLIED SAPSUCKER
 Wings with large white patch; red streak on chin and throat; rump white; belly yellow—YELLOW-BELLIED SAPSUCKER
 White bars across black back; nape red—NUTTALL'S WOODPECKER
 Similar to above but without red—FEMALE NUTTALL'S WOODPECKER
 Body black; head white; white on wings; nape red—WHITE-HEADED WOODPECKER
 White patch down black back; white outer tail feathers with black markings—DOWNY WOODPECKER
 Head and breast black; below white; inconspicuous crest—BLACK PHOEBE
 Head, neck, throat black; white thumb-marks on tips of outer tail feathers; sides reddish-brown—SPOTTED TOWHEE
- C. About size of Brewer's Blackbird (10 in.)
 Back, wings, and tail black; rump and patch in wing white; crown red; throat, forehead, and sides of head white—ACORN WOODPECKER
 Entirely iridescent black; iris white; gregarious—MALE BREWER'S BLACKBIRD
 Body blackish; eye dark brown; head and neck brownish—FEMALE BREWER'S BLACKBIRD
 Wings black with white patch; black bar through eye; hooked beak—SHRIKE
- D. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
 Black crescent on breast; red line on side of head; rump white; wing lining orange—RED-SHAFTED FLICKER
 Upper parts black; forehead and side of head dull red; breast gray passing to rose on belly—LEWIS'S WOODPECKER
 Wings and tail black, marked with white; rest of body gray—CLARK'S NUTCRACKER
- E. About size of Crow (18 in.) or larger
 Entirely iridescent black; often in flocks; cultivated lands—AMERICAN CROW
 Generally black; crest red—PILEATED WOODPECKER

(6) BIRDS WITH CONSPICUOUS WHITE IN TAIL, WINGS, OR BOTH

1. White in both wing and tail
 - A. Smaller than Junco (6 in.)
Crown black; below yellow; above olive-gray—ARKANSAS GOLDFINCH
Yellowish patch on chin, crown, rump, and on each side; under parts whitish;
above bluish-gray—AUDUBON'S WARBLER
 - B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
Head black; bill thick; throat and breast orange—BLACK-HEADED GROSBEEK
Head black; eyes red; sides reddish-brown—SPOTTED TOWHEE
Long, slender-winged, erratic flyer, active at dusk—BOOMING NIGHTHAWK
 - C. About size of Brewer's Blackbird (10 in.)
Black mask; beak hooked—SHRIKE
Body generally gray; wings and tail black—MOCKINGBIRD
Generally gray; wings and tail with black; high mountains; nasal call—CLARK'S
NUTCRACKER
Wings slender; tail rusty; above dark brown; black bands on breast; below white—
KILLDEER
 - D. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
Upper parts brown; yellow below; black crescent on breast—WESTERN
MEADOWLARK
2. White in tail
 - A. Smaller than Junco (6 in.)
Yellow patch on rump; white thumb-marks on tips of tail feathers—FEMALE
or IMMATURE AUDUBON'S WARBLER
Head, neck, and breast black; back brown; bill yellow—JUNCO
Head, neck, and breast gray; back brown; bill yellowish—FEMALE JUNCO
Top of head and nape black; long, slender bill—WHITE-BREASTED NUTHATCH
 - B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
Tail-wagging habit; breast streaked—WATER PIPIT
Generally gray; buffy bar in wing—TOWNSEND'S SOLITAIRE
 - C. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
Central tail feathers long; tail wedge-shaped when spread; pinkish throat and
breast—MOURNING DOVE
3. White in wing
 - A. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
Generally brownish-yellow; bill short, thick; tail forked—EVENING GROSBEEK
Wings swallow-like; tail forked; under parts barred—BOOMING NIGHTHAWK
Head white; nape red (not in female); generally black—WHITE-HEADED
WOODPECKER
Generally black; rump and belly white; crown red—ACORN WOODPECKER

II. CATEGORIES BASED ON CHARACTERISTICS OTHER THAN COLOR

(7) BIRDS WITH LINE OVER, UNDER, THROUGH, OR NEAR THE EYE

- A. Smaller than Junco (6 in.)
 1. One or more wing-bars
Above grayish; white line over eye; crown orange, margined by yellow and
black—GOLDEN-CROWNED KINGLET
Grayish-brown; white line over eye; yellow tinge on sides—WARBLING VIREO
Above olive-gray; white line from bill to eye-ring—SOLITARY VIREO
Above gray; inconspicuous wing-bars and white line over eye; willows, usually—
WARBLING VIREO
Top of head, cheeks, throat black; back slaty gray—BLACK-THROATED GRAY
WARBLER
Throat and cheeks black; yellow stripe above and below eye—TOWNSEND'S
WARBLER
 2. Without wing-bars
Black line through eye; crown reddish-brown; tail forked—CHIPPING SPARROW
Throat and head black; cheeks white—MOUNTAIN CHICKADEE
Above grayish-brown, speckled; tail barred; rocky areas; bobs—ROCK WREN
Above speckled, reddish-brown, brightest on tail; throat white; abdomen reddish-
brown; bill curved—CANYON WREN
Above brown; tail comparatively long, barred, rounded; tail feathers white-tipped;
white line over eye; slender, slightly curved bill—BEWICK'S WREN
Above dark brown; tail very short, barred; bill short—WINTER WREN
Tiny, grayish-brown bird; inconspicuous white nape; short tail—PYGMY NUT-
HATCH
Above bluish-gray; below reddish-brown—RED-BREASTED NUTHATCH
- B. About size of Junco (6 in.)
Dusky line through eye; broad, buffy breast-band streaked narrowly with black;
damp meadows—LINCOLN'S SPARROW
Crown black, broken by three white bands; a white band on each side of head
above eye—WHITE-CROWNED SPARROW
Arrangement of bands similar to preceding but white replaced by grayish-brown
and black by rusty brown—IMMATURE WHITE-CROWNED SPARROW
- C. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
Head dark brown with white streak over eye; orange line through crown; below
pale orange; white in wings and tail—FEMALE BLACK-HEADED GROSBEEK

(8) BIRDS WITH COLLAR-BAND OR BREAST-PATCH

- A. About size of Junco (6 in.)
Dark spot on breast; tail held erect; above brown, streaked below—SONG
SPARROW
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
Two black breast-bands; above brown; below white—KILLDEER
- C. About size of Brewer's Blackbird (10 in.)
Black collar; above slaty brown; orange stripe behind eye—VARIED THRUSH

- D. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
 Black crescent on breast; back and wings barred; below whitish with black spots;
 rump white—**RED-SHAFTED FLICKER**
 Breast slaty; crested; below white; above slaty blue—**BELTED KINGFISHER**
 Similar to preceding but an additional chestnut band across belly—**FEMALE**
BELTED KINGFISHER
- (9) **BIRDS WITH EYE-RING**
- A. Smaller than Junco (6 in.)
 Nervous twitching of wings; generally gray, above tinged with green; inconspicuous scarlet patch on top of head; wing-bars—**RUBY-CROWNED KINGLET**
 Above gray; line from bill to eye-ring; wing-bars; below white—**SOLITARY VIREO**
 Top and sides of head slaty; faint, chestnut head-cap; above olive-green—**NASHVILLE WARBLER**
 Eyelids white; foreparts slaty; belly yellow—**TOLMIE'S WARBLER**
- B. About size of Junco (6 in.)
 Above brown; wing-bars; breast yellowish—**EMPIDONAX FLYCATCHER**
 (pages 110, 111)
- C. Larger than Junco (6 in.)
 Eye-ring buffy; breast speckled; above uniformly gray-brown; below whitish except buffy on breast—**SWAINSON'S THRUSH**
 Above grayish-brown; below pale orange—**FEMALE ROBIN**
 Breast spotted with black; back brown, speckled with whitish—**IMMATURE ROBIN**
 Narrow buffy bar running length of extended wing; generally gray; white on edge of outer tail feathers—**TOWNSEND'S SOLITAIRE**
- (10) **BIRDS WITH FORKED TAIL**
- A. Smaller than Junco (6 in.)
 Black line through eye; crown reddish-brown—**CHIPPING SPARROW**
 Streaked above and below; yellow in wings and outspread tail—**PINE SISKIN**
- B. About size of Junco (6 in.)
 Above brown; eye-ring; under parts yellowish—**EMPIDONAX FLYCATCHER**
 (pages 110, 111)
 Body generally reddish; wings and tail dusky; tips of bill crossed—**RED CROSSBILL**
 Wings slender and pointed; above dark except white patches on rump; below white—**VIOLET-GREEN SWALLOW**
 Above greenish-blue; below white—**TREE SWALLOW**
 Above brown; chin, throat, and breast grayish-brown—**ROUGH-WINGED SWALLOW**
- C. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Above brownish-gray; white rump-tufts—**OLIVE-SIDED FLYCATCHER**
 Under parts dull yellow; generally grayish above; wing-bars—**IMMATURE WESTERN Tanager**
 Generally brownish-black; throat and stripe along belly white; forages in air—**WHITE-THROATED SWIFT**
 Entirely blue, lighter beneath—**MOUNTAIN BLUEBIRD**
 Generally brownish; rump, tail, and wings bluish; below tending toward white—**FEMALE MOUNTAIN BLUEBIRD**
- D. About size of Brewer's Blackbird (10 in.)
 Above mottled; white band midway between tip and bend in long, slender wings—**BOOMING NIGHTHAWK**
- (11) **BIRDS WITH CREST OR PLUME**
- A. About size of Junco (6 in.)
 Indefinite crest; sits erect with tail on line with back; above grayish-brown; no eye-ring—**WOOD PEWEE**
 Above brownish-gray; eye-ring; whitish wing-bars; tail droops at rest—**EMPIDONAX FLYCATCHER** (pages 110, 111)
 Crested; entirely gray—**PLAIN TITMOUSE**
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Inconspicuous crest; head black; belly white; often jerks tail—**BLACK PHOEBE**
 Generally gray; lighter below; often sits high on coniferous stubs—**OLIVE-SIDED FLYCATCHER**
 Suggestion of crest; under parts white; under side of tail rufous—**ASH-THROATED FLYCATCHER**
- C. About size of Brewer's Blackbird (10 in.)
 Plume tipped forward—**CALIFORNIA QUAIL**
 Long, slender, erect plume; chestnut on face and sides; mountains—**MOUNTAIN QUAIL**
- (12) **WOODPECKERS AND OTHER CLIMBERS**
- A. Smaller than Junco (6 in.)
 Long, curved bill; creeps upward on tree trunks—**BROWN CREEPER**
 White line over eye; top of head black; breast rusty—**RED-BREASTED NUTHATCH**
 Crown and nape black; sides of head white; creeps both up and down—**WHITE-BREASTED NUTHATCH**
 Above bluish-gray; black line through eye; tail very short—**PYGMY NUTHATCH**
- B. About size of Junco (6 in.)
 Broad white stripe down back; crown red; inconspicuous black bars on white outer tail feathers—**DOWNY WOODPECKER**
- C. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Head, neck, and breast crimson; white stripe along bend of wing—**YELLOW-BELLIED SAPSUCKER**
 Back barred black and white; crown and nape red, wanting in female—**NUTTALL'S WOODPECKER**

- Generally black; rump, wing-patch, belly, and about face white; crown red—**ACORN WOODPECKER**
 Generally black; head white—**WHITE-HEADED WOODPECKER**
- D. Intermediate between Brewer's Blackbird (10 in.) and Crow (18 in.)
 Black crescent on breast; white on rump; reddish-orange beneath wings—**RED-SHAFTED FLICKER**
- (13) **BIRDS THAT HOLD THE TAIL ERECT**
- A. About size of Junco (6 in.) or smaller
 Beak curved; tending generally toward brown; active—**WRENS**
 Brownish on head; eye whitish; relatively long tail; below light gray—**BUSH-TIT**
 Below buffy; above brown; guttural, scolding note; relatively long tail—**WREN-TIT**
- * B. Larger than Crow (18 in.)
 Tail relatively short; generally gray; chunky; wings short—**SOOTY GROUSE**
- (14) **BIRDS THAT BOB OR TEETER**
- A. About size of Junco (6 in.) or smaller
 Above dark brown; faint line over eye; tail very short—**WINTER WREN**
 Tail rich, rusty-brown; throat and breast white; bill slender, curved—**CANYON WREN**
 Above grayish-brown, speckled; tail barred; rocky areas—**ROCK WREN**
- B. Intermediate between Junco (6 in.) and Brewer's Blackbird (10 in.)
 Below white, dotted with round, dusky spots; pebbly shores—**SPOTTED SAND-PIPER**
 Body slate-gray; tail short; mountain streams—**AMERICAN DIPPER**
- (15) **DUCKS AND DUCK-LIKE BIRDS**
 These birds are frequently observed at a distance, making it difficult to estimate size; thus they have been keyed out chiefly on the basis of the distribution of black, white, etc.
- A. Generally Black or with Conspicuous Black or Dark Markings
- Generally black (dark)
 Flanks brownish-red; yellow "ear" tufts at sides of head; slender bill (12-14 in.)—**EARED GREBE**
 White of bill contrasting with black of head; moves head back and forth when swimming (13-16 in.)—**AMERICAN COOT**
 - Not generally black but with conspicuous black (dark) head markings
 - Head solid black (real or apparent)
 White collar; breast chestnut; blue in wing (20-25 in.)—**MALLARD**
 Breast pure white; back white with dark area down middle; bill broad at tip (17-21 in.)—**SHOVELLER**
 Bill blue; black head, neck, and upper breast; back whitish (15-16 in.)—**SCAUP**
 Back and breast black; white mark in front of wing; bill bluish-gray with whitish band at base and near tip (15-18 in.)—**RING-NECKED DUCK**
 Long, slender, hooked, red bill; most of wings and under parts white; upper back black (21-27 in.)—**COMMON MERGANSER**
 - With black (dark) markings but head not solid black
 Head and neck black; white bib extending up on cheeks; large bird (23-42 in.)—**CANADA GOOSE**
 Head dark brown (may appear black); long, slender neck; long, pointed central tail feathers (26-30 in.)—**PINTAIL**
 Crested; two narrow white lines on side of head; white bib (18-20 in.)—**WOOD DUCK**
 Black on throat; arching neck; narrow, snake-like head; expert diver; bill crossed by black band (12-15 in.)—**PIED-BILLED GREBE**
 Size small (7-8 in.); top of head and bar back of eye dusky; back streaked with black and white—**WINTER-PLUMAGED ADULT** or **IMMATURE NORTHERN PHALAROPE**
 Size small (8-10 in.); top of head and bar back of eye dusky; upper parts ash-gray—**WINTER-PLUMAGED ADULT** or **IMMATURE WILSON'S PHALAROPE**
- B. Generally White or With Conspicuous White (Light) Markings
- Generally white (light)
 Primaries black; large bill with conspicuous yellow pouch, orange at base (5 ft.)—**WHITE PELICAN**
 - Not generally white but with conspicuous white on head
 White bib extending up on cheeks; remainder of head and neck black; large bird (23-42 in.)—**CANADA GOOSE**
 Broad white crown-patch; white flanks contrasting with black stern (18-22 in.)—**BALDPATE**
 Broad white crescent in front of eye; large blue area in wing (14-16 in.)—**BLUE-WINGED TEAL**
 Two narrow white lines on side of head; white bib; upper breast reddish-brown (18-20 in.)—**WOOD DUCK**
 White cheeks; top of head black; general rusty color (13-16 in.)—**RUDDY DUCK**
- C. Birds with Conspicuous Rusty, Reddish-brown, or Cinnamon Markings
- Entire bird chiefly rusty or reddish-brown
 Bill blue; cheeks white; top of head black; tail often held erect (13-16 in.)—**RUDDY DUCK**
 Head and neck dark cinnamon; wings brown with large patch of blue (15-17 in.)—**CINNAMON TEAL**
 - Not generally rusty; reddish-brown color restricted to head, neck, or both
 Head and neck reddish-brown; back and sides apparently white; long sloping forehead (20-23 in.)—**CANVAS-BACK DUCK**
 Crested; throat white; bill long, slender, hooked (21-27 in.)—**FEMALE** or **IMMATURE COMMON MERGANSER**
 Size small (7-8 in.); whirling habit; head sooty; sides of neck rusty; eye-ring white—**FEMALE NORTHERN PHALAROPE**
 Size small (8-10 in.); top of head and stripe down neck ash-gray; rich chestnut on lower neck; whirling habit—**FEMALE WILSON'S PHALAROPE**

INDEX

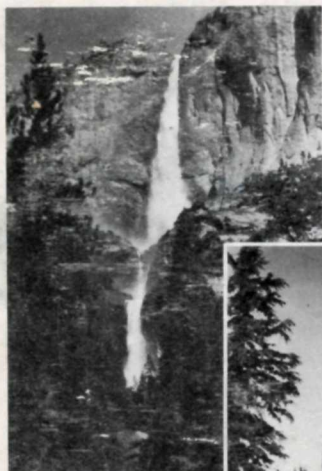
(Including summary of occurrence and distribution)

The index provides a summary of status and life-zone distribution of the birds of Yosemite. The abbreviations for status are explained on page 78, while the abbreviations for life-zones are the initials of the zonal names as explained on pages 76 and 77. Status is given first. Life-zone range is of resident birds or those spending the summer or winter in the region. Zonal range is not always stated for casual visitants or transients because it often has little meaning with reference to occurrence in Yosemite.

A space is provided in front of each name to permit checking each species as it is identified. In this manner the reader may keep a "life list" for the Yosemite region and may add to it on subsequent visits. Place a check mark in front of a name only if certain of your identification. Names not provided with a check space are synonyms. Numbers indicate pages in this booklet.

-AVOCET, American—CV, 97
-BALDPATE—CV, 86
-BLACKBIRD, Brewer's—SV; LS-C, 130
 -Red-winged—SV; LS-T, 129, 130
 -Yellow-headed—CV; LS-T, 129
-BLUEBIRD, Mexican—WV; US-T, 122
 -Mountain—SV; T-H, 122
 -Western (Mexican)
-BUFFLE-HEAD DUCK—CV, 88
-BUNTING, Lazuli—SV; LS-T, 132
-BUSH-TIT—R; US, 116
-BUTCHERBIRD (SHRIKE)
-CANVAS-BACK DUCK—CV, 86, 87
-CHAT—CV; LS-T, 128
-CHICKADEE, Mountain—R; T-H, 115
-COOT, American—CV, 95, 96
-CORMORANT, Double-crested—CV, 82, 83
-COWBIRD—CV; LS-T, 131
-CREEPER, Brown—R; T-C, 117
-CROSSBILL, Red—R; C-H, 134
-CROW, American—CV; LS-T, 115
-DIPPER, American—R; T-H, 118
-DOVE, Mourning—CV, 99
-DUCK, Buffle-head—CV, 88
 -Canvas-back—CV, 86, 87
 -Harlequin—CV, 88
 -Ring-necked—CV, 86, 87
 -Ruddy—CV, 88
 -Wood—CV, 86, 87
-EAGLE, Bald—R; LS-US, 91
 -Golden—R; US-T, 90
-EGRET, American (Common)
 -Common—CV, 84
 -Snowy—CV, 84
-FALCON, Prairie—CV, 92
-FINCH, Cassin's—R; T-H, 132
 -House (Linnet)—R; LS-US, 133
 -Purple—CV; US-T, 132
 -Sierra Nevada Rosy—R; H-A, 133
-FLICKER, Red-shafted—R; US-C, 105, 106
-FLYCATCHER, Ash-throated—CV; LS-US, 109
 -Hammond's—SV; C, 110
 -Little (Traill's)
 -Olive-sided—SV; T-C, 112
 -Traill's—SV; LS-C, 110
 -Western—SV; US-T, 111
 -Wright's—SV; C, 111
-GNATCATCHER, Blue-gray—SV; LS-US, 123
 -Western (Blue-gray)
-GOLDEN-EYE, Barrow's—CV, 87
-GOLDFINCH, American—CV; LS-T, 139
-Arkansas—CV; LS-T, 133, 134
-Lawrence's—CV, 139
-Willow (American)
-GOOSE, Canada—CV, 84, 85
-GOSHAWK—R, 89
-GREBE, Eared—CV, 82, 83
 -Pied-billed—WV, 82, 83
-GROSBEAK, Black-headed—SV; LS-T, 131
 -Blue—CV; LS, 139
 -California Pine—R; C-H, 133
 -Evening—SV; T-C, 132
-GROUSE, Sage—CV, 94
 -Sierra (Sooty)
 -Sooty—R; T-H, 94
-GULL, California—CV, 98
 -Ring-billed—CV, 98
-HARLEQUIN DUCK—CV, 88
-HAWK, Cooper's—R; US-T, 89, 90
 -Duck—CV, 92
 -Marsh—CV; LS-C, 91
 -Red-tailed—R; LS-H, 90
 -Sharp-shinned—R; LS-T, 90
 -Sparrow—R; LS-H, 92
 -Swainson's—SV, 90
-HERON, Great Blue—CV, 83
 -Green—CV, 83, 84
-HUMMINGBIRD, Allen's—CV, 104
 -Anna's—R; US-T, 104
 -Black-chinned—SV; US-T, 104
 -Calliope—CV; T-C, 105
 -Rufous—M; T, 104
-JAY, Blue-fronted (Steller's)
 -California (Scrub)
 -Pinon—CV; US-T, 115
 -Scrub—R; US, 114
 -Steller's—R; T-C, 113, 114
-JUNCO, Oregon—SV; T-H, 137
 -Slate-colored—CV, 136
 -Thurber's (Oregon)
-KILLDEER—SV, 96
-KINGBIRD, Western—CV; LS-US, 109
-KINGFISHER, Belted—R; LS-T, 105
-KINGLET, Golden-crowned—SV; C-T, 123
 -Ruby-crowned—R and WV; C, 123
-KITE, White-tailed—CV, 139
-LARK, Horned—CV; LS-US, 112
-LINNET (HOUSE FINCH)
-LOON, Arctic—CV, 139
-MAGPIE, Black-billed—CV; US-T, 114
 -Yellow-billed—CV; LS-US, 114
-MALLARD—CV, 84, 85
-MEADOWLARK, Western—R; LS-T, 129
-MERGANSER, American (Common)
 -Common—SV and CV, 89
 -Hooded—CV, 89
-MOCKINGBIRD—R; LS-US, 120
-NIGHTHAWK, Booming—SV; T-C, 102
 -Pacific (Booming)
-NUTCRACKER, Clark's—R; C-H, 115
-NUTHATCH, Pygmy—R; T-C, 117
 -Red-breasted—R; T-H, 117
 -Slender-billed (White-breasted)
 -White-breasted—R; US-H, 116

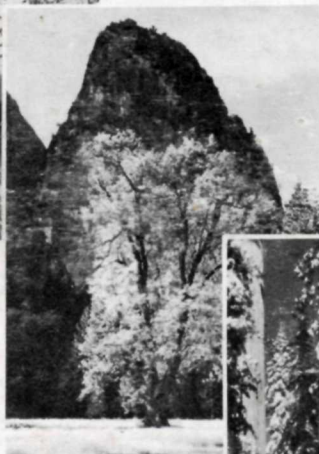
-ORIOLE, Bullock's—CV, 130
OSPREY—CV, 91
OUZEL (DIPPER)
OWL, American Long-eared—R; US-T, 101
 Barn—CV, 139
 Great Gray—R; C, 101
 Horned—R; LS-H, 100
 Pygmy—R; T-C, 100
 Saw-whet—R; T-C, 102
 Screech—R; LS-T, 100
 Short-eared—CV, 101, 102
 Spotted—R; T, 101
PELICAN, White—M, 82
PEWEE, Wood—SV; US-H, 111
PHAINOPEPLA—R; LS-US, 124
PHALAROPE, Northern—CV, 97, 98
 Red—CV, 139
 Wilson's—CV, 97
PHOEBE, Black—SV; US, 110
 Say's—CV; LS-US, 110
PIGEON, Band-tailed—SV; US-T, 99
PINTAIL—CV, 85
PIPIT, American (Water)
 Water—WV, 124
POOR-WILL—SV; LS-T, 102, 103
QUAIL, California—R; US-T, 95
 Mountain—R; T-C, 94
 Valley (California)
RAIL, Sora—CV, 139
 Virginia—CV, 95
RING-NECKED DUCK—CV, 86, 87
ROAD-RUNNER, California—CV; LS-US,
 99
ROBIN—SV; T-H, 121
RUDDY DUCK—CV, 88
SANDPIPER, Solitary—CV, 139
 Spotted—SV, 96
SAPSUCKER, Red-breasted (Yellow-bellied)
 Red-naped (Yellow-bellied)
 Williamson's—R; C-H, 107
 Yellow-bellied—WV or R; T-C, 107
SCALUP, Lesser—CV, 87
SHOVELLER—CV, 86
SHRIKE, Loggerhead—CV; LS-US, 125
 White-rumped (Loggerhead)
SISKIN, Pine—R; T-H, 133
SNIPPE, Wilson's—CV, 97
SOIITAIRE, Townsend's—SV or R; T-H,
 122, 123
SPARROW, Bell's—CV; US, 136
 Brewer's—CV; US-T, 139
 Chipping—SV; US-T, 137
 English—CV, 129
 Fox—SV and WV; US-C, 138
 Golden-crowned—WV; US-C, 138
 Harris's—CV, 130
 Lark—CV; LS-US, 135, 136
 Lincoln's—SV; C, 138
 Rufous-crowned—CV; US, 136
 Sage (Bell's)
 Savannah—CV; LS-T, 135
 Song—R; LS-H, 138, 139
 Vesper—CV; US-C, 135
 White-crowned—SV and WV; T-H, 137
 White-throated—CV, 139
STILT, Black-necked—CV, 139
SWALLOW, Barn—CV, 139
 Cliff—SV; LS-T, 113
 Rough-winged—CV; LS-US, 112, 113
 Tree—CV; US-T, 113
 Violet-green—SV; US-T, 112, 113
SWIFT, Black—SV; T, 103
 Vaux's—CV, 103
 White-throated—SV; LS-T, 103
TANAGER, Western—SV; T-C, 131
TEAL, Blue-winged—CV, 85
 Cinnamon—CV, 85
 Green-winged—CV, 85
THRASHER, California—R; LS-US, 120
 Sage—CV, 120
THRUSH, Hermit—SV and WV; T-H,
 121
 Russet-backed (Swainson's)
 Swainson's—SV; US-C, 122
 Varied—WV; US-C, 121
TITMOUSE, Plain—R; US, 116
TOWHEE, Brown—CV; LS-T, 135
 Green-tailed—SV; T-H, 134
 Spotted—R; US-T, 134
VIREO, Cassin's (Solitary)
 Hutton's—R; US-T, 125
 Solitary—SV; US-C, 125
 Warbling—SV; US-C, 126
VULTURE, Turkey—R; LS-H, 89
WARBLER, Audubon's—SV and WV; US-
 H, 126, 127
 Black-throated Gray—SV; US-T, 127
 Calaveras (Nashville)
 Hermit—SV; T-C, 127
 Macgillivray's (Tolmie's)
 Nashville (Calaveras)—SV; T-C, 126
 Orange-crowned—SV; US-C, 126
 Pileolated—SV; US-C, 128, 129
 Tolmie's (Macgillivray's)—SV; T-C, 128
 Townsend's—CV and T, 127
 Yellow—SV; LS-T, 126
WAXWING, Bohemian—CV, 139
 Cedar—WV and M, 124
WILLET—CV, 139
WOOD DUCK—CV, 86, 87
WOODPECKER, Acorn—R; US-T, 106
 Arctic Three-toed—R; C-H, 109
 California (Acorn)
 Downy—R; US-T, 108
 Hairy—R; US-C, 106
 Lewis's—R; US-T, 106
 Nuttall's—CV; US, 108
 Pileated—R; T-C, 105
 White-headed—R; T-C, 108, 109
WREN, Bewick's—R; US, 119
 Canyon—R; LS-T, 119
 House—SV; US-T, 118, 119
 Long-billed Marsh—WV; LS-T, 119
 Rock—R and SV; LS-H, 120
 Winter—R and WV; T-C, 119
WREN-TIT—R; US-T, 118
YELLOW-THROAT—CV; LS-US, 128



Spring



Summer



Autumn



Winter

an

appropriate

gift

at any season

YOSEMITE
NATURE
NOTES

A \$1.50 subscription will bring you the Yosemite story accurately and interestingly told twelve times a year.

Revenue derived from the activities of the Yosemite Natural History Association is devoted entirely to assisting the park naturalist division in the furtherance of research and the interpretation of the natural and human story in Yosemite National Park.

SEND SUBSCRIPTIONS TO

YOSEMITE NATURAL HISTORY ASSOCIATION, INC.
BOX 545, YOSEMITE NATIONAL PARK, CALIFORNIA