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COOPER ORNITHOLOGICAL CLUB

PACIFIC COAST AVIFAUNA
NUMBER 19

BIRDS OF THE PORTLAND AREA, OREGON

BY
STANLEY G. JEWETT
AND
IRA N. GABRIELSON

BERKELEY, CALIFORNIA
Published by the Club
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Edited by

JOSEPH GRINNELL

and

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at the

Museum of Vertebrate Zoology

University of California

NOTE

PACIFIC COAST AVIFAUNA No. 19 is the nineteenth in a series of publications issued by the Cooper Ornithological Club for the accommodation of papers whose length normally prohibits their appearance in the Club's magazine, THE CONDOR. For information regarding either of these series of publications address the Club's Business Manager, W. Lee Chambers, Drawer 123, Eagle Rock, Los Angeles County, California.

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INTRODUCTION

The Portland area as covered in the present paper comprises within its boundaries the territory easily reached from the city of Portland, including Government Island and Sauvies Island, which are in the Columbia River, close to the Oregon shore. No Washington State records are included in this paper, although the Vancouver district might be considered part of the area.

The dominant geographical features are the valleys of the Columbia and Willamette rivers. The former river flows nearly due west along the northern boundary of our area and the latter flows north into the Columbia, somewhat to the west of the center. For our purposes we have taken in the Willamette Valley south to the falls at Oregon City, and the Columbia from the eastern boundary of Multnomah County to its west line. In addition, Sauvies Island, part of which

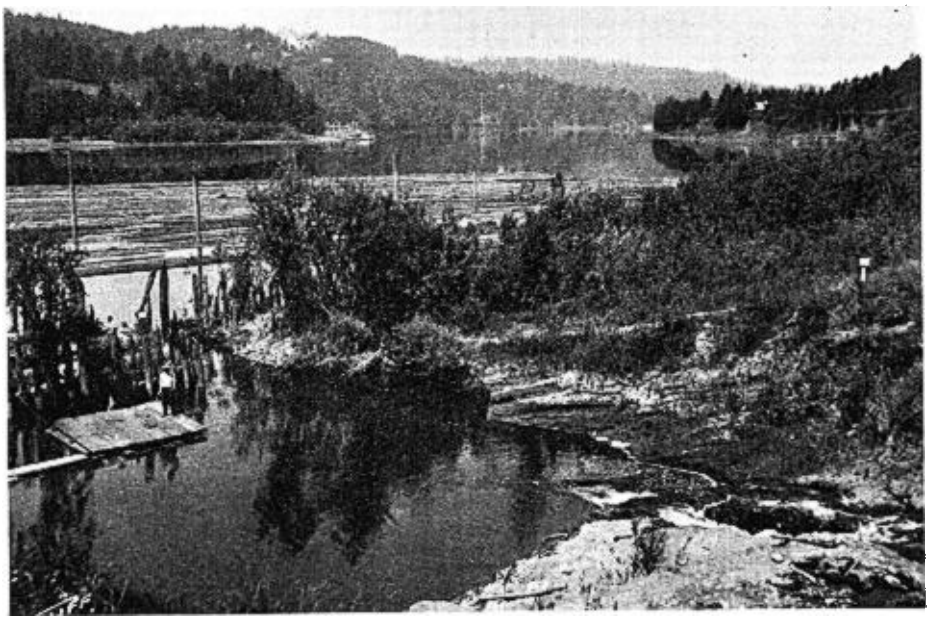

Fig. 1. WILLAMETTE RIVER VALLEY SOUTH OF PORTLAND, SHOWING MARGINAL DECIDUOUS GROWTH AND CHARACTERISTIC SECOND-GROWTH DOUGLAS FIR. THIS DOUGLAS FIR ASSOCIATION ON THE ROLLING HILLS IS THE DOMINANT ONE IN THE AREA COVERED BY THIS PAPER.

Photo by F. M. Brown.

lies west of Multnomah County, has been included, for the reason that it serves as a hunting ground for a large number of Portland sportsmen and is therefore a logical part of this area.

The territory thus bounded includes portions of the two main river valleys, some of the foothills of the Cascade Mountains, the range of hills bordering the Columbia River, and a considerable area of rolling farming country. In short, it may be considered a typical cross section of the Humid Transition Zone as found in western Oregon.

Along the bottoms of the Columbia and Willamette and their smaller tributaries is found a characteristic growth of trees, the most common of which are black cottonwood (*Populus trichocarpa*), big-leaf maple (*Acer macrophyllum*), willow

(*Salix,* several species), Oregon ash (*Fraxinus oregona*), the less commonly found Oregon oak (*Quercus garryana*), alder (*Alnus oregona*), wild crab (*Pyrus rivularis*), and a hawthorn (*Crataegus douglasii*). Gairdner Woodpecker, Bullock Oriole, Black-headed Grosbeak, Western Warbling Vireo, Red-eyed Vireo, and Oregon Chickadee are the characteristic birds frequenting the tree tops along the rivers.

A great variety of shrubs are found along the lowlands, forming almost impenetrable thickets in many places. A complete list would be out of place in a paper of this character, but the species most commonly found are blue elder (*Sambucus coerulea*), red elder (*Sambucus callicarpa*), salmonberry (*Rubus spectabilis*), thimbleberry (*Rubus parviflorus*), black-cap raspberry (*Rubus leucodermis*), wild blackberry (*Rubus ursinus*), hardhack (*Spirea menziesii*), ocean spray (*Sericotheca discolor*), red-twigged dogwood (*Cornus stolonifera*), Oregon grape (*Odestemon nervosa* and *O. aquifolium*), red currant (*Ribes sanguineum*), goose

Fig. 2. CREEK AND RIVER BOTTOM ASSOCIATION AS COMMONLY FOUND IN THE OVERFLOW LANDS ALONG THE COLUMBIA RIVER. WILLOWS, COTTONWOODS, OREGON ASH, AND SCATTERED FIR TREES COMPRISE THE DOMINANT PLANTS OF THIS AREA. THIS POSSESSES THE MOST ABUNDANT BIRD LIFE OF ANY AREA IN THIS DISTRICT.

Photo by Herman T. Bohlman.

berry (*Ribes divaricatum*), syringa (*Philadelphus lewisii*), snow-berry (*Symphoricarpos racemosus*), vine maple (*Acer circinatum*), and wild rose (*Rosa,* several species).

These tangles furnish shelter and feed to a great variety of birds, the most common and characteristic of which are Western Traill Flycatcher, Rusty Song Sparrow, Oregon Towhee, Lazuli Bunting, California Yellow Warbler, Western Yellow-throat, Long-tailed Chat, Seattle Bewick Wren, and Russet-backed Thrush.

On the foothills and ridges the variety of trees and shrubs is much restricted as compared with the riparian vegetation. Douglas fir (*Pseudotsuga taxifolia*) is the dominant tree within our area, with a sprinkling of others, of which western

red cedar (*Thuja plicata*), hemlock (*Tsuga heterophylla*), cascara (*Rhamnus purshiana*), vine maple (*Acer circinatum*), and dogwood (*Cornus nuttallii*) are the most commonly found. The characteristic birds of this region are Northern Red-breasted Sapsucker, Coast Steller Jay, Pine Siskin, California Purple Finch, Cassin Vireo, Audubon Warbler, Black-throated Gray Warbler, Western Winter Wren, and Chestnut-backed Chickadee.

The largest cultivated district within our area lies in the vicinity of Gresham, to the east of Portland. There is some general farming, but dairying and the intensive cultivation of fruits and vegetables use most of the land.

Characteristic birds of this region are Northwestern Flicker, Pacific Nighthawk, Streaked Horned Lark, Western Meadowlark, Brewer Blackbird, Willow Goldfinch, Green-backed Goldfinch, Oregon Vesper Sparrow, Brooks Savannah

Fig. 3. CHARACTERISTIC HUMID TRANSITION GROWTH IN THE PORTLAND AREA. THIS REGION OF DENSE GROWTH OF FIR AND CEDAR IS THE HOME OF THE WESTERN WINTER WREN, WESTERN GOLDEN-CROWNED KINGLET, AND CHESTNUT-BACKED CHICKADEE. OUTSIDE OF THESE SPECIES, BIRD LIFE IS SCARCE IN THESE GLOOMY FORESTS.

Photo by U. S. Forest Service.

Sparrow, Puget Sound White-crowned Sparrow, Pacific Chipping Sparrow, Oregon Towhee, Cliff Swallow, Northern Violet-green Swallow, California Yellow Warbler, Western Robin, and Western Bluebird.

It is probable that cutting the timber and bringing this land under cultivation have increased the number of nesting sites and the amounts of food supplies for some or all of the above species and that, as a result, they are more numerous now than when white men first came to this region.

The city of Portland lies almost in the center of the area from east to west and extends almost across it from north to south. East of the city is a more or less level district sprinkled with wooded buttes that gradually merge into the foothills of the Cascades. On the southern edge is a wooded hilly district pierced by the Willamette from south to north. West and north of Portland lie the Columbia River bottoms, varying in width until the mouth of the Sandy is crossed, beyond which point the Cascade foothills come to the river, forming the Columbia Gorge.

In assembling material for this paper we were struck by the paucity of published records from this area. The early explorers doubtless noted some birds in this area, but we have been unable to localize any of their records. The Portland area is the type locality of many species of plants and mammals taken by early collectors, but birds appear to have occasioned but casual interest. Jewett has published a few records in *The Condor*, references to which are made under the species concerned. Aside from these, only fragmentary notes in the *Oregon Naturalist* and *Oregon Sportsman* have been found. Therefore this paper is based largely on hitherto unpublished notes of the writers. Jewett has lived in the district since 1902 and Gabrielson since 1918, and we have notes covering parts of all these years. These records are of necessity incomplete, as both writers are out of the district a great part of the time and even while there can devote only leisure time to field observation of birds. We lack especially fall migration data, but we are assembling such material as we have as a basis for the work of future students as well as ourselves.

Water birds, with few exceptions, are scarcer than in the past, and work on them will be increasingly difficult. Study on winter gulls is greatly needed, and little opportunity for such work has ever been open to us. Much work in keeping migration data on land birds could well be done and would without doubt greatly increase our knowledge of the various species. As it is, we have been forced to depend almost entirely on our own records except for scattered notes by Wm. L. Finley, Herman T. Bohlman, and a few others, which are acknowledged under the species concerned.

This paper includes species of which fifty-five may be classed as permanent residents, forty-three as summer residents, thirty-three as winter residents, and fifty-six as transients, as follows.

PERMANENT RESIDENTS

Pied-billed Grebe
Mallard
Northwestern Great Blue Heron
Pacific Virginia Rail
American Coot
Killdeer
Coast Mountain Quail
Sooty Grouse
Oregon Ruffed Grouse
Sharp-shinned Hawk
Cooper Hawk
Western Red-tailed Hawk
Bald Eagle
American Sparrow Hawk
Short-eared Owl
Brewster Screech Owl
Dusky Horned Owl
Northern Spotted Owl
Coast Pigmy Owl
Western Belted Kingfisher
Harris Woodpecker
Gairdner Woodpecker
Northern Red-breasted Sapsucker
Western Pileated Woodpecker
Lewis Woodpecker
Northwestern Flicker
Streaked Horned Lark
Coast Steller Jay
Long-tailed California Jay
Oregon Jay
Northwestern Crow
Northwestern Red-winged Blackbird
Western Meadowlark
Brewer Blackbird
California Purple Finch
Willow Goldfinch
Pine Siskin
Puget Sound White-crowned Sparrow

Shufeldt Junco
Rusty Song Sparrow
Oregon Towhee
Hutton Vireo
Audubon Warbler
Dipper
Seattle Bewick Wren
Western Winter Wren
California Creeper
Slender-billed Nuthatch
Red-breasted Nuthatch
Oregon Chickadee
Chestnut-backed Chickadee
Coast Bush-tit
Western Golden-crowned Kinglet
Western Robin
Western Bluebird

SUMMER RESIDENTS

Wood Duck
Spotted Sandpiper
Band-tailed Pigeon
Western Mourning Dove
Turkey Vulture
American Osprey
California Cuckoo
Pacific Nighthawk
Vaux Swift
Rufous Hummingbird
Western Wood Pewee
Western Flycatcher
Western Traill Flycatcher
Bullock Oriole
Green-backed Goldfinch
Oregon Vesper Sparrow
Brooks Savannah Sparrow
Pacific Chipping Sparrow
Black-headed Grosbeak
Lazuli Bunting
Western Tanager
Purple Martin
Cliff Swallow
Barn Swallow
Tree Swallow
Northern Violet-green Swallow
Rough-winged Swallow
Cedar Waxwing
Red-eyed Vireo
Western Warbling Vireo
Cassin Vireo
Calaveras Warbler
Lutescent Warbler
California Yellow Warbler
Black-throated Gray Warbler
Hermit Warbler
MacGillivray Warbler
Western Yellow-throat
Long-tailed Chat
Golden Pileolated Warbler
Western House Wren
Tule Marsh Wren
Russet-backed Thrush

WINTER RESIDENTS

Glaucous-winged Gull
Western Gull
California Gull
Short-billed Gull
American Merganser
Baldpate
Green-winged Teal
Shoveller
American Pintail
Canvas-back
Lesser Scaup Duck
American Golden-eye
Buffle-head
Ruddy Duck
Canada Goose
Wilson Snipe
British Columbia Evening Grosbeak
Golden-crowned Sparrow
Oregon Junco
Shumagin Fox Sparrow
Sooty Fox Sparrow
Kadiak Fox Sparrow
Townsend Fox Sparrow
Valdez Fox Sparrow
Yakutat Fox Sparrow
Alberta Fox Sparrow
Northwestern Shrike
Alaska Myrtle Warbler
American Pipit
Sitka Kinglet
Alaska Hermit Thrush
Dwarf Hermit Thrush
Varied Thrush

TRANSIENTS

Western Grebe
*Holboell Grebe
Horned Grebe
*American Eared Grebe
Common Loon
*Cassin Auklet
*Parasitic Jaeger
*Glaucous Gull
*Arctic Tern
*Beal Leach Petrel
Farallon Cormorant
*California Brown Pelican

Hooded Merganser
Gadwall
*European Widgeon
*Cinnamon Teal
Ring-necked Duck
*Surf Scoter
Lesser Snow Goose
White-fronted Goose
Hutchins Goose
*Whistling Swan
*Trumpeter Swan
*Anthony Green Heron
Black-crowned Night Heron
Sandhill Crane
Sora Rail
Pectoral Sandpiper
Least Sandpiper
Western Sandpiper
Greater Yellow-legs
*Western Goshawk
*Duck Hawk
*Peale Falcon
*Black Pigeon Hawk
*American Barn Owl
*Great Gray Owl
*Saw-whet Owl
*Western Kingbird
Say Phoebe
*American Magpie
Northern Raven
*Yellow-headed Blackbird
American Crossbill
Western Savannah Sparrow
*Nevada Sage Sparrow
*Cassiar Junco
*Merrill Song Sparrow
*Yellow-head Pass Song Sparrow
Forbush Lincoln Sparrow
*Bohemian Waxwing
*Townsend Warbler
*Wilson Warbler
*Sage Thrasher
*Short-tailed Mountain Chickadee
*Townsend Solitaire

*Those species designated by an asterisk can be classed, so far as our present knowledge goes, as only casual transients or stragglers to this area. The remainder are more or less regular migrants.

The high proportion of permanent residents is of interest as compared with similar lists from the eastern United States. In addition to the foregoing 186 species, we have included a list of introduced species, which contains many that failed to establish themselves in addition to the more successful forms such as Ring-necked Pheasant, Bob-white, and English Sparrow.

We have also appended a hypothetical list, consisting of birds reported from this area for which we can find no definite records and a few easily confused with others which we are certain occur here, but of which no specimens have been taken. Undoubtedly some of these will be taken in the future and they may then be added to the definite list. In addition, there is a long unpublished list of possibilities, many of which will eventually be added to our list.

We wish to acknowledge our indebtedness to Mr. William L. Finley and Mr. Herman T. Bohlman for free access to their notes and collections. Dr. Harry C. Oberholser, Dr. Joseph Grinnell, and Mr. Harry S. Swarth have been very kind in identifying doubtful specimens for us and we take this opportunity of expressing our appreciation for their help. We are also obligated to the late D. C. Ingram, of the U. S. Forest Service, who supplied the identifications of the trees and shrubs listed. We are indebted to Mr. E. S. Currier, an old-time ornithologist, who has furnished us several valuable nesting records.

Portland, Oregon, July 11, 1929.

BIRDS OF THE PORTLAND AREA

Aechmophorus occidentalis (Lawrence). Western Grebe.

Of casual occurrence on the Columbia River. Specimens have been taken October 5 and November 9, and birds have been observed at different times during the fall. No spring records of this species are at hand.

Colymbus holboellii (Reinhardt). Holboell Grebe.

The only records we have of the occurrence of this species are of two specimens presented to the State Game Commission collection, an adult female taken on October 5, 1915, near Sauvies Island, and a female killed on November 9, 1913, on the Willamette River just below Portland.

Colymbus auritus Linnaeus. Horned Grebe.

Of regular occurrence on the Columbia and Willamette rivers during the fall migration. There are two specimens in the Jewett collection, both taken in November, one in 1902, and the other in 1905.

Colymbus nigricollis californicus (Heermann). American Eared Grebe.

We have only a single record of the occurrence of this grebe. A skin in the collection of William L. Finley (no. 3), was taken at Portland, in June, 1908.

Podilymbus podiceps podiceps (Linnaeus). Pied-billed Grebe.

A permanent resident. Sight records have been made during every month in the year and the species is known to nest occasionally on small ponds. During June, 1913, a pair raised a brood of young on a small pond on Reed College campus in East Portland. A skin in the Gabrielson collection (no. 533), an adult female, was taken June 21, 1921, on the Columbia River.

Gavia immer (Brünnich). Common Loon.

Although it is quite natural that this species should occur regularly on the larger bodies of water within the county, it is admitted to this list solely on one sight record by Jewett. An adult was seen on the Columbia River off Government Island, on October 17, 1915.

Ptychoramphus aleuticus (Pallas). Cassin Auklet.

An oil-soaked bird of this species was picked up in the lower Portland harbor by an employee of the United States Customs Service and presented to Jewett on October 4, 1921 (no. 3452, male, coll. S. G. J.). This specimen was recorded in the Condor (XXVI, 1924, p. 35).

Stercorarius parasiticus (Linnaeus). Parasitic Jaeger.

A rare straggler to the Portland area, and included solely on the basis of a single skin (no. 3470) in the Jewett collection. This bird was killed on Sauvies Island near Scappoose, Oregon, by Dr. J. H. Flynn, late in August or early in September, 1909, and later it was presented to Jewett.

Larus hyperboreus Gunnerus. Glaucous Gull.

A rare bird in Oregon so far as our experience goes, but we have one absolute record. This bird (no. 3515, coll. S. G. J.) was shot by an Italian for food and confiscated by a game warden, who presented it in the flesh to Jewett. The bird was taken on Sauvies Island on December 12, 1914, and is a female in second winter plumage. We had some doubts as to the identity of this specimen until the recent publication of Dwight's "The Gulls (Laridae) of the World" (Bull. Amer. Mus.

Nat. Hist., LII, 1925, pp. 63-401). Our bird is identical with Dwight's detailed description of the plumage of this species.

Occasionally other extremely light-colored gulls, that are undoubtedly this species, are seen by the writers. The last bird so noted in the Portland area was observed by Gabrielson on January 19, 1922, on the Willamette. Jewett saw one, presumably the same individual, a day or two later.

Larus glaucescens Naumann. Glaucous-winged Gull.

One of the most abundant of birds that winter in the Portland harbor. Stragglers begin coming in during September, and the species remains with us until March, its abundance depending somewhat on weather conditions. A skin in the Finley collection was taken at Swan Island on February 10, 1901.

Larus occidentalis occidentalis Audubon. Western Gull.

Occasionally seen on our larger bodies of fresh water. Occurs during every month in the year. From September to March they are reasonably common and can be found daily along the Portland water-front.

Larus californicus Lawrence. California Gull.

Believed to be a regular fall and winter visitor on the Columbia and Willamette rivers. Additional studies, however, must be made before the status of our visiting gulls is thoroughly known. Specimens of this species have been collected on Government Island in the Columbia River, and small flocks have been seen feeding in the meadows in and near Portland on various dates in mid-winter. A skin in the Finley collection was taken on the Willamette River on October 28, 1900.

Larus canus brachyrhynchus Richardson. Short-billed Gull.

A common visitor during the fall and winter months, both on the larger bodies of water and on the wet meadows and freshly plowed fields of the district. There is a specimen in the Gabrielson collection taken on January 18, 1921, and one in the Finley collection taken February 10, 1901.

Sterna paradisaea Brünnich. Arctic Tern.

Given a place on our list solely on the record of a flock of about forty seen flying over a small lake on Government Island during mid-August, 1902. Jewett saw these birds feeding over the lake and identified them largely on the strength of their conspicuous red bills.

Oceanodroma leucorhoa beali Emerson. Beal Leach Petrel.

A single specimen, female (no. 3673, coll. S. G. J.), was taken in Portland harbor, July 10, 1923. This bird was recorded in the Condor (XXVI, 1924, p. 35).

Phalacrocorax auritus albociliatus Ridgway. Farallon Cormorant.

Of casual occurrence on our larger bodies of water. Two specimens in the Finley collection, taken on the Willamette River near Portland, are typical of this species. Numerous sight records are at hand from January to April.

Pelecanus occidentalis californicus Ridgway. California Brown Pelican.

On August 20, 1908, Robert Franklin saw a Brown Pelican on the Oak Slough, a few miles south of Portland. Mr. Franklin has been familiar with Brown Pelicans in the south for a great many years and states that he approached to within fifty feet of this bird while it sat asleep on a floating log. The species is entered on this list solely on this record, and we believe it is correct.

Mergus merganser americanus Cassin. American Merganser.

Of regular and common occurrence on our larger bodies of fresh water. Recorded during the fall and winter. During the extremely cold weather of December, 1924, when the Columbia and Willamette rivers were both frozen over, a considerable flock was seen on some small areas of open water on the Willamette just south of Portland.

Lophodytes cucullatus (Linnaeus). Hooded Merganser.

Of casual occurrence on the Columbia River. Specimens have been prepared by Jewett taken at Sauvies Island on November 2 and 23, 1913.

Anas boschas boschas Linnaeus. Mallard.

The Mallard is one of our most abundant edible ducks, large numbers being taken during the hunting season on all bodies of water within the district where hunting is permitted. A few remain to breed on the lowlands each year (Murie, Condor, xv, 1913, pp. 176-178). The species becomes common in late August and remains with us in abundance until April. Numerous specimens have been prepared between October and January.

Chaulelasmus streperus (Linnaeus). Gadwall.

Of rare occurrence within the area covered by this paper. An adult male of this species was shot by Jewett, December 5, 1915, on Government Island, and he records a few individuals with other ducks on Reed College lake on February 5, 1916.

Mareca penelope (Linnaeus). European Widgeon.

Although a constant lookout for this bird has been kept for more than twenty years, but three records are available. The first of these was of a male killed by J. S. Stafford on Sauvies Island on November 12, 1922, and the second was taken in the same locality by Ed. King in December, 1923. Both these birds have been recorded previously by Jewett (Condor, xxvi, 1924, p. 32). The third record was received through the kindness of deputy state game warden E. H. Clark of the Oregon State Game Commission. This was a beautiful adult male shot by G. M. Stutsman at the Twin Willows Duck Club on Sauvies Island on the Columbia River a few miles west of Portland. The bird was in excellent physical condition and in high plumage. When shot, it was in company with a flock of Baldpate. The specimen was presented in the flesh to Jewett and is now in his collection. There is no doubt in the writers' minds that these birds occur more regularly during the late winter and early spring, as they have been described to Jewett by various hunters who have hunting lodges along the Columbia River.

Mareca americana (Gmelin). Baldpate.

One of our abundant migrating ducks. During ordinary years the heavy migration occurs in October. Some years most of the game bags obtained on the Columbia River consist solely of these birds, for periods extending from October 1 to November 15. Our earliest record is September 13 and our latest is April 19.

Nettion carolinense (Gmelin). Green-winged Teal.

The Green-wing is of regular occurrence. It is much sought after by local hunters. The flocks arrive from their breeding grounds in the north during September and they are constantly seen up to mid-April, our latest record being April 24.

Querquedula cyanoptera (Vieillot). Cinnamon Teal.

The only record available for this species is that of a bright adult male seen by Jewett at close range on a drainage canal on the Hall ranch twelve miles east of Portland, in the Columbia River bottoms, on May 19, 1928. This bird was undoubtedly a straggler from east of the Cascade Mountains.

Spatula clypeata (Linnaeus). Shoveller.

Of common occurrence on our rivers and ponds. Specimens have been taken by Jewett on Government Island during November in several different years.

Dafila acuta tzitzihoa (Vieillot). American Pintail.

Abundant and of regular occurrence in this district. Some years large flights appear in mid-August. Specimens have been taken from September to January, and the species has been noted on the Columbia River as late as April 1.

Aix sponsa (Linnaeus). Wood Duck.

When Jewett first came to Oregon, early in the spring of 1902, this was the first duck with which he became acquainted on the Columbia River bottoms. During that and the next few years, three pairs of Wood Duck nested in cavities in cottonwood trees on Government Island, and the broods of downy young were a daily sight on the small ponds of the island. From approximately 1905 to 1912 this species became much reduced in numbers, but of late years it has again increased enormously. At the present time Wood Ducks can be found anywhere in suitable localities along the Columbia and lower Willamette river bottoms. Through the courtesy of the State Game Commission, specimens have been available for examination during all the winter months but January, although at that time of the year the species may be considered only tolerably common. From March to October it is very common in this district.

Nyroca valisineria (Wilson). Canvas-back.

One of the most familiar of our fall and winter ducks on the Columbia River and adjacent sloughs. Canvas-backs begin coming in from the north from middle to late September and stay with us well into April. Our latest spring record is of an adult male on the Columbia River at Government Island, April 19, 1916. Specimens have been taken in every month from September to February.

Nyroca affinis (Eyton). Lesser Scaup Duck.

The most abundant of the diving ducks spending the winter in this area. On August 10, 1914, a considerable flock was seen on the pond on Reed College campus. The bulk of the migrating birds, however, do not arrive before mid-September. They stay with us, both on the larger bodies of water and on the small ponds, until April. A large flock was seen at the Reed College pond on April 3, 1913.

Nyroca collaris (Donovan). Ring-necked Duck.

The Ring-neck must be considered a rare migrant in this locality. An adult male was taken on Government Island in the Columbia River on November 23, 1913, by Jewett. His notes contain a record of a flock of about twenty on Reed College pond on November 11, 1923.

Glaucionetta clangula americana (Bonaparte). American Golden-eye.

A regular migrant on the Columbia River and on adjacent ponds and sloughs. Jewett's collection contains two specimens, both adult males, taken on Government Island on March 19 and November 23, respectively.

Charitonetta albeola (Linnaeus). Buffle-head.

During mid-winter this is one of the characteristic ducks in this area. A considerable number stay on the Columbia and Willamette rivers from September to March. During severe weather in mid-winter they congregate in some numbers on Reed College pond in Portland. A number of specimens have been taken between November and February.

Melanitta perspicillata (Linnaeus). Surf Scoter.

While hunting ducks along the main channel of the Columbia River ten miles east of Portland, Melville Wills shot a beautiful adult female of this species on October 6, 1928. The specimen was preserved and is now in the Jewett collection.

Erismatura jamaicensis rubida (Wilson). Ruddy Duck.

A few visit this district each winter. Specimens have been taken on Government Island, October 19, and some birds were seen on Reed College pond on February 5, 1916.

Chen hyperboreus hyperboreus (Pallas). Lesser Snow Goose.

We have but few records of occurrence. Jewett reports that on his arrival on Government Island on the second of April, 1902, one of these birds was noted on the Fisher ranch, where it stayed on and close to a fresh-water pond for several days. From November 25 to 27, 1911, one of these white geese stayed with a flock of Canada Geese on Government Island. Gabrielson saw, on October 5, 1927, several flocks of white geese, which were undoubtedly of this species, flying over Portland.

Anser albifrons albifrons (Scopoli). White-fronted Goose.

A flock of eleven White-fronted Geese flew by Gabrielson at close range on December 24, 1922, while he was on a bird trip through the Columbia River bottoms. Jewett saw a flock of 35 or 40 flying low over Portland on September 29, 1927. Doubtless this species is more common than these records indicate, but opportunities to see geese at close range in this area are exceedingly limited.

Branta canadensis canadensis (Linnaeus). Canada Goose.

The Canada Goose is the most conspicuous of the geese that winter along the Columbia River near Portland. Large flocks begin to arrive from the north in September, and by mid-October the birds have become common, a number staying well into April. Our latest date in this district is of one reported by Jewett on Government Island on May 20, 1902. Specimens have been taken from September to January.

Branta canadensis hutchinsii (Richardson). Hutchins Goose.

The only definite record we have is of an adult male in the Jewett collection taken on November 27, 1911, on Government Island, in the Columbia River.

Cygnus columbianus (Ord). Whistling Swan.

Formerly an abundant and regular visitant to this locality, but becoming of less frequent occurrence each year. An adult male taken by Jewett on Government Island on April 8, 1903, is now in the museum of the State University at Eugene, Oregon. Other specimens were taken in December, 1907, and in December, 1908. Jewett's notes contain records of the presence of this species on Government Island in every month from November to April, between 1903 and 1908.

Cygnus buccinator Richardson. Trumpeter Swan.

The only authentic record we have of the occurrence of this species is that reported by H. K. Coale (Auk, vol. 32, 1915, p. 87), concerning a specimen in the Chicago Academy of Sciences Museum taken "on the Columbia River, three miles west of Portland, Oregon".

Ardea herodias fannini Chapman. Northwestern Great Blue Heron.

A permanent resident. Several spring skins in the State Game Cammission collection and a winter skin in the Jewett collection (no. 4261) are, in our opinion, closer to *fannini* than to any other form, and we are therefore provisionally placing them under this name. A small colony nests near Linnton, in the western part of the district, but neither of us has obtained any special information concerning it.

Butorides virescens anthonyi (Mearns). Anthony Green Heron.

On June 7, 1927, Jewett saw, plainly, one flying over his home in Portland, traveling towards a willow-fringed slough near by. While ordinarily we are opposed to including a species in a list of this kind on sight records, the bird is so distinctive and the evidence of its invasion of the state in 1927 so conclusive, that we feel justified in making an exception in this case.

Nycticorax nycticorax naevius (Boddaert). Black-crowned Night Heron.

A juvenile male taken by Jewett on July 29, 1908, on Government Island is the only specimen we have been able to locate taken within the area. On November 8, 1925, however, two of these birds flew over Jewett's residence in East Portland and not only were they seen to good advantage, but their characteristic "squawk" was heard several times.

Grus mexicana (Müller). Sandhill Crane.

Formerly a regular and common fall migrant in this locality, now becoming extremely rare. Between October 1 and December 1, 1902, three flocks of considerable size visited the lake on Government Island and were noted by Jewett on various occasions during that time. Only two late records are available. A flock of about thirty birds was seen flying over by Gabrielson in April, 1919; and a lone bird circled over his home several times on the evening of September 27, 1925.

Rallus virginianus pacificus Dickey. Pacific Virginia Rail.

A tolerably common but inconspicuous resident. During 1914, a pair nested on the border of Reed College pond in East Portland. On August 10 of that year, Jewett watched an adult of this species with its small, downy, black young as they fed about in the grass. On January 19, 1916, Jewett flushed one at close range along the borders of Spring Creek in East Portland.

Porzana carolina (Linnaeus). Sora Rail.

On October 10, 1928, a bird of this species was picked up dead by a school boy and sent to W. A. Eliot. He presented it to Gabrielson, but the specimen was too much decomposed to be saved. This constitutes our only definite record for this area.

Fulica americana americana Gmelin. American Coot.

A common resident, found in all suitable areas. A considerable number nest each year on the Oak Slough in south Portland; and, to a lesser extent, the species nests in suitable localities along the lower Willamette and Columbia rivers. During September the resident birds congregate with the migrants in considerable flocks

and remain bunched until late in March or early in April. Our records contain notes of their occurrence in this district each month of the year, and considerable numbers have been taken from September to November.

Capella delicata (Ord). Wilson Snipe.

A regular migrant and occasional winter resident in all suitable localities. Numerous sight records have been made from September 6 to April 6, and a number of specimens have been taken on Government Island in the Columbia River from September 29 to November 15.

On October 1, 1927, the writers saw a flock of 12 to 15 rather large shorebirds flying in close formation over a meadow on the Columbia River bottoms. They were going through the simultaneous turning and twisting evolutions so commonly seen in sandpipers. Somewhat puzzled, we collected one and to our surprise found it to be of this species. Neither of us had ever previously observed such actions on the part of Wilson Snipe.

Pisobia maculata (Vieillot). Pectoral Sandpiper.

A casual fall migrant along sloughs and river banks, frequenting wet, grassy meadows by choice. Jewett's collection contains three specimens taken on October 15, 1905, and October 5, 1908, on Government Island.

Pisobia minutilla (Vieillot). Least Sandpiper.

A tolerably common fall migrant. Frequents wet meadows, sloughs and ponds during September and as late as October 3.

Ereunetes mauri Cabanis. Western Sandpiper.

This species, although occurring regularly in fall, can not be considered common in this localitity. Our earliest fall migration record was on July 3, 1923, near Fairview on the Columbia River. Gabrielson has taken specimens on September 2, 1920, and Jewett mentions a flock of about twenty seen on Government Island on May 7, 1908.

Totanus melanoleucus (Gmelin). Greater Yellow-legs.

Of frequent and regular late summer and fall occurrence in this locality. Four were seen on August 2, 1925, near Fairview, and the Jewett collection contains specimens from Government Island taken on October 18, 1908. Gabrielson saw two birds in company with a flock of Western Sandpipers on September 2, 1920, near Fairview. We have only two spring records. Gabrielson saw a pair of migrant birds in a small pond near his home on April 17, 1922, and three birds, May 3, 1926, along the Columbia River.

Actitis macularia (Linnaeus). Spotted Sandpiper.

A tolerably common summer resident in the vicinity of all bodies of water within the district. Nests with eggs have been located on various dates during May and early June, and the species has been noted commonly from April to September each year.

Oxyechus vociferus vociferus (Linnaeus). Killdeer.

The most common and conspicuous wader in the district. Our notes contain sight records for every month in the year. A nest containing two addled eggs was found on April 18, 1909, on Government Island; and numerous records of young out of the nest occur through our notes during June and July. On April 20, 1926, a pair of Killdeers brought eggshells, presumably from newly hatched young, and dropped them into the bird bath at Gabrielson's home. The young birds were seen a few days later.

Oreortyx picta palmeri Oberholser. Coast Mountain Quail.

This species was quite abundant during the period from December, 1904, to January, 1907. Jewett collected a representative series in the area now included within the city limits of Portland. On April 5, 1908, he saw a large covey of newly hatched young in south Portland. During recent years, the species has become much scarcer, and only a remnant of the large number once seen now remains within this district. The creation by the State Game Commission of an upland game preserve bordering the city of Portland on the south will help preserve the species, although most of this area is well settled and over-run with stray cats and dogs. The Mountain Quail is a permanent resident.

Fig. 4. NEST AND EGGS OF THE SOOTY GROUSE IN SALAL THICKET. THIS SPECIES USUALLY SELECTS A WELL-DRAINED BUSHY KNOLL FOR ITS NESTING SITE.

Photo by Alex Walker.

Dendragapus obscurus fuliginosus (Ridgway). Sooty Grouse.

This is another species that is disappearing rapidly within the immediate vicinity of Portland. A few are found in the wooded tracts of Portland Heights and on the various buttes east of Portland, and it is more common in the foothills in the eastern part of the district. It formerly bred in considerable numbers in parts of the city that have now become well settled. These birds are locally known as "hooters", from their mating call, which is produced from the tops of tall fir trees during the latter part of February and which is continued until the middle of May. Nests with eggs have been found from April 26 to June 2.

Bonasa umbellus sabini (Douglas). Oregon Ruffed Grouse.

Numbers of this grouse are still found permanently resident in the immediate vicinity of Portland and they are fairly common in the outlying heavily wooded districts, especially along the Columbia and Willamette rivers. They are protected by law over most of the area covered by this paper.

Columba fasciata fasciata Say. Band-tailed Pigeon.

A common summer resident. Our earliest date of actual appearance is April 21, when a number were seen by Jewett on Government Island in the Columbia River. By May 5 to 7, the pigeons become common in flocks; and as soon as the elder-berries begin to develop along the river bottoms they feed on them extensively. They are also exceptionally fond of the berries of the cascara tree, and in some localities considerable complaint is made by farmers against their depredations on cultivated cherries.

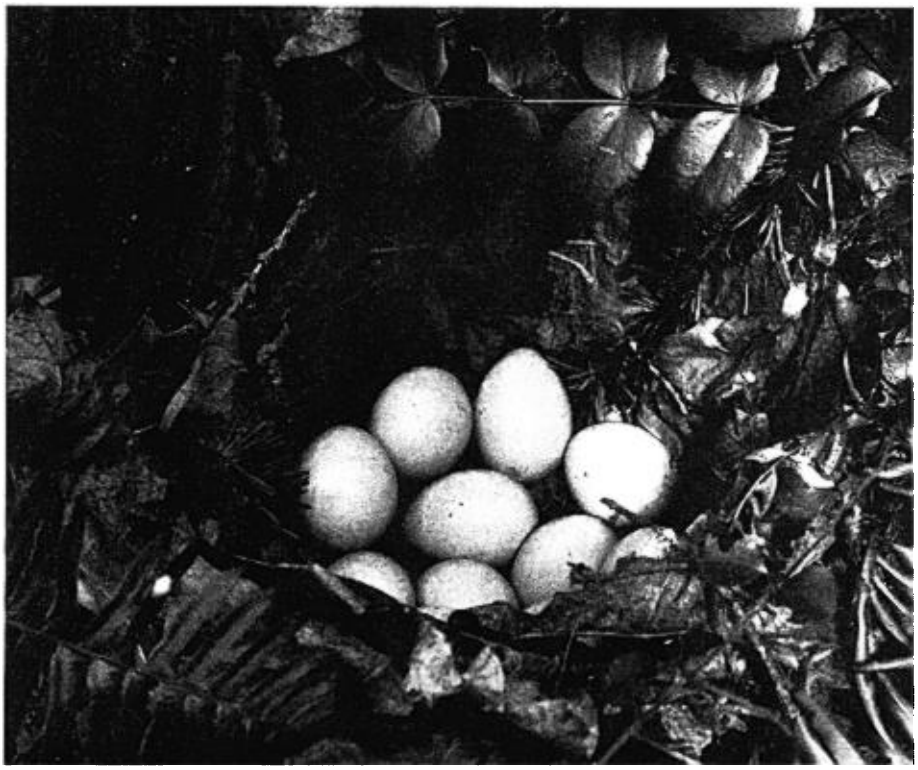

Fig. 5. TYPICAL NEST AND EGGS OF THE OREGON RUFFED GROUSE; MAY 4, 1913.
Photo by Alex Walker.

Zenaidura macroura marginella (Woodhouse). Western Mourning Dove.

Only tolerably common. Our notes contain sight records ranging from April 23 to October 11. After the breeding season they are of rather frequent occurrence about thistle patches along the Columbia River bottomlands.

Cathartes aura septentrionalis Wied. Turkey Vulture.

A fairly common summer resident. The earliest date we have is April 5 and the latest is in the last week in September. We have, at the present time, no definite

breeding records, although this species undoubtedly does nest in suitable localities, particularly along the Columbia River in the eastern part of the district.

Accipiter velox (Wilson). Sharp-shinned Hawk.

One of the commonest hawks of this district. It is a permanent resident, records being available for every month in the year.

Accipiter cooperii (Bonaparte). Cooper Hawk.

A common permanent resident, being recorded every month in the year. Six specimens taken in the district are available for examination. A nest containing five fresh eggs, with the adult female, taken at Milwaukie on May 21, 1909, constitutes our only breeding record.

Astur atricapillus striatulus Ridgway. Western Goshawk.

The only record for the district is of an immature male in the Jewett collection taken February 5, 1923, at Oswego. This bird was killed and sent in the flesh to Jewett by a farmer of that vicinity.

Buteo borealis calurus Cassin. Western Red-tailed Hawk.

A permanent resident, and the only one of the large hawks found commonly in this district. On May 7, 1908, Jewett recorded a nest containing three large young. A pair nests each year on Wilson Hill, a small butte between Portland and Gresham, another pair on the Columbia River bottoms near Troutdale, and doubtless others in other parts of the county.

Haliaeëtus leucocephalus (Linnaeus). Bald Eagle.

The Bald Eagle is a rather rare bird in this district. Jewett reports that a pair formerly nested in a big cottonwood at the head of Government Island, but this tree was washed out by a flood in the spring of 1903, and the birds left the locality. He records one other bird seen near Troutdale on March 15, 1922. Gabrielson saw a lone bird on February 28, 1921. He shot a fully adult bird on June 21, 1921, on the shore of Sauvies Island, and he also saw a single bird on May 30, 1923. This constitutes the entire number of definite records available for the county at the present time. Undoubtedly, more time spent along the Columbia River will produce more records of this species.

Falco peregrinus anatum Bonaparte. Duck Hawk.

"Last January, Dr. Hibbard of Portland shot a female Western Duck Hawk in Multnomah Co., Oregon" (Oreg. Nat., IV, 1897, p. 20). Aside from the above the only record of this species is of a bird seen by Jewett on February 3, 1916, on Oak Slough, along the Willamette. The Duck Hawk undoubtedly migrates through the area, but it is not a common bird anywhere in Oregon.

Falco peregrinus pealei Ridgway. Peale Falcon.

A female bird was picked up dead on the streets of Portland near the Couch school in October, 1927. After passing through the hands of several people it finally reached us on October 25, through the kindness of W. A. Eliot. It is now in the Gabrielson collection.

Falco columbarius suckleyi Ridgway. Black Pigeon Hawk.

On July 31, 1925, Jewett noted a Black Pigeon Hawk at Crown Point, on the Columbia River Highway. This bird flew very close to him and allowed an exceedingly good view. In addition to this record, a bird of this species has wintered in Portland for several years and it has frequently been observed, by both of us, from the windows of the New Post Office Building, chasing pigeons.

Falco sparverius sparverius Linnaeus. American Sparrow Hawk.

Our most common bird of prey. It is a year-long resident of the county, but much more common during the spring and fall migrations. It can be seen, however, at any season of the year in reasonable numbers in most sections of the district. We have had a series of thirty-five Sparrow Hawks from the Willamette Valley to compare with birds from Wisconsin and New York. We have gone over them many times and are unable to differentiate the western birds in any way from eastern birds. Therefore we are considering them as *sparverius* instead of *phalaena.*

Pandion haliaëtus carolinensis (Gmelin). American Osprey.

In the summer of 1902, Jewett shot an adult, carrying a large sucker, flying over Government Island. He also saw one in the same locality on April 20, 1903, and another one on April 21, 1910.

Fig. 6. IMMATURE NORTHERN SPOTTED OWL. THIS, THE RAREST OF OUR LARGER OWLS, FREQUENTS DENSE CONIFEROUS THICKETS AND IS RARELY SEEN BY EVEN THE MOST ENTHUSIASTIC BIRD STUDENT.
Photo by W. E. Sherwood.

Tyto alba pratincola (Bonaparte). American Barn Owl.

There is a skin in Jewett's collection taken April 18, 1913, on the eastern outskirts of Portland and a second in the hands of T. D. Kirkpatrick. This latter bird was picked up dead in the Peninsula district on January 13, 1928. These are our only records for the area.

Asio flammeus (Pontoppidan). Short-eared Owl.

There are available two skins of this bird from this district. The first is a female in the collection of W. L. Finley, taken December 31, 1901, by H. Bohlman. The second, in Jewett's collection, was taken October 17, 1912, on Govern-

ment Island. His records from 1908 indicate that this owl has been a fairly common spring migrant, and at least an occasional winter resident, particularly on the Columbia River bottoms. At the present time it is a common species in the Portland area.

Strix occidentalis caurina (Merriam). Northern Spotted Owl.

An adult female (no. 2644, coll. S. G. J.) was taken on November 15, 1914, at Oswego, about ten miles south of Portland on the Willamette River, by E. F. Gonty, a Portland taxidermist. There are, in addition, two mounted specimens without data in the Portland City Museum prepared by Fred Brazee who, some years ago, told Jewett they were killed on the range of hills known as Portland Heights. This is a species rarely seen anywhere in western Oregon, but it is as likely to be found in the Portland area as elsewhere.

Fig. 7. BREWSTER SCREECH OWL. THIS IS THE ONLY COMMON SMALL OWL FOUND IN THE AREA COVERED BY THIS PAPER.
Photo by Alex Walker.

Scotiaptex nebulosa nebulosa (J. R. Forster). Great Gray Owl.

The only record for the county is of a female bird shot by Guy Stryker near Milwaukie (Oreg. Nat., IV, 1897, p. 19).

Cryptoglaux acadica acadica (Gmelin). Saw-whet Owl.

On October 28, 1908, Fred Corliss, of Portland, took an adult female in East Portland. This specimen, now in the Jewett collection (no. 1816), provides the only record for the district.

Otus asio brewsteri Ridgway. Brewster Screech Owl.

The commonest owl in this district. It is a permanent resident, being recorded every month in the year. In May and June, 1923, Jewett picked up a number of pellets in Sellwood Park. In these, parts of skulls were found as follows:

Field Mouse (*Microtus townsendi*)	16
House Mouse (*Mus musculus*)	3
House Rat (*Rattus norvegicus*)	2
Wandering Shrew (*Sorex vagrans*)	11
Shrew (*Sorex*, sp.)	2
Song Sparrow (*Melospiza melodia morphna*)	1
Frog (*Rana*, sp.)	1

A total of 34 small mammals, one bird and one frog was found. It is interesting to note that the one bird found in these pellets was a Song Sparrow, this in view of the fact that, on December 27, 1924, a Screech Owl caught alive by

Fig. 8. DUSKY HORNED OWL. THIS IS THE MOST COMMON OWL FOUND IN THIS DISTRICT, BUT OWING TO THE GREAT AMOUNT OF TIMBER IT IS MORE OFTEN HEARD THAN SEEN.

Photo by Alex Walker.

Gabrielson held a freshly killed bird of this species in its claws. Jewett records a nest containing two full-grown young Screech Owls on June 19, 1902, and Gabrielson caught a newly fledged young one in his yard on June 8, 1921.

Bubo virginianus saturatus Ridgway. Dusky Horned Owl.

Except for the Screech Owl, the Horned Owl is the most common member of this family hereabouts. It is found commonly in coniferous timber in the eastern part of the district and it frequents the wooded buttes between Portland and Gresham. One pair has lived on a butte near Gabrielson's home for at least three years.

Glaucidium gnoma grinnelli Ridgway. Coast Pigmy Owl.

There is a single skin of this little owl in Jewett's collection, taken November 23, 1913, at Latourelle, Oregon, by O. J. Murie. This is the only available specimen, although it is undoubtedly a permanent resident of the district. Gabrielson has heard Pigmy Owls calling in East Portland several times; and on January 13, 1926, he saw one sitting on a telephone wire near Oregon City.

Coccyzus americanus occidentalis Ridgway. California Cuckoo.

According to all early records this bird was rare here formerly. In later years it has apparently become somewhat more abundant, as in 1923, 1924, and 1925 the writers have found it quite regularly in their trips along the Columbia River; on June 8, 1923, they saw at least twelve birds. It has been recorded from April to September 3. E. S. Currier reports that he has found two deserted nests in the Portland area. The first was found on July 2, 1911, in a lowland thicket in the St. Johns district. The nest was a platform of coarse twigs covered with finer twigs, gray moss, and tendrils. It was built five feet from the ground in a wild-rose thicket and it contained one egg. On July 31, 1924, in the Ramsay Lake district, he found a second deserted nest containing a dead nestling and an egg.

Megaceryle alcyon caurina (Grinnell). Northwestern Belted Kingfisher.

A common permanent resident, observed every month in the year by both writers. It nests in cut banks along our water-courses.

Dryobates villosus harrisi (Audubon). Harris Woodpecker.

A regular year-long resident, but not nearly so common as the Gairdner Woodpecker. More abundant in the wooded sections of the district than along the waterways and in town. Jewett records two nests. The first one, May 7, 1902, contained four eggs, and the second, May 7, 1908, contained large young.

Dryobates pubescens gairdneri (Audubon). Gairdner Woodpecker.

A very common permanent resident. One of the characteristic birds of the district and one that is almost invariably seen on a bird trip taken anywhere in the vicinity of Portland. Nests with eggs have been discovered from May 10 to May 22, but these dates could undoubtedly be extended by more concentrated search.

Sphyrapicus ruber ruber (Gmelin). Northern Red-breasted Sapsucker.

A permanent resident of the district and undoubtedly breeds, although no definite nesting records are available at this time. This bird is much more conspicuous in the winter time than in summer, and consequently most of the records obtained are for the fall and winter months.

Phloeotomus pileatus picinus Bangs. Western Pileated Woodpecker.

Jewett has seen this bird within the district on two occasions, once in April,

1903, and the other time on April 24, 1916, both on Palatine Hill. The birds are undoubtedly more common than our records indicate, as their work on trees is seen not uncommonly in the wooded sections.

Asyndesmus lewisi Riley. Lewis Woodpecker.

A common summer resident, and fairly common in winter. Jewett records a brood of young on August 2, 1914, and a great many spring and summer records are available from the notes of both writers.

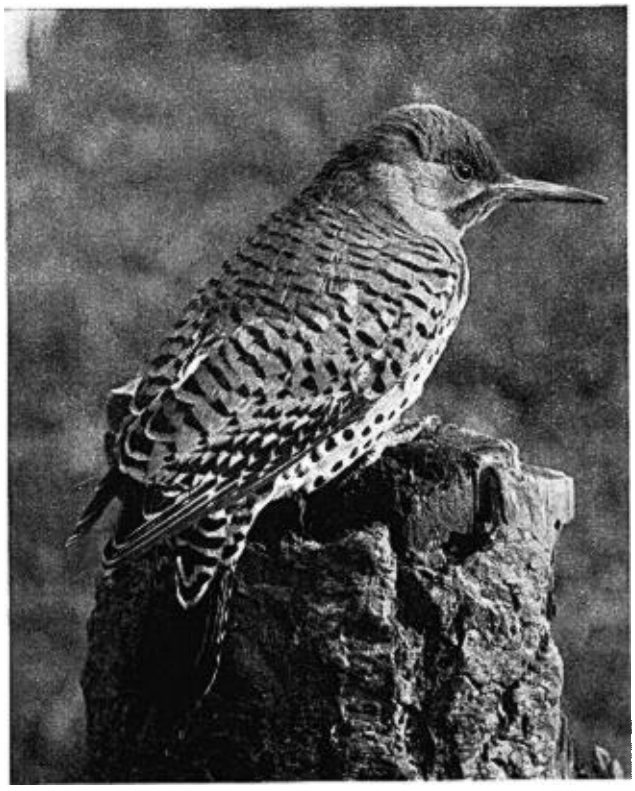

Fig. 9. NORTHWESTERN FLICKER. CHARACTERISTIC BIRD OF OUR LOGGED-OFF AND OPEN RIVER BOTTOM LANDS. THE MOST CONSPICUOUS MEMBER OF THE WOODPECKER FAMILY.

Photo by Alex Walker.

Colaptes cafer cafer (Gmelin). Northwestern Flicker.

Next to the Gairdner Woodpecker, the Northwestern Flicker is the most common woodpecker in this section. It is a permanent resident, although the numbers present in winter are subject to considerable fluctuation. Wintering flocks usually appear in October and wander about the country. North-bound migrants appear usually in February, the date varying from the first to the twentieth, according to the weather. Occasionally light-colored birds approaching *collaris* are taken during the winter months; a female (no. 3624, coll. S. G. J.) taken October 21, 1924, is a bird of this type. Specimens of the "hybrid" type, in which the red of the wings and tail is more or less completely replaced by yellow or orange, and in

which the head markings vary, are frequently seen and one has been taken (coll. S. G. J., no. 3380, male, October 14, 1913).

Chordeiles virginianus hesperis Grinnell. Pacific Nighthawk.

The Pacific Nighthawk, a regular summer resident, is one of the latest migrants to put in an appearance. For three years, 1922 to 1924, the first ones observed in East Portland by Gabrielson appeared on June 3. On June 28, 1920, he found a nest containing two eggs in a field near his home. During migration flights, particularly in June and August, this bird sometimes becomes abundant.

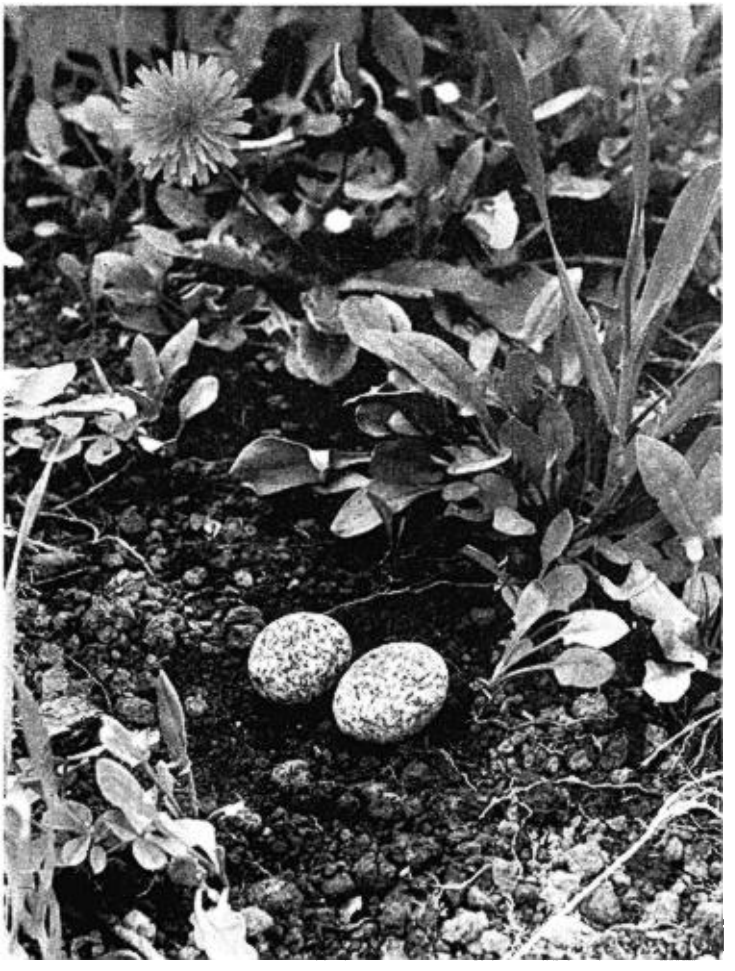

Fig. 10. EGGS OF THE PACIFIC NIGHTHAWK. THIS SPECIES USUALLY CHOOSES GARDENS OR OTHER CULTIVATED LANDS FOR NESTING SITES.

Photo by Alex Walker.

Chaetura vauxii (J. K. Townsend). Vaux Swift.

A fairly common summer resident. The earliest date on which it has been observed is May 4 and the latest September 9. This bird frequents the Columbia River bottoms and has been noted by Jewett as nesting in chimneys on Government Island (Condor, XI, 1909, p. 139).

Selasphorus rufus (Gmelin). Rufous Hummingbird.

A very common summer resident. The earliest record by either of the writers is March 22, but it has been noted by Mrs. Gale on February 16 (1916). It usually arrives with the blooming of the red currants, and it is much in evidence from then on until late in September. Jewett records two nests, one containing two eggs and the other newly hatched young; and Gabrielson saw a nest containing about half grown young on April 20, 1926, near Oswego. These birds are attracted greatly by such plants as scarlet sage, petunia, and other bright summer flowers, and they are noticed more commonly after such flowers begin to bloom.

Fig. 11. RUFOUS HUMMINGBIRD AT ITS NEST IN A VIRGINIA CREEPER. THIS IS THE ONLY HUMMINGBIRD FOUND IN THIS AREA.

Photo by Herman T. Bohlman.

Tyrannus verticalis Say. Western Kingbird.

A bird of the arid sections of eastern Oregon, but occasionally straggling down the Columbia River to the area under consideration. Jewett records two seen May 7 to 11, 1908, on Government Island, and both writers, while tramping the Columbia River bottoms, saw two on May 4, 1924, and another single bird on August 11, 1924. Gabrielson also saw two birds on August 24, 1926, near the same place. This species is not an uncommon straggler throughout the western districts of Oregon, and it occasionally breeds there but has not been recorded as nesting within the area included in the present study.

Sayornis sayus sayus (Bonaparte). Say Phoebe.

Included in this list on the strength of a single bird collected by Jewett on

Government Island on March 4, 1903. It undoubtedly occurs in this section periodically, as it has been noted in the Willamette Valley south of Portland on various occasions.

Myiochanes richardsonii richardsonii (Swainson). Western Wood Pewee.

A regular summer resident, the earliest date of appearance being May 4. Neither writer has made any summer records after July 1, but the species stays until well toward the first of September.

Empidonax difficilis difficilis Baird. Western Flycatcher.

A regular summer resident, arriving early in May. The earliest date recorded is May 7, and the latest August 11. One nest was found on July 6, 1924, in the Columbia River bottoms, containing two young birds and one egg. It is not so common a bird as the Traill Flycatcher, but it is a regular breeding species.

Empidonax traillii brewsteri Oberholser. Western Traill Flycatcher.

Our most abundant flycatcher. Our earliest spring date is April 21 and the latest summer date, July 27. Jewett has taken full sets of eggs from June 15 to July 2.

Otocoris alpestris strigata Henshaw. Streaked Horned Lark.

A permanent resident, particularly abundant in the cultivated sections of the district in the vicinity of Gresham. It is less common along the Columbia River bottoms, although at times in the winter it is found there in large flocks. These birds begin to sing on the first warm days in February, and they mate and nest earlier than do most other song birds.

Pica pica hudsonia (Sabine). American Magpie.

The magpie is another eastern-Oregon species that occasionally straggles down the Columbia River to this section. There are two skins in the collection of W. L. Finley, taken at Taylor's ranch on the Columbia River, December 26, 1900. Jewett saw two birds on Government Island on January 8, 1903, and a single bird on November 14, 1908. April 3, 1924, Gabrielson saw a bird along the road near Kelly Butte, and on October 12, 1924, another was noted by both the present writers on the Columbia River bottoms. These are the only definite records available at the present time. This species may be looked for, particularly during the winter months, along the Columbia River bottoms east of Portland.

Cyanocitta stelleri carbonacea Grinnell. Coast Steller Jay.

A common permanent resident of this section. It is typical of the coniferous forest sections, and it is not at all common along the river bottoms or in the open cultivated lands. Birds of this species from the Portland area have usually been referred to *stelleri* by local students, but careful comparison shows them to be intermediates between *stelleri* and *carbonacea*, closer to the latter.

Aphelocoma californica immanis Grinnell. Long-tailed California Jay.

A rare resident. Jewett collected an adult male on November 5, 1905, on the Columbia Slough, and records seeing another on October 16, 1906, in the same locality; also several in Sellwood on December 30, 1915. Gabrielson saw one on July 4, 1920, at Oak Slough, and others were seen on various occasions after this date by both writers. A male in the Finley collection was taken near Portland on January 21, 1900. The Long-tailed Jay is a regular resident as far north as Salem and Dallas, in the Willamette Valley, but is not at all abundant north of there except for an established colony on Sauvies Island where it is possible to see

a number at any season of the year. The specimen above referred to (coll. S. G. J., no. 269) has been recorded by Swarth (Univ. Calif. Publ. Zool., vol. 17, 1918, pp. 415-417) as *A. c. immanis*. E. S. Currier took a nest containing four fresh eggs in the Portland area on April 15, 1906, and a second one containing five eggs on May 13, 1906. These are the only available nesting records.

Perisoreus obscurus obscurus Ridgway. Oregon Jay.

Jewett has two skins of this bird, both collected on November 28, 1913, at Palmer, Oregon, by O. J. Murie. This species is undoubtedly fairly common in the eastern part of the district in the heavily timbered sections; only a little time has been spent by us in that locality.

Fig. 12. NEST AND EGGS OF THE NORTHWESTERN RED-WINGED BLACKBIRD IN TYPICAL LOCATION. THE NESTING RANGE OF THIS SPECIES IN THE AREA COVERED BY THIS PAPER IS VERY RESTRICTED, OWING TO THE COMPARATIVE ABSENCE OF SWAMP LAND.
Photo by Alex Walker.

Corvus corax principalis Ridgway. Northern Raven.

The Raven, so far as known, is only a transient visitor to this section. It has been seen at various times flying over East Portland, by Gabrielson, most commonly in October and November.

Corvus caurinus Baird. Northwestern Crow.

A common permanent resident. It nests along the Columbia River and in other suitable places, and it gathers in wintering flocks of various sizes along the same river. These wintering flocks usually make their appearance between October 15 and November 1; and they persist until late in February or early in March, when they begin to break up as the birds pair off. It is probable that the larger Western Crow (*Corvus brachyrhynchos hesperis*) occasionally appears here in the winter time. We have often seen these apparently larger birds in the crow flocks, but have never obtained any specimens.

Xanthocephalus xanthocephalus (Bonaparte). Yellow-headed Blackbird.

A few years ago, stragglers of this species were reported along the Columbia River bottoms by members of the local Audubon Society, but this record was not verified until May 19, 1928, when the writers were visiting the Hall ranch, at which time two beautiful adult males were collected. At the time, these were associating with a small flock of Northwestern Red-wings.

Agelaius phoeniceus caurinus Ridgway. Northwestern Red-winged Blackbird.

A permanent resident, but much more common during migration than at other seasons. It usually winters in small straggling flocks in sheltered places along the river bottoms. Migrating flocks of adult males appear on the first warm days in spring, running in our records from January 21 to February 22. These are soon followed by the flocks of females, and the species is then a conspicuous feature of bird life for several weeks. Again in September the blackbirds congregate in flocks of considerable size and remain until November, when their numbers decrease markedly, to the few that remain all winter. The red-wing nests in suitable places along the Columbia River and other streams, but it can not be called a common nesting bird.

Sturnella neglecta Audubon. Western Meadowlark.

One of the most common and conspicuous residents of the district. It will be found in full song on bright days throughout the winter and it is equally conspicuous at other seasons of the year. It is found in open fields throughout the district. The nesting season reaches its height during May.

Icterus bullockii Swainson. Bullock Oriole.

Not an abundant bird, although a regular summer resident. It usually prefers the cottonwood or willow bottoms. The earliest appearance noted was April 28. It is one of the earliest migrants to leave in the fall. We have found this oriole as a summer resident of the Columbia River bottoms, but we have seen none later than our August trips.

Euphagus cyanocephalus (Wagler). Brewer Blackbird.

A regular permanent resident of the district and a quite conspicuous migrant in spring and fall, when the numbers greatly increase over what they are at other seasons of the year. It nests regularly, the young birds usually being fledged by May 25. From this date on through the summer, flocks of young Brewer Blackbirds are increasingly conspicuous and continue so until well into September.

Hesperiphona vespertina brooksi Grinnell. British Columbia Evening Grosbeak.

A quite regular winter visitor and at least an occasional summer resident of the district. Charles K. Reed recorded (MS) two seen on Council Crest on July

4, 1905, and Jewett reports the species as abundant on June 14, 1908. The birds appear regularly in the fall; the earliest date that we have is August 20, but more commonly it is late in September or early in October before they are at all conspicuous. They remain usually until some time in April, May 2 being the latest spring date on which they have been observed by either of the writers, except for the above-mentioned summer records. There is some variation in the birds taken in this area and we are in doubt as to the subspecies. Grinnell has identified one bird (no. 328, coll. S. G. J.) as *brooksi*. This bird is an adult male collected on February 13, 1905, at Portland.

Carpodacus purpureus californicus Baird. California Purple Finch.

A common permanent resident, found usually in coniferous timber, although we regularly find young birds feeding in the willow bottoms during August and September. We have never found a nest, but a pair appeared at Gabrielson's bird

Fig. 13. NEST AND EGGS OF THE CALIFORNIA PURPLE FINCH IN SECOND-GROWTH FIR.

Photo by Alex Walker.

bath on June 25, 1924, with four newly fledged young and remained about the place for several days. E. S. Currier has taken four nests of this species in North Portland, all of them being found in second-growth Douglas fir. The dates are as follows: Two nests containing five fresh eggs each on May 13, 1906, one containing two eggs on June 2, 1907, and one containing one egg on June 11, 1911.

Loxia curvirostra minor (Brehm). American Crossbill.

This erratic wanderer occasionally breeds within this section, and it is likely to appear at any season. There is one skin available taken at Holbrook, April 22, 1900, by Herman T. Bohlman. Jewett saw five on Palatine Hill on January 18, 1916. Gabrielson saw a flock on Wilson Butte between Portland and Gresham on December 24, 1922; and on March 25, 1926, he took two birds out of a flock of

four near his home. These proved to be a male changing from the streaked plumage to the yellow, and an adult female. They were accompanied by another immature bird and a male in the rosy plumage. On March 26 at least three flocks flew overhead, and several birds were at the drinking fountain in the yard on one occasion. These birds were joined on March 28 by several others, and ten birds were daily visitors until May 15.

Spinus tristis salicamans Grinnell. Willow Goldfinch.

A common summer and a regular winter resident, recorded in every month of the year. Six nests with eggs have been noted between June 15 and July 6. It is found in small flocks in the wintertime, and an interesting note was made, on December 27, 1924, by the writers, on the feeding habits of this bird. On this date a strong east wind was blowing and a trip was made along the Columbia River bottoms. All other birds were feeding in the timbered and sheltered places, but a large flock of these goldfinches was flying about scattered thistles in a flat pasture, despite the heavy wind.

Fig. 14. NEST AND EGGS OF THE OREGON VESPER SPARROW. THIS SPECIES NESTS COMMONLY IN OPEN MEADOW AND PASTURE LANDS IN THIS AREA.

Photo by Alex Walker.

Spinus psaltria hesperophilus (Oberholser). Green-backed Goldfinch.

A quite common summer resident and irregular winter resident; noted from March 6 to October 26. Although most books do not give this species as occurring in western Oregon, it is regularly found in this district. It is mentioned in Jewett's notes since 1908. On January 30, 1928, Jewett saw several in the residential section of Portland.

Spinus pinus pinus (Wilson). Pine Siskin.

A very common permanent resident, though it is most conspicuous during the fall and winter months.

Pooecetes gramineus affinis G. S. Miller. Oregon Vesper Sparrow.

A very common summer resident of suitable breeding areas. It usually appears about April 1, and it remains until late September. The earliest date of spring arrival is March 29 and the latest, April 5, while our latest fall date is October 1. This species nests regularly in the cultivated sections of the district.

Passerculus sandwichensis brooksi Bishop. Brooks Savannah Sparrow.

This is the summer resident form of the Savannah Sparrow. It breeds regularly in this section and appears in the spring about April 1. The earliest date of spring arrival is March 18, and the latest, April 3. This bird nests regularly in the meadowlands and cultivated fields, being particularly common in the Gresham district, east of Portland. Full-fledged young appear about June 5.

Fig. 15. NEST AND EGGS OF THE BROOKS SAVANNAH SPARROW. THIS IS ANOTHER LOCALLY COMMON NESTING SPECIES IN THE OPEN MEADOW AND PASTURE LANDS.

Photo by Alex Walker.

Passerculus sandwichensis alaudinus Bonaparte. Western Savannah Sparrow.

This form of the Savannah Sparrow migrates through the Portland area. Specimens have been secured October 4, 1905, May 4, 1924, and December 27, 1924, by Jewett.

Zonotrichia leucophrys pugetensis Grinnell. Puget Sound White-crowned Sparrow.

A common nesting species and a rather rare winter resident. It has been re-

corded every month in the year, but there is usually a great migration flight between March 25 and April 5. The earliest date we have of nests with eggs is May 12, and the latest, June 15.

Zonotrichia coronata (Pallas). Golden-crowned Sparrow.

A common migrant and a regular winter resident. The earliest date of its appearance in the fall is October 3 and the latest spring record May 21. Its period of greatest abundance in the spring is between March 25 and April 10, and it is also a very common species the latter half of the month of October.

Spizella passerina strigula Grinnell. Pacific Chipping Sparrow.

A common summer resident. The first migrants appear from March 29 to April 2, according to our records, and remain until late September or early October, as regular residents. Nests in suitable localities throughout the district.

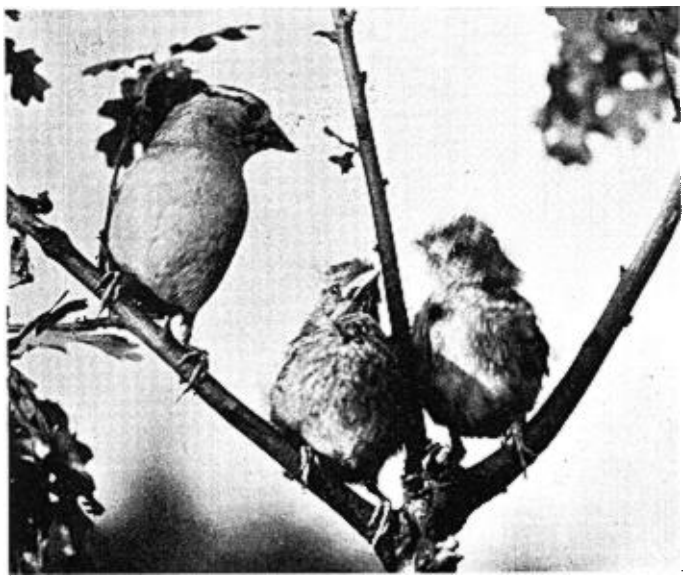

Fig. 16. PUGET SOUND WHITE-CROWNED SPARROW FEEDING YOUNG. THIS IS ONE OF OUR MOST COMMON NESTING SPARROWS.

Photo by Herman T. Bohlman.

Junco hyemalis connectens Coues. Cassiar Junco.

Gabrielson collected a male of this representative of the slate-colored juncos in his yard on January 1, 1928. The bird was with a flock of *J. o. shufeldti* driven to the shelter of the buildings by a snow and sleet storm.

Junco oreganus oreganus (J. K. Townsend). Oregon Junco.

A rare winter visitor to the Portland area. Out of forty-six skins collected in the Portland area by the two writers, only three are *oreganus*. Two of these are October birds and one was taken in February. All of these have been identified by H. S. Swarth.

Junco oreganus shufeldti Coale. Shufeldt Junco.

This is the breeding form of junco in this district and it is the one to which the name *connectens* has usually been applied. It is a fairly common summer resi-

dent, nesting in brushy pastures and cut-over lands. Nests with eggs have been found as early as May 3. On December 8, 1924, a perfect albino junco was killed on Sauvies Island and brought to the State Game Commission.

Amphispiza belli nevadensis (Ridgway). Nevada Sage Sparrow.

Jewett saw a bird of this species on February 18 and February 19, 1914, at Portland and had excellent opportunities to observe it on both dates.

Melospiza melodia morphna Oberholser. Rusty Song Sparrow.

We have had available a large series of skins of Song Sparrows from western Oregon, including 130 from the Portland area. There is considerable variation in the birds present at any season that is not correlated with sex, season, or state of wear of the feathers. We can not find any recognizable dividing line in birds of this area in the breeding season and in the wintering individuals, and therefore class them all as *morphna*, except the specimens mentioned under the two following subspecies. In our classification of *morphna* and *merrilli* we are following the ideas of H. S. Swarth. On December 26, 1927, Gabrielson collected a song sparrow with a white patch on each of the three outer primaries of each wing which gave the bird an odd appearance. We have handled a number of partially albino birds, but this is the first in which the pattern was so symmetrical.

Melospiza melodia merrilli Brewster. Merrill Song Sparrow.

Occasionally during the winter months lighter colored Song Sparrows from east of the Cascades drift into the Portland area through the Columbia Gorge. These birds are quite distinct among the multitudes of dark-colored *morphna* and can be picked out in the field. Gabrielson has two birds that have been identified as *merrilli*, one by Oberholser and one by Swarth. The first of these is a male taken December 24, 1922, and the second a female collected on October 28, 1923.

Melospiza melodia inexspectata Riley. Yellow-head Pass Song Sparrow.

A peculiar appearing male Song Sparrow collected by Gabrielson at his home on January 8, 1922, has been identified by Oberholser as *inexspectata.*

Melospiza lincolnii gracilis (Kittlitz). Forbush Lincoln Sparrow.

The Forbush Sparrow is a regular, but not common, migrant in the Portland area. All birds collected by the writers have been taken between September 9 and October 11. No spring birds have been taken within this district, although they have been taken in other sections of the Willamette Valley.

Passerella iliaca unalaschcensis (Gmelin). Shumagin Fox Sparrow.

Fox Sparrows of seven different subspecies have been taken as migrants in the Portland district. The status of each will be discussed under the appropriate race. The Shumagin Fox Sparrow is one of the rarer forms in this district. A single specimen (no. x3897, coll. Calif. Acad. Sci.) was taken in Portland, Oregon, November 7, 1912.

Passerella iliaca fuliginosa Ridgway. Sooty Fox Sparrow.

The Sooty Fox Sparrow is another of the rarer Fox Sparrows found in this district. A specimen collected by Gabrielson October 12, 1924, and another January 10, 1926, have been identified as *fuliginosa* by H. S. Swarth.

Passerella iliaca insularis Ridgway. Kadiak Fox Sparrow.

Again, one of the rarer forms in this district. One specimen collected December 14, 1924, by Gabrielson on Columbia River bottoms, and one by Jewett on Eagle Creek, Clackamas County, on February 16, 1907, are the only specimens the present writers have.

Passerella iliaca townsendi (Audubon). Townsend Fox Sparrow.

Another of the less common Fox Sparrows in this area. Jewett has one skin (no. 530) taken March 16, 1905, which has been identified as *townsendi* by H. S. Swarth. In addition, Audubon's type (U. S. Nat. Mus. no. 2874) of this form was taken on the Columbia River, February 15, 1836, probably somewhere in the vicinity of Fort Vancouver.

Passerella iliaca sinuosa Grinnell. Valdez Fox Sparrow.

This is the commonest form of Fox Sparrow found within this area. Eight specimens collected in this district by both writers are referred to this form by H. S. Swarth. Skins collected by Jewett are two March 23, 1908, two April 1, 1923, one February 21, 1925; by Gabrielson, two April 1, 1923, one October 12, 1924.

Fig. 17. NEST AND EGGS OF THE OREGON TOWHEE, ONE OF OUR MOST CHARACTERISTIC BIRDS. IT INHABITS BRUSHY BOTTOM LANDS THROUGHOUT THE AREA.

Photo by Alex Walker.

Passerella iliaca annectens Ridgway. Yakutat Fox Sparrow.

Three specimens of this race collected on February 21, 1921, and April 5, 1925, by Gabrielson, and one December 14, 1925, by Jewett, have been identified by H. S. Swarth.

Passerella iliaca altivagans Riley. Alberta Fox Sparrow.

Included in this list on the strength of a single specimen collected by Jewett on Government Island, December 15, 1912. This bird has been identified by H. S. Swarth.

Pipilo maculatus oregonus Bell. Oregon Towhee.

A common permanent resident. It is one of the earliest birds to commence singing in the spring, and nests containing eggs have been found from May 3 to

June 25. Fledglings are usually much in evidence by the first week in June. The bird decreases considerably in numbers during the winter, but can always be found in brush piles and sheltered places throughout the district. There is considerable increase in numbers in March when the migrants put in their appearance.

Hedymeles melanocephalus melanocephalus (Swainson). Black-headed Grosbeak.

The Black-headed Grosbeak can not be regarded as a common species of this district, though it is found regularly in the cottonwoods and willows along the Columbia River and other streams. The earliest recorded date is April 28, and it remains until late in August or early in September.

Passerina amoena (Say). Lazuli Bunting.

A common summer resident. Our earliest spring date is April 30, and the latest date on which it has been recorded by either writer is September 9. It nests regularly, eggs having been found from June 8 to June 17.

Piranga ludoviciana (Wilson). Western Tanager.

A common migrant, and less common as a summer resident. Our earliest date is May 2, and the bird is found in the district throughout the summer. Young birds usually appear at Gabrielson's home about June 20.

Progne subis subis (Linnaeus). Purple Martin.

The Purple Martin formerly bred in what is now the Fulton district of Portland; Herman T. Bohlman and Wm. L. Finley found them there. At the present time it can not be recorded as anything more than a very rare migrant in this section, though recently observed by both writers. On April 25, 1922, Gabrielson saw several birds along the Willamette Slough. On August 2, 1925, both writers watched a small flock for some time along the Columbia River bottoms. On the evening of May 13, 1926, a single bird of this species was present at Gabrielson's home sailing about in company with the Northern Violet-green Swallows nesting there. It remained for some little time, coming quite close to Gabrielson as he watched it from a summer house.

Petrochelidon albifrons albifrons (Rafinesque). Cliff Swallow.

A regular migrant and summer resident of this section. The earliest date recorded in spring is April 23, and the latest in the fall August 2, but this latter date could probably be considerably extended by more field work in the fall months of the year.

Hirundo rustica erythrogaster Boddaert. Barn Swallow.

A regular summer resident. The earliest date of arrival recorded is May 4, and the latest fall date September 4. It nests regularly about barns and outbuildings around farms within the district.

Iridoprocne bicolor (Vieillot). Tree Swallow.

Not so common as other swallows, but regularly recorded here in the spring months. The earliest date is March 6. It nests quite commonly in deserted woodpecker holes along the Columbia River bottoms, and is found in the great mixed swallow flocks in the fall months.

Tachycineta thalassina lepida Mearns. Northern Violet-green Swallow.

The commonest swallow found here. It regularly arrives during the first three weeks in March. Our earliest record is February 27; and our latest date

was October 7, 1928, when a large flock was noted by the writers along the Columbia River bottoms. Nests have been found as early as May 7, containing eggs. It is a common nesting species, frequently raising two broods in a season. Nests regularly about barns and outbuildings throughout the district, and in bird houses in the city of Portland.

Stelgidopteryx ruficollis serripennis (Audubon). Rough-winged Swallow.

A regular summer resident of this district, but neither writer has recorded definite dates of arrival. It nests regularly in tunnels along the river banks. Jewett records two nests dug out in June, one on June 23 containing young, and one on June 28 containing an addled egg.

Bombycilla garrula pallidiceps Reichenow. Bohemian Waxwing.

A rare winter visitor. It was recorded by both writers in different locations in 1919, the year in which there was a considerable invasion of this bird, at least as far south as Corvallis in the Willamette Valley. Gabrielson saw a flock on December 23, 1919, in the Court House square in the city, and a flock of nine birds near his home on the same date, and Jewett saw, on December 28 of the same year, a flock of eighty-three birds (counted) feeding on hawthorn berries at Eleventh Street and Malden Avenue, Portland.

Bombycilla cedrorum Vieillot. Cedar Waxwing.

A regular and quite common summer resident. The earliest date recorded is April 26, and the latest, November 28. It probably winters occasionally, but neither writer has noted it in the winter months within this area. Jewett found nests from June 6 to June 20, containing eggs. The bird is chiefly in evidence in most sections of the county in June and July during cherry season, when it appears in small flocks to feed on the ripening cherries.

Lanius borealis invictus Grinnell. Northwestern Shrike.

A rare winter visitor. A specimen was taken by Jewett on November 16, 1902, and others were seen January 8, 1903, and January 30, 1912, all in the present city limits of Portland. Gabrielson saw one bird on April 9, 1920, at his home on Powell Valley Road, and has noted two or three on other occasions.

Vireo olivaceus (Linnaeus). Red-eyed Vireo.

The first record of the Red-eyed Vireo for the Portland area was made by the writers July 6, 1924, when a nest containing three eggs and the two adult birds were collected. This nest was a typical one in a small hawthorn tree and was recorded by Jewett (Condor, XXVI, 1924, p. 227). This species was again seen on July 13, August 1, and September 3, 1924, and July 9, August 5, and September 8, 1925, by one or both writers on each date. Since then the colony has appeared each year and its future history will be followed with interest. A single bird appeared at Jewett's home on April 27, 1926, the earliest date on which the species has been noted.

Vireo gilvus swainsonii (Baird). Western Warbling Vireo.

This is a common nesting vireo in this section. It nests among the willows and cottonwoods along the river bottoms. The earliest recorded date of its appearance is May 5 and our latest record is October 1. One nest containing eggs was found by Jewett on June 16, and several containing young have been found in the latter part of the month.

Vireo solitarius cassinii Xantus. Cassin Vireo.

A common nesting species of coniferous timber, usually found on the side-hills still covered with conifers, or in second-growth on cut-over lands. The earliest recorded date of appearance is April 16, and the latest date on which noted in the district is August 11.

Vireo huttoni huttoni Cassin. Hutton Vireo.

A permanent but not abundant resident. Specimens have been collected every month in the year except April and August. A fully fledged young able to fly was taken on May 3, 1908, by Jewett, and a nest containing four small young was found by him on July 10, 1921. A nesting season is indicated, covering an unusually long period. Birds of this species are particularly noisy and conspicuous during February and March and most records are made during that time.

Vermivora ruficapilla ridgwayi van Rossem. Calaveras Warbler.

The Calaveras Warbler is a rare bird according to our records, although it is an abundant resident farther south in the State. Jewett saw one bird May 14, 1921; and Gabrielson saw one April 26, 1920, and one May 15, 1921. There is also a bird (no. 869) in the State Game Commission collection, taken on April 21, 1913, by L. A. Lewis at Jennings Lodge.

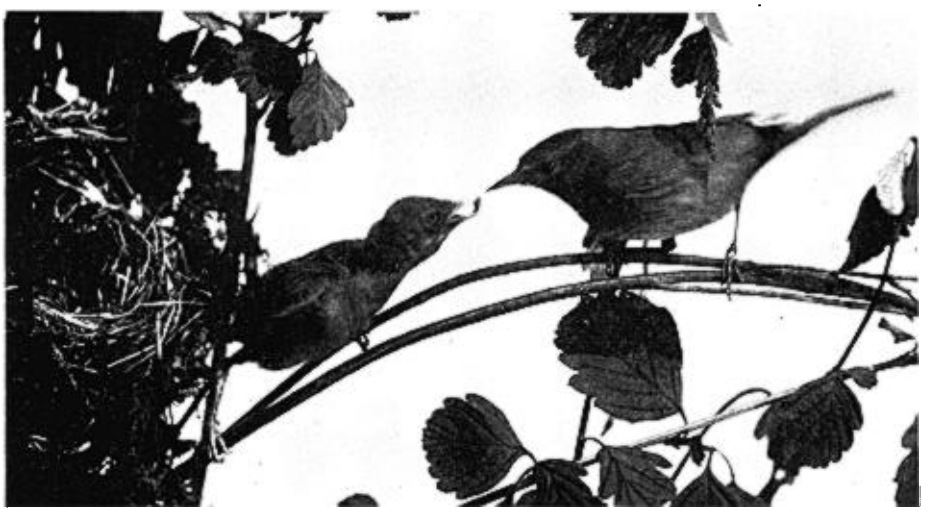

Fig. 18. LUTESCENT WARBLER FEEDING YOUNG JUST OUT OF THE NEST.
Photo by Herman T. Bohlman.

Vermivora celata lutescens (Ridgway). Lutescent Warbler.

One of the common species of this section. The earliest spring record so far made is March 25. Jewett has found two nests, one May 23 containing five young and the other May 27 containing four eggs. We have not noted it later than August 1, although it undoubtedly remains longer in this territory.

Dendroica aestiva brewsteri Grinnell. California Yellow Warbler.

A common summer resident. The earliest date of appearance in spring is April 24 and the latest record in the fall, September 9. Nests with eggs have been found from June 2 to June 28. This is a very common species in the deciduous growth along the river bottoms. The Alaska Yellow Warbler (*Dendroica aestiva rubiginosa*) probably migrates through here, but no specimens from this district are available at the present time.

Dendroica coronata hooveri McGregor. Alaska Myrtle Warbler.

A regular migrant. The latest date on which it has been recorded in the spring is May 4, and the earliest fall date is October 11. From our experience this bird is at least an occasional winter resident of this district, as we have taken it every month from October to May inclusive, except February.

Dendroica auduboni auduboni (J. K. Townsend). Audubon Warbler.

A very common migrant, a common summer resident, and a quite common winter resident of this district. It has been recorded by the writers every month in the year, and in some winters it is plentiful. A pair bred in the conifers at Gabrielson's home in 1925, newly fledged streaked young appearing in his yard on June 8.

Dendroica nigrescens (J. K. Townsend). Black-throated Gray Warbler.

A fairly common summer resident. The earliest migration date reported is April 13 and the latest date on which it has been noted in the county is October 1. Nests with eggs have been reported by Jewett from May 30 to June 11. This bird frequents sections of the county containing coniferous timber.

Dendroica townsendi (J. K. Townsend). Townsend Warbler.

We have only two records. The first is of a male seen at short range by Gabrielson on May 6, 1923, on a small timbered butte east of Portland. This bird was shot but lost in the heavy underbrush. A second male, in winter plumage, was found dead by a school girl and brought by Miss Ruth Russell to Gabrielson on January 13, 1928. The bird was extremely emaciated. We consider this a most unusual winter record for Oregon. The species is doubtless more common than these records indicate.

Dendroica occidentalis (J. K. Townsend). Hermit Warbler.

A rare bird in this section, only two records being made by the two writers. Jewett saw a male in full song on May 21, 1909, and Gabrielson collected one on June 2, 1921, on Wilson Hill, the same little butte where the Townsend Warbler was noted.

Oporornis tolmiei (J. K. Townsend). Macgillivray Warbler.

A regular and fairly common summer resident. The earliest spring date is April 21; the latest record is October 12, an unusually late date for this species. Two nests have been noted within the county, one on June 5, 1908, and the other June 16, 1907, both by Jewett. This species is a fairly common resident of the blackberry patches and other brushy places along the river and on the hillsides.

Geothlypis trichas occidentalis Brewster. Western Yellow-throat.

One of the commonest summer warblers of this district. The earliest date on which it has been recorded in the spring is April 5, and the latest in the fall, September 9. The bird is a common nesting species of the Columbia River bottoms and other similar places.

Icteria virens longicauda Lawrence. Long-tailed Chat.

A common summer resident of the Columbia River bottoms and the creek bottoms in other sections of the county. The earliest spring date is May 3, and the latest fall date is September 9. Jewett reports a nest containing three eggs on June 17, 1908. This species is a common but not conspicuous resident, although it is far more often heard than seen. During the mating season, however, a number of them may be seen almost every day going through their peculiar mating evolutions.

Wilsonia pusilla pusilla (Wilson). Wilson Warbler.

A very rare straggler from the eastern United States. Jewett saw one on December 10, 1908, with a flock of chickadees and kinglets on Government Island, and he collected a bird on the 11th at the same place. This bird was identified by Dr. H. C. Oberholser.

Wilsonia pusilla chryseola Ridgway. Golden Pileolated Warbler.

A fairly common spring migrant and probably just as abundant in the fall, although noted less often then. The earliest recorded date is May 3, and the latest, August 24. This species nests quite commonly in the coast district and sparingly in the Portland area. One skin taken August 9, 1924, is the only fall specimen. Two pairs were noted by Jewett on June 22 on the Columbia River bottoms. From their actions he feels sure they had nests or young near-by.

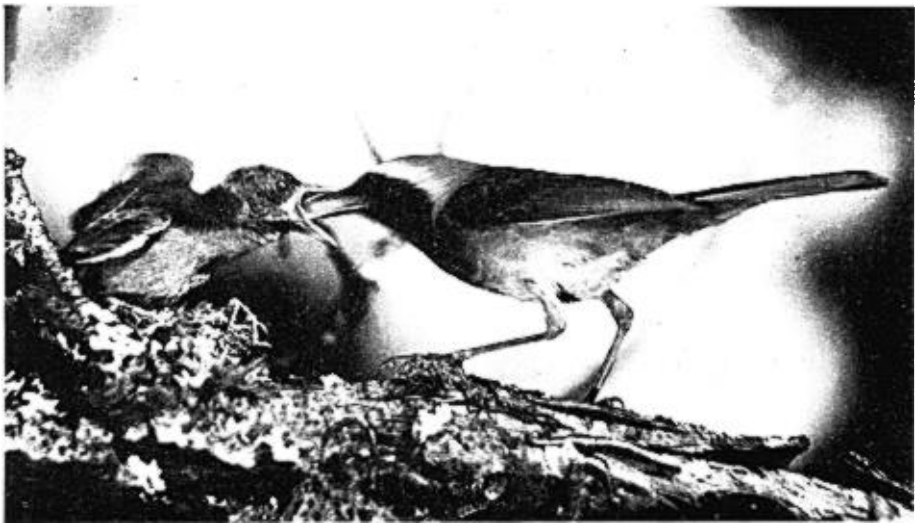

Fig. 19. MALE WESTERN YELLOW-THROAT FEEDING YOUNG. THIS SPECIES NESTS ONLY IN THE HEAVY BRUSH AREAS OF THE BOTTOM LANDS.

Photo by Herman T. Bohlman.

Anthus rubescens (Tunstall). American Pipit.

A very common fall and spring migrant and a fairly common winter resident. The earliest fall record by either writer is September 6, and the latest April 25. It has been recorded every month between these two extreme dates, but it is usually most abundant in October and March. During October and November of 1923 there was a tremendous flight of these birds throughout this district.

Cinclus mexicanus unicolor Bonaparte. American Dipper.

A permanent resident in suitable sections along mountain streams in the eastern part of the county. It has been seen practically every month in the year around Multnomah Falls, Oneonta Gorge, Sandy River, and Eagle Creek.

Oroscoptes montanus (J. K. Townsend). Sage Thrasher.

A rare straggler to this section. A single bird came to the bird bath in Gabrielson's yard on the morning of August 12, 1924, and was observed for some time at very close range. This was an extremely dry season and is marked by a number of records of eastern-Oregon birds in the Portland area.

Thryomanes bewickii calophonus Oberholser. Seattle Bewick Wren.

The commonest wren of this section, a permanent resident, and recorded every month in the year. It is found throughout the district and nests frequently in the residence sections of the city. Nests with eggs have been taken as early as May 10. These birds may be found in almost full song throughout the winter on bright days.

Troglodytes aëdon parkmanii Audubon. Western House Wren.

The Western House Wren is to be classified as only a locally common bird anywhere in Oregon. There are communities in the Willamette Valley where it is quite abundant. In Portland and vicinity it may be classed as an uncommon summer resident. The earliest spring record is April 16, and Jewett reports one nest on June 5, 1908, containing seven eggs. No fall dates have been made by either writer, the latest date being July 1, 1903; yet the birds are probably here until up into September, as they are in other sections of the valley.

Nannus troglodytes pacificus (Baird). Western Winter Wren.

A permanent resident. A nest containing five fresh eggs was taken on April 13, 1905, by Jewett at Milwaukie. Noted commonly through the summer in dense coniferous timber, being one of the few birds found in such localities.

Telmatodytes palustris paludicola (Baird). Tule Marsh Wren.

A local summer resident in the few tule swamps that are found in the district. Nesting sites for this bird are not abundant, and consequently it is not found in any numbers. The species winters occasionally, and numerous summer records have been made in the Columbia River bottoms and about the pond at Reed College. An adult male was taken just east of Portland on October 6, 1928.

Certhia familiaris occidentalis Ridgway. California Creeper.

A fairly common permanent resident, but one that is rather difficult to find. It has been recorded every season of the year by both writers and undoubtedly breeds in this territory, although no nests have been discovered.

Sitta carolinensis aculeata Cassin. Slender-billed Nuthatch.

A permanent resident. It is usually more conspicuous in the winter time because of the lack of foliage on the trees then, but it has been recorded every month of the year.

Sitta canadensis Linnaeus. Red-breasted Nuthatch.

Another permanent resident, having been recorded by the two writers every month in the year. Jewett reports one nest containing six eggs found May 17, 1908. An unusual number was noted on a joint trip to the Columbia River bottoms on August 11, 1924. The birds were then found in willow and cottonwood timber, where we rarely see them.

Penthestes atricapillus occidentalis (Baird). Oregon Chickadee.

One of the most common and widely distributed permanent resident birds of the section. Many nests have been discovered; the earliest date for eggs is May 4. This is one of the birds seen on practically every field trip made in the area, regardless of the territory visited.

Penthestes gambeli abbreviatus Grinnell. Short-tailed Mountain Chickadee.

A rare straggler from the mountains, placed on this list solely upon the basis of a bird collected by Jewett, December 11, 1908, on Government Island. The species probably could be seen frequently in the more mountainous sections to the east of Portland, if regular field work were done there.

Penthestes rufescens rufescens (J. K. Townsend). Chestnut-backed Chickadee.

A permanent resident of coniferous timber, in contrast with the Oregon Chickadee which is more commonly found in deciduous woods. Jewett reports nests containing eggs on June 3, 1908.

Psaltriparus minimus minimus (J. K. Townsend). Coast Bush-tit.

A fairly common permanent resident. Nests containing eggs have been dis-

Fig. 20. NEST AND EGGS OF THE OREGON CHICKADEE. ONE OF OUR MOST COMMON AND WIDELY DISTRIBUTED NESTING BIRDS. SECTION OF TREE REMOVED TO SHOW NEST AND EGGS, AT BOTTOM OF CAVITY.

Photo by Alex Walker.

covered from June 5 to June 15. It is usually found around creek bottoms or on brushy hill sides, much as with the Oregon Chickadee, and it is very often found in company with that species.

Regulus regulus olivaceus Baird. Western Golden-crowned Kinglet.

A very common winter bird and at least an occasional summer resident. Jewett records one pair seen feeding young, June 4, 1909, in Sellwood Park. These birds are usually most conspicuous in April and October during the migration flights.

Fig. 21. NEST OF THE RUSSET-BACKED THRUSH. THIS BIRD NESTS COMMONLY IN THE UNDERGROWTH IN SECOND-GROWTH DOUGLAS FIR AND HEAVY FORESTS THROUGHOUT THE PORTLAND AREA.

Photo by Alex Walker.

Corthylio calendula grinnelli (W. Palmer). Sitka Kinglet.

A fairly common winter resident. The earliest fall date on which it has been recorded is November 10 and the latest spring date April 24. It is much more common in the fall and spring months than during the winter.

Myadestes townsendi (Audubon). Townsend Solitaire.

A straggler from eastern Oregon. It has been reported quite frequently by various observers, though all the definite records available are in September and April. Jewett has three skins in his collection from this district, one taken September 22, 1907, one April 27, 1908, and one April 25, 1916.

Hylocichla ustulata ustulata (Nuttall). Russet-backed Thrush.

A fairly common summer resident. Nests containing eggs have been discovered from May 30 to July 4. The earliest recorded date of spring arrival is April 24, and the latest date in the fall, September 9.

Hylocichla guttata guttata (Pallas). Alaska Hermit Thrush.

Two forms of the Hermit Thrush migrate through the district. A specimen (no. 870, coll. S. G. J.) collected April 27, 1908, has been identified as *guttata* by H. S. Swarth. Birds collected throughout western Oregon by both writers show that this is the rarer form of the two.

Hylocichla guttata nanus (Audubon). Dwarf Hermit Thrush.

Two Hermit Thrushes collected by Jewett near Portland on March 26, 1908, and September 22, 1907, respectively, have been identified as *nanus* by H. S. Swarth. This is the more common form found wintering throughout western Oregon.

Turdus migratorius propinquus Ridgway. Western Robin.

The Robin is probably the most abundant bird of the district and a permanent resident. During the winter months, even in the severest weather, it may be found in sheltered places around the city, and in normal winters it is a fairly common resident. The first warm days of late January or early February usually see shifting flights of these birds making their appearance about the city and they are hailed as the first Robins by many persons. The dates of the first appearance of these flocks has varied from January 7 to February 14, and from then on until the nesting season they are conspicuously in evidence throughout the territory.

On December 14, 1924, the writers noted an enormous number of Robins feeding on an abundant crop of snowberries along the Columbia River bottoms. A trip on December 27, to the same territory, following a severe storm, revealed the fact that the robins had all left this locality. The earliest date on which eggs have been discovered is April 11, and the latest July 8. The young ones regularly make their appearance in the latter part of May, but in 1926, fledgling birds appeared at Gabrielson's home on April 18, by far the earliest date we have. There seems to be a pronounced albinistic strain in the Robins of this district, as pure or partial albino birds are quite commonly observed. The writers have seen probably twenty such birds in the past five years.

Ixoreus naevius naevius (Gmelin). Varied Thrush.

A fairly common winter resident, appearing in large numbers some seasons. The earliest fall date of either observer is September 20, and the latest spring date May 15.

Sialia mexicana occidentalis J. K. Townsend. Western Bluebird.

A common summer resident and a regular winter resident, being found in sheltered places even in the most severe winters. The earliest date on which eggs have been discovered is May 6, and the latest, June 27. Like the Robin, the first warm days of January or February usually produce abundant evidence of the presence of this bird in the form of flocks moving about the country. The dates on which this movement has first been observed vary from January 25 to February 25, according to the season.

INTRODUCED SPECIES

There have been a number of exotic species of birds introduced into the Portland district at different times, but, except for the Ring-necked Pheasant and English Sparrow, not one of them has succeeded in establishing itself permanently in this section. The European Partridge is found occasionally, but it has not been so successful here as in sections of eastern Oregon and Washington.

From 1889 to 1892 was a period of great activity in the introduction of foreign birds, and a local organization called the "Society for the Introduction of Useful Song Birds into Oregon" was in operation. A great many species of European birds were brought in and liberated. According to all records that we can find the European Starling and the Skylark were the only two that persisted for any length of time, and these have now entirely disappeared from this section. As a matter of historical interest we quote here from the *Oregon Naturalist,* parts of the records of attempted introductions of various European song birds.

Colinus virginianus virginianus (Linnaeus). Bob-white.

This eastern quail has been liberated a number of times during the past thirty years in various parts of the Willamette Valley adjacent to Portland. The species never has thrived to a point of abundance, although a few can be found in the vicinity of Portland at all times. Jewett's collection contains a specimen found dead in East Portland on October 16, 1906. Numerous records of flocks seen occur through both writers' notes during the fall of each year. A pair nested regularly near Gabrielson's home for four years from 1920 to 1923 inclusive, and regularly brought their newly hatched young into his garden to forage up and down the rows of vegetables. In 1924 and 1925 no quail were present, but they put in their appearance again in 1926.

Lophortyx californica vallicola (Ridgway). Valley Quail.

So far as can be ascertained, the Valley Quail is not native to the Portland area. During the eighties a number were liberated along the Columbia River, but not until February 13, 1914, was a successful planting made. During the winter of 1913-14, large numbers were trapped by the State Game Commission in the Rogue River Valley of southern Oregon, and on February 13, twenty-four, equally divided as to sex, were received at Reed College and kept in a cage for a few days. The next day, six died through injuries received in shipment. The rest of them were liberated, and the next day one of the adult males was found dead nearby. The survivors soon became content in their new home and were known to have raised young during 1915 and 1916, but they gradually disappeared from the immediate vicinity of the campus. No recent records of occurrence have been noted by either writer.

Perdix perdix (Linnaeus). European Partridge.

The first shipment of 97 European Partridges was imported from Europe to Oregon during 1900. These birds were all liberated in the central Willamette Valley. On March 25, 1913, 218 more were received direct from Europe and liberated in various parts of the state, sixteen from this shipment in the immediate vicinity of Portland. During the spring of 1914, a consignment of 1522 birds was received from Austria, sixty-four of which were liberated in the Portland area. As early as June 9, 1914, a definite record of the breeding of a pair of these Partridges was established on the Reed College campus in East Portland. A brood of young

was noted on that day. Apparently the Willamette Valley is not so well suited to the habits of this bird as some of the more arid grain-growing regions east of the Cascades, both in Oregon and Washington. A few pairs, however, do breed on the higher hills surrounding the city of Portland.

Phasianus torquatus Gmelin. Ring-necked Pheasant.

Nests commonly in hayfields and even in vacant lots in well-settled communities. Within the city limits of Portland, pheasants are familiar sights in the suburban districts. Nests with eggs ranging from sets of nine to sixteen have been noted from April 16 to July 10. Young still in the natal down are occasionally seen as late as August 1 in the vicinity of Reed College campus.

Sturnus vulgaris Linnaeus. Starling.

"Of these useful birds 35 pairs were introduced into Oregon by the Society in 1889 and 1892. They were turned loose in the city of Portland near the city park, and have since increased remarkably well" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 109).

Acridotheres cristatellus (Gmelin). Chinese Starling.

A single individual, presumably a straggler from the colony in British Columbia, appeared in East Portland. Gabrielson saw the bird on February 5 and 6, 1922, and recorded it in Bird-Lore (XXIV, 1922, p. 104). This same bird was mentioned by Casey A. Wood in the Condor (XXVI, 1924, p. 135).

Pyrrhula pyrrhula (Linnaeus). Bullfinch.

"Of these handsome song-birds, 20 pairs were introduced into Oregon by the Society in 1889 and 1892" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 104).

Loxia pityopsittacus Borkhausen. Parrot Crossbill.

"Of these song birds 20 pairs were introduced into Oregon by the Society in 1889" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 32).

Carduelis spinus (Linnaeus). Siskin.

"Of these useful song-birds, 40 pairs were introduced into Oregon in 1889, by the Society" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 103).

Carduelis carduelis (Linnaeus). Goldfinch.

"Of these handsome birds 40 pairs were introduced into Oregon by the Society in 1889 and 1892. They have become very plentiful throughout the State, and can be seen quite often on the east side of the city" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 153).

Fringilla coelebs Linnaeus. Chaffinch.

"Of these lovely song-birds 40 pairs were introduced by the Society into Oregon in 1889" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 154).

Chloris chloris (Linnaeus). Greenfinch.

"Of these song birds, 15 pairs were introduced by the Society into Oregon in 1889 and 1892" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 142).

Linaria cannabina (Linnaeus). Gray Linnet.

"Of these beautiful song-birds 35 pairs were introduced by the Society into Oregon in 1889 and 1892" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 141).

Passer domesticus (Linnaeus). English Sparrow.

We can find no definite records of the first appearance of this species in this district. At the present time, however, it is a common and well-distributed resident of the cities and also of farmsteads in the cultivated sections. The *Oregon Naturalist* for 1897 (IV, p. 7) states that English Sparrows were not yet reported for Oregon outside of Portland and estimated that 500 birds were in Portland at that time.

Alauda arvensis Linnaeus. Skylark.

"Of these useful and lovely song birds 50 pairs were introduced into Oregon by the Society in 1889 and 1892. They were let loose at the following places: Upon Ladd's tract of land in East Portland south of Hawthorne Ave., near McMinnville; near Milwaukee and Molalla in Clackamas County, and in the Waldo Hills at Judge Waldo's farm in Marion County. They have increased wonderfully since their introduction, and can be heard and seen at the proper seasons of the year upon most all the meadows, marshy and bottom lands in Oregon.

"Within the last five years it has been observed that they regularly returned from their winter migration during the month of February, for they were seen and heard upon the Ladd tract in East Portland as early as that and during that month" (C. F. Pfluger, Oreg. Nat., IV, 1897, p. 29).

Lullula arborea (Linnaeus). Wood Lark.

"Ten pairs of wood larks were introduced near Portland, Oreg., in the spring of 1889, according to the records of the Portland Song Bird Club" (Phillips, U. S. Dept. Agric. Tech. Bull. No. 61, 1928, p. 51).

Mimus polyglottos (Linnaeus). Mockingbird.

"In the spring of 1892 the 'Society for the introduction of useful Song-Birds into Oregon' set free three pairs of Mockingbirds,—*Mimus polyglottus*, Boie—at Milwaukee, Oregon, which are said to have returned to breed the following season. About January 15th., 1895, nearly 40 pairs were set free from the Aviary in this city." (Unsigned note in Oreg. Nat., II, 1895, p. 23.)

Erithacus rubecula (Linnaeus). Robin Redbreast.

"Of these lovely and useful song birds but 5 pairs were introduced into Oregon by the Society in 1889 and 1892" (P. F. Pfluger, Oreg. Nat., III, 1896, p. 110).

Luscinia megarhyncha Brehm. Nightingale.

"It is certain these romantic songsters were liberated in considerable numbers during the Cincinnati, New York, California, and Portland, Oreg., experiments previously mentioned" (Phillips, U. S. Dept. Agric. Tech. Bull. No. 61, 1928, p. 51).

Arceuthornis iliacus (Linnaeus). Song Thrush.

". . . 35 pairs of these birds were introduced into Oregon in 1889 and 1892, and since that time they have increased remarkably well" (C. F. Pfluger, Oreg. Nat., III, 1896, p. 59).

Sylvia atricapilla (Linnaeus). European Blackcap Warbler.

"The writer has a note of some 20 pairs brought over by the Portland Song Bird Club in 1907 and others perhaps in 1900" (Phillips, U. S. Dept. Agric. Tech. Bull. No. 61, 1928, p. 53).

HYPOTHETICAL LIST

In forming a hypothetical list to accompany this paper we have included only birds that have been reported from this locality, or birds that are found adjacent to the section but which we have not yet found within the area. There are others that will undoubtedly be found here in the future, when more persons are making a more intensive study of the Oregon bird population than at the present time. There are, in addition, possibilities of a great many stragglers being picked up here that have not been recorded, but we can see no advantage in making a list of all such possibilities.

Larus argentatus Pontoppidan. Herring Gull.

Considerable confusion has existed in the past regarding the status of the winter gulls in the Portland area. We have listed only those species of which we have been able to obtain specimens. Herring Gulls have frequently been reported on the Willamette and Columbia rivers, but we have not been able to secure specimens here. We have therefore relegated this species to the hypothetical list until such time as specimens are obtained.

Larus delawarensis Ord. Ring-billed Gull.

No specimens of this species have been obtained in this district and we have therefore placed it in the hypothetical list, although it almost certainly does occur. In fact, we are both reasonably certain that we have seen adult birds on the Willamette during the winter months.

Larus philadelphia (Ord). Bonaparte Gull.

Has been noted adjacent to the Portland area and almost certainly occurs, although up to the present no actual records have come to our attention.

Melanitta deglandi (Bonaparte). White-winged Scoter.

Scattered records of this bird are in existence from many sections of the state, but no specimens have yet been taken in the Portland area.

Asio wilsonianus (Lesson). Long-eared Owl.

Owls of all species, except the Dusky Horned Owl, are difficult to see in the Portland district. We feel sure that this species occurs, but have no definite records and are therefore placing it in the hypothetical list for the present.

Ammodramus bairdii (Audubon). Baird Sparrow.

Recorded from the Portland area in a rather casual manner in the Oregon Naturalist (II, 1895, p. 37). C. W. Swallow is mentioned as having a skin of this species. We are relegating it to the hypothetical list for the reason that the above-mentioned skin can not be located, and so far as we can learn there are no authentic records of the occurrence of this bird in the state.

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