

vidual birds by this means (Saunders, 1924) it may frequently be noted that fall singers are the same individuals, occupying the same territory that they did in summer (Nice, 1943: 125). Occasional songs, mainly in September, are of primitive type, but I more frequently hear such songs at the close of the nesting season in August or the beginnings of spring song in February or March.

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Fairfield

Connecticut

BIRDS OF THE ALTA LAKE REGION, BRITISH COLUMBIA

BY KENNETH RACEY

DURING 1926, a list of the birds found in the Alta Lake district was published in *The Auk* (see *Auk*, 43: 319, July, 1926). Since the compilation of this list, twenty years ago, many new records for the region have been found, and several corrections have been made in the original list.

During the past twenty years, there has been but little change in the climatic conditions, this period participating in the usual climatic cycles. Some of the glaciers in the surrounding mountains have receded to a noticeable extent, and others have entirely disappeared. In near-by Pemberton Valley, the precipitation for 1945 was 37 inches, whereas the average for the past thirty-three years is 35 inches.

Alpha and Nita lakes are no longer "milky" glacial-fed lakes, but have become clear, as was Alta Lake twenty or more years past.

Unfortunately, logging and sawmill operations are now being carried on at numerous points along the P. G. E. Railway, which runs through the region in question, and are doing an immense amount of damage. No apparent attempt is being made to curb the careless logging methods practiced, which leave debris and desolation everywhere, as well as blocking the old-time trails. Worst of all, however, is the fire hazard created, and in some instances great areas have been burnt and the once beautiful mountainsides left barren, with but little or no signs of natural reforestation taking place.

Deer and grouse have very greatly decreased in number, and there is little doubt that the once abundant rainbow trout in Alta Lake are being adversely affected by the sawdust now entering the lake.

The following list is an endeavour to bring up to date the studies on bird life of the region under consideration.

Subspecific determinations have been made from specimens collected.

LESSER LOON, *Gavia immer elasson* Bishop.—During the summer months, these birds may be seen almost every day on one or more of the chain of lakes. Three adult loons were seen together in front of our camp on Alta Lake on August 7, 1937, and five appeared on August 22. No nest has been found, although two downy young were reported as seen by Mr. Alec Phillips on Lost Lake in 1924. On November 15, 1931, while I was watching a shoal of rainbow trout passing in front of Harrops Point, a loon suddenly appeared under water, following the trout. On October 12, 1946, an adult, molting to winter plumage, came circling overhead at the excellent imitation of the loon's call by Mrs. G. W. Burbidge, and then came to rest on the water close to us.

HOLBOELL'S GREBE, *Colymbus grisegena holbölli* (Reinhardt).—Common migrant from August to November. Flocks of two or three to twenty or more usually arrive during night time, remain a few days resting, and then continue southward. On August 28, 1937, thirteen of these birds arrived and spent four days on Alta Lake, and then took their departure. All thirteen appeared to be adult birds. Five juvenile birds were seen about Alta Lake on October 13, 1946.

HORNED GREBE, *Colymbus auritus* Linnaeus.—Only occasionally seen during the months of August, September and October in migration.

WESTERN GREBE, *Aechmophorus occidentalis* (Lawrence).—Seen only in southbound migration from a few scattered individuals to very large

flocks which remain on the lake only for a short time. Both arrival and departure take place at night. These birds usually begin to arrive during the last week of August. On August 28, 1923, Mrs. Racey saw a flock of over two hundred on Alta Lake. They all left during the evening, making a great noise when rising and departing.

PIED-BILLED GREBE, *Podilymbus podiceps podiceps* (Linnaeus).—Never noted in any numbers, but each fall a few individuals pass through. An adult was seen August 12, 1937, and again on the 22nd. Two remained near the camp, and one of these kept close to the float. Two others arrived on the 24th and left on the night of the 26th. Three young birds came September 6 and remained at the Lake near camp for nearly a fortnight. They were very shy and alert.

NORTHWESTERN COAST HERON, *Ardea herodias fannini* Chapman.—A summer resident, seen almost daily flying from lake to lake. Believed to nest somewhere about Green Lake. Footprints of a heron were noticed in the snow on a small bridge crossing a slough as late as November 11, 1944.

WHISTLING SWAN, *Cygnus columbianus* (Ord).—Fall migrant during November 7 to 10, 1944. Flocks of three, four and six were seen on Alta Lake, only remaining for a few hours. On November 11, a single cygnet arrived during the night and remained about the lake until 11 a. m. We watched it through our field glasses as it swam about on the opposite side of the lake. At one time it turned and joined a flock of Buffleheads, where it remained for a few minutes and then continued on, and when about a hundred yards distant, it lifted, made a great circle towards the north end of the lake, and then bore off southwards, passing a few feet above our boat.

TRUMPETER SWAN, *Cygnus buccinator* Richardson.—Formerly a regular winter resident. When first seen in 1922, there were eleven birds in the flock, and these gradually dwindled in number until the winter of 1927 when two adults and a cygnet appeared. These were shot at by loggers from a near-by camp until both adults were killed. Mr. P. D. Lineham found the body of one of these birds and hung it in a tree near the shore of Green Lake. Shortly afterward, there was a heavy snowfall which permitted a coyote to reach the bird and eat it. Mr. John Bailiff states that three adults and four cygnets wintered on Daisy Lake in 1920, and that eleven swans believed to be Trumpeters came to Alta Lake in 1937, just as the ice was going out. Two were seen by Mr. Bailiff on Cheakamus Lake, in December, 1943, before that lake froze over.

COMMON CANADA GOOSE, *Branta canadensis canadensis* (Linnaeus).

—Migrates in numbers annually through Pemberton Valley and southward over Lillooet Lake. At Pemberton, wild Canada Geese have remained and bred with the domestic Toulouse Geese on Mr. John Ronayne's ranch, but so far the progeny have proved infertile. Mr. Bailiff advises me that he had found the nest of a Canada Goose on the top of a muskrat's house, at the east end of Cheakamus Lake during the latter part of May, and watched the young hatching out. This nest was in use for three years in succession. A nest was also found on the Soo River which drains into Green Lake. In 1937, a pair of Canada Geese nested in the bush about one mile from the pond, on the Lorimer ranch, and the young birds were seen on the trail. The Lorimer's place lies midway between Alta and Green lakes. On August 17, 1937, during the evening, nine geese were seen flying southward over the lake. On August 7, 1944, Dr. Cowan saw seven Canada Geese flying over Alta Lake. The late Mr. G. L. Wright told me he had seen a flock of five Canada Geese on August 26. The flock flew southward, and later on one lone bird returned.

LESSER CANADA GOOSE, *Branta canadensis leucopareia* (Brandt).—One of these geese spent two summers about the ranch of Mr. John Ronayne, Pemberton Valley.

ACKLING GOOSE, *Branta canadensis minima* Ridgway.—Seen occasionally in Pemberton Valley where a hunter shot one in the fall of 1944. A flock of eleven was seen flying about Alta Lake on December 22, 1944.

LESSER SNOW GOOSE, *Chen hyperborea hyperborea* (Pallas).—Two flocks, numbering fifty and twenty-five birds, were seen on Alta Lake, November 7, 1944, and a third flock of thirteen individuals was seen on November 9, 1944.

COMMON MALLARD, *Anas platyrhynchos platyrhynchos* Linnaeus.—Mallards were found breeding in the slough near Mile 38. On January 6, 1937, with the temperature 8° below zero, I saw a male and three females on 21 Mile Creek and was advised by Mr. Fred Woods, a local resident, that several Mallards had remained about this creek the previous winter. Flocks of Mallards are occasionally seen on Alta and Green Lakes in the fall, en route southward. They breed about Green Lake, and flocks of them have been seen there at different times. Common in Pemberton Meadow. Six birds were seen flying down Alta Lake on August 2, 1942.

BALDPATE, *Mareca americana* (Gmelin).—A male and two females were seen on Alta Lake, September 30, 1944. These had arrived during the night, and remained about the lake until the following day.

SHOVELLER, *Spatula clypeata* (Linnaeus).—Only once noticed on Alta Lake—a young bird seen near Rainbow Lodge on September 1, 1923.

WOOD DUCK, *Aix sponsa* (Linnaeus).—Mr. J. Bailiff states that two Wood Ducks were seen near Brandywine Falls in April, 1921, and that three—one male and two females—were seen on Cheakamus River in the spring of 1935.

CANVAS-BACK, *Aythya valisineria* (Wilson).—Half a dozen were shot by Mr. Bailiff from a flock of twenty or thirty in the latter part of November, 1942.

GREATER SCAUP DUCK, *Aythya marila nearctica* Stejneger.—Both Greater and Lesser Scaup Ducks are seen in fall migration. An adult female was taken November 10, 1944, from a flock of ten birds.

LESSER SCAUP DUCK, *Aythya affinis* (Eyton).—A juvenile female was taken by Alan Racey on November 9, 1944, and the following day the writer secured an adult male.

BARROW'S GOLDEN-EYE, *Glaucionetta islandica* (Gmelin).—A common resident on all the lakes. A nest was found in a hole in the fork of a cottonwood tree, about fifty feet above ground, on July 1, 1920. The mortality among the young birds appears to be very high, for it has been noted that of the birds nesting on Alta Lake, seldom more than two or three of the young brood survive, due, it is believed, to depredations by minks. These Golden-eyes remain very late about the lakes and do not leave until freeze-up, and then quickly return when open water is again in evidence.

BUFFLE-HEAD, *Glaucionetta albeola* (Linnaeus).—Usually very numerous in the fall. On November 16, 1931, a flock of two hundred and fifty to three hundred arrived on Alta Lake. Of these, between eighty-five and ninety per cent were adult males. Mr. Bailiff states that on November 1, 1940, a flock of about two hundred Buffle-heads arrived on the Lake, and of these, between sixty-five and seventy per cent were in adult male plumage. During the fall of 1944, only small flocks appeared, fairly evenly divided in numbers between males and females. The usual southbound flocks did not put in an appearance during the fall of 1945.

WHITE-WINGED SCOTER, *Melanitta fusca deglandi* (Bonaparte).—Common migrant. Frequently seen in flocks of four to eight birds, from late August into November, en route to the sea.

SURF SCOTER, *Melanitta perspicillata* (Linnaeus).—A common migrant in the fall. On November 15, 1931, mixed flocks of Surf and White-winged Scoters as well as Mallards Golden-eyes, and Buffle-heads were seen on Alta Lake.

HOODED MERGANSER, *Lophodytes cucullatus* (Linnaeus).—Three females were seen at the south end of Alta Lake on September 29, 1944. Two were later seen on November 9, 1944.

AMERICAN MERGANSER, *Mergus merganser americanus* Cassin.—Not common but seen occasionally on Alta and Lost lakes. Several of these mergansers arrived on September 4, 1932, in company with half a dozen Golden-eyes.

WESTERN GOSHAWK, *Accipiter gentilis striatulus* (Ridgway).—From early August to winter, both adults and immature birds are common. Specimens were taken near Green Lake and at Pemberton, as follows:—Oct. 15, 1929, ♀ imm.; Oct. 31, 1929, ♂ ad.; Jan. 2, 1929, ♂ imm.; Dec. 3, 1936, ♂ ad.; Oct. 14, 1938, ♂ ad.; Aug. 12, 1939, ♂ imm.

SHARP-SHINNED HAWK, *Accipiter striatus velox* (Wilson).—A common fall migrant.

COOPER'S HAWK, *Accipiter cooperii* (Bonaparte).—Summer resident, frequently seen hunting along the mountainsides bordering the lakes. In 1922 a pair nested near Nita Lake.

WESTERN RED-TAILED HAWK, *Buteo jamaicensis calurus* Cassin.—Frequently seen soaring about the surrounding mountains. Between August 23 and 25, 1932, a considerable number of birds of prey were seen at elevations from 6,000 to 7,000 feet on what is now known as London Mountain. Reference to notes made at the time shows that Sharp-shinned, Cooper's, Marsh, and Red-tailed Hawks and Golden Eagles were numerous. In 1920, a pair of Red-tails nested in a fir tree at the southern end of Alpha Lake.

AMERICAN ROUGH-LEGGED HAWK, *Buteo lagopus s.johannis* (Gmelin).—Only one record—a male bird, shot by Mr. Tom Neeland on November 11, 1944, at Mile 34, and sent to the writer.

GOLDEN EAGLE, *Aquila chrysaëtos canadensis* (Linnaeus).—Frequently seen at high elevations, hunting on mountainsides. Two were seen soaring over Sproat Mountain on July 25, 1927. Six were seen on London Mountain between August 2 and 4, 1928. One was noticed sitting on a rock at an altitude of 6,000 feet. Some years ago, an old prospector advised me that a pair of Golden Eagles nested on an inaccessible ledge on Mount Overlord.

Five Golden Eagles were seen hunting about the mountains above Avalanche Pass, June 26, 1924. On August 25, 1932, when I was crossing London Mountain, at an elevation of 6,500 feet, a close approach was made to a Golden Eagle which was sitting with drooping wings on a projecting rock. It was looking down on a hoary marmot which was sunning itself on a ledge about one hundred feet below.

Four eagles were observed soaring over Garibaldi station on September 30, 1944, and although some distance away, they appeared to be of this species.

MARSH HAWK, *Circus cyaneus hudsonius* (Linnaeus).—Not common, and only occasionally seen. A female was collected at Green Lake, Mile 40, on August 8, 1944.

OSPREY, *Pandion haliaetus carolinensis* (Gmelin).—A common summer resident. It nests between Alta and Green Lakes, and near Lost Lake. The nest near Green Lake was seen and photographed on August 29, 1937. Mr. Barnfield, who lived at the north end of Alta Lake in 1922, told the writer that he had carefully watched the Osprey which had a nest on the top of a high stub, and that the parent birds brought in about twenty trout per day to the young.

BLACK PIGEON HAWK, *Falco columbarius suckleyi* Ridgway.—Uncommon, but occasionally seen in migration. On June 10, 1932, at Pemberton a juvenile male was collected by Jack Ronayne, Jr., and sent to the writer. A young male was collected by Dr. Cowan on August 4, 1941, near camp on Alta Lake. The bird was chasing some Gray Jays when shot. Its stomach contained only remains of a beetle.

Two birds were seen at Alta Lake on August 23, 1921; one was seen at Alta Lake, September 14, 1941, and one at an elevation of 5,000 feet on Sproat Mountain, on September 8, 1937.

EASTERN SPARROW HAWK, *Falco sparverius sparverius* Linnaeus.—A summer resident; breeds. A nest was found in an old hemlock stub just behind our camp, and on June 18, 1924, young ones were seen sitting on the telephone wires along the railway track.

SOOTY GROUSE, *Dendragapus obscurus fuliginosus* (Ridgway).—Not so abundant as formerly. On August 4, 1928, five females were found on Mt. Overlord and London Mountain. Each female had a brood, which numbered as follows:—3, 2, 7, 2, and 3. Near by, two male birds were heard hooting on the hillside. These grouse nest about Alta and other lakes, but by early September, nearly all have moved to higher altitudes, and many of the male birds will be found between 4,000 and 5,000 feet. In 1937, three females and young were seen close to Alta Lake on the following dates:—August 7—2 young; August 9—3 young; August 11—3 young. It is believed that the abundance of Horned Owls, Goshawks, and Cooper's Hawks tends to keep the number of grouse in check, not to mention the local logging camps.

FRANKLIN'S GROUSE, *Canachites franklinii* (Douglas).—Resident; breeder. A female with four downy young was seen above Nita Lake at an elevation of 2,500 feet. On a fallen log near by, a downy chick

was found dead but still warm. Dissection showed three claw marks on the body. The stomach was found to contain two red ants, one large green and gray caterpillar, and 61 heads of moss flowers. A male, female, and two half-grown young were seen above Alpha Lake on July 30, 1923. This grouse is less common now than formerly, and is only occasionally seen.

OREGON RUFFED GROUSE, *Bonasa umbellus sabini* (Douglas).—Formerly common about Alta Lake when there was ample protecting coverage and an abundant food supply. The crop of a Ruffed Grouse examined in the fall contained the following:—

High bush cranberries.....	8%
Willow buds.....	15%
Bearberries.....	20%
Huckleberry buds and woody tips.....	43%
Waxberries.....	2%
Strawberry leaves and portions of other unidentified leaves.....	10%
Small stones.....	2%

WILLOW PTARMIGAN, *Lagopus lagopus albus* (Gmelin).—During the month of November, 1944, prior to any snowfall, the Willow Grouse were feeding largely on willow buds. Twenty-six birds were seen during the month, as follows: one on the 7th, fourteen on the 6th; eight on the 10th; and three on the 21st. Only one individual was seen in October, 1946, although careful search was made in all places usually frequented by these birds.

ROCK PTARMIGAN, *Lagopus mutus rupestris* (Gmelin).—Reported as having been seen by Mr. Bailiff on Mount Overlord (formerly Red Mountain).

NORTHERN WHITE-TAILED PTARMIGAN, *Lagopus leucurus leucurus* (Richardson).—Common on the surrounding mountains above 5,500 feet elevation. Descends into the surrounding valleys in severe winters when there is a very heavy snowfall. It was seen about Alta Lake during the winters of 1929 and 1932. On August 2, 1928, a female and nine half-grown chicks were seen on a rock slide in a northern exposure on Red Mountain (now Mt. Overlord) (altitude 6,300 feet). Two ptarmigan were seen by Stewart Racey and party on 21 Mile Mountain (altitude approximately 5500 feet) on August 19, 1937.

On September 8, 1937, the writer saw four ptarmigan on rocks in a heather-covered slope on Sproat Mountain, at an elevation of 5,400 feet, and on the following day a female and four nearly grown young were seen at an elevation of 5,700 feet on a rock slide three miles distant. Two specimens were taken. Their crop content was as follows:

No. 2316	Seeds of alpine sedge (<i>Carex</i>)	90%
	White heather tips	10%
No. 2319	2 seeds of lousewort (<i>Pedicularis</i>)	
	3 tips red heather	
	50 seeds western teaberry (<i>Ganethria ovalifolia</i>)	
	3 seed heads of sedge (<i>Carex</i>)	

On August 25, 1932, on London Mountain (formerly Mt. Whistler) two female ptarmigan were seen with five and four three-quarters-grown chicks, respectively. In each instance the females were perched on top of rocks, and the young below on the ground. These birds were at altitudes of 6,400 and 6,700 feet. Later on, during the day, two male ptarmigan were seen together on the summit of London Mountain, at an altitude of 7,300 feet.

On August 27, 1932, I found two ptarmigan nests—one at 6,900 feet and the second at 6,700 feet. Both were in moss and heather, among lichen-covered stones, and each nest contained the remains of six hatched eggs. The first nest, found at 6,900 feet, appeared to be the more recently used, and was at the foot of a large rock.

AMERICAN COOT, *Fulica americana americana* Gmelin.—Only occasionally seen about the lake. One of these birds was noticed near camp on August 28, 1941. The species is quite common in the marshes about the Indian reserve at the lower end of Pemberton Valley.

SPOTTED SANDPIPER, *Actitis macularia* (Linnaeus).—Common summer resident; breeds. A nest with eggs was found in the grass by the side of the railroad on July 26, 1930. Three young birds just past the downy stage were found dead on the railroad track. Although crushed and damaged, one was preserved. On December 29, 1945, I saw a Spotted Sandpiper twice at the outlet of Nita Lake, where the stream was not frozen.

GREATER YELLOW-LEGS, *Totanus melanoleucus* (Gmelin).—One was seen by Dr. Cowan on August 31, 1941, and two were seen the following day. Two were seen by Mrs. Noble near Rainbow Lodge, September 12, 1941.

NORTHERN PHALAROPE, *Lobipes lobatus* (Linnaeus).—A flock of four was seen by Dr. Cowan on Alta Lake, August 16, 1941.

GLAUCOUS-WINGED GULL, *Larus glaucescens* Naumann.—Frequently seen each year as they pass down the lake towards the sea. Several rested on the shore of Alta Lake on August 31, 1932. The species was seen September 12 and 13, 1946.

HERRING GULL, *Larus argentatus smithsonianus* Coues.—I saw an adult bird sitting on the shore of the lake near a sawdust pile on August 31, 1932. On August 15, 19, and 29, 1937, a few adult and immature birds passed southward, and on September 4, about a dozen

went through. One adult bird remained for some time on the water in front of the house.

SHORT-BILLED GULL, *Larus canus brachyrhynchus* Richardson.—Several of these birds were seen passing down Alta Lake during the latter part of August, 1932. On August 7, 1937, five adult birds flew down the lake, and up to the 15th of the month a few of these gulls passed by every day or two. On the 22nd, a flock of fourteen passed southwards.

FRANKLIN'S GULL, *Larus pipixcan* Wagler.—A juvenile was taken by Dr. Cowan on August 9, 1941, from a flock of Bonaparte's Gulls.

BONAPARTE'S GULL, *Larus philadelphia* (Ord).—Seen occasionally as they pass seaward. On August 9, 1941, Dr. Cowan saw a flock of six birds—one in black-headed plumage, and four in winter plumage. Later in the day, three more flew down the lake.

COMMON TERN, *Sterna hirundo hirundo* Linnaeus.—Usually seen migrating southward toward the latter part of August. Three were seen circling about the lake on August 21, 1937. These birds remained for half an hour, only, and then continued to the southward. On the same day, a flock of fourteen passed down the lake, and on August 27 a flock of seventeen passed southward.

BAND-TAILED PIGEON, *Columba fasciata fasciata* Say.—A few of these birds now nest regularly between Nita and Alpha lakes, and are occasionally seen about these lakes. Three were seen flying across Nita Lake on July 26, 1927. Two pigeons were disturbed while feeding on berries by the side of the track at the foot of Alpha Lake, on September 29, 1944. Four were seen on August 11, 1937. On July 7, 1946, eight were seen on the side of Sproat Mountain. Two—a male and a female—were collected.

WESTERN MOURNING DOVE, *Zenaidura macroura marginella* (Woodhouse).—Mrs. Tom Neeland stated to the writer that, during the spring of 1945, a Mourning Dove remained about their farm at Mile 34, Pacific Great Eastern Railway.

DUSKY HORNED OWL, *Bubo virginianus saturatus* Ridgway.—Numerous and nests throughout the area. On June 19, 1924, a family of five was seen in dense timber above Nita Lake. One of these, collected about 5 p. m., proved to be a juvenile female. Its stomach contained the remains of a young varying here and a white-footed mouse. Another juvenile female was taken near by on July 1, 1941; the stomach of this bird was empty save for a single unidentified feather. An adult female, collected at Alpha Lake, August 17, 1946, had in its stomach remains of a squirrel and a large beetle.

COAST PYGMY OWL, *Glaucidium gnoma grinnelli* Ridgway.—Fre-

quently seen and heard about Alta Lake in fall and winter. Specimens taken were from Alta Lake, Alpha Lake, and Green Lake. Specimen No. 3,097 from Alta Lake is a male taken on September 29, 1944, and closely resembles *californicum*. I saw two Pygmy Owls at Pemberton on November 23, 1931. One of these was on a barn; the other, in the woods, followed me about as I whistled to it.

NORTHERN SPOTTED OWL, *Strix occidentalis caurina* (Merriam).—The call of this bird was heard on several occasions, but it was not until an adult female was taken in a weasel trap by a trapper near Mile 32, P. G. E. Railway, and sent in to the writer, that it was seen in the flesh. July 17, 1946, one of these birds was heard calling in late evening from the woods south of Alpha Lake.

LONG-EARED OWLS, *Asio otus wilsonianus* (Lesson).—Only seen in Pemberton Valley. An adult male was taken December 7, 1936. The stomach was empty except for unidentified feathers.

SHORT-EARED OWL, *Asio flammeus flammeus* (Pontoppidan).—Resident in Pemberton Valley. A pair was found dead by Mr. John Ronayne, Sr., on January 24, 1935, when the temperature was down to 30° below zero. These specimens were preserved, and are now Nos. 689 and 690.

SAW-WHET OWL, *Aegolius acadicus acadicus* (Gmelin).—Resident. It was heard about camp during the summer months. Specimens were received from Cheakamus Lake and Pemberton, having been found dead during late fall and winter. One was seen in a barn at Pemberton on November 23, 1931.

EASTERN NIGHTHAWK, *Chordeiles minor minor* (Forster).—Common every summer. All leave for the south by August 28.

BLACK SWIFT, *Nephoceles niger borealis* (Kennerly).—On August 29, 1937, Mrs. Racey and the writer saw five Black Swifts flying southward during the afternoon. Cowan saw ten at Alta Lake on August 4, 1941; 12 on August 14; and two on September 2. I saw eight at Sproat Mountain on July 6, 1946.

VAUX'S SWIFT, *Chaetura vauxi vauxi* (Townsend).—A few seen each summer. On August 29, 1945, at 1:30 p. m., a flight of seventeen was seen near Alta Lake Station, heading southward.

RUFIOUS HUMMINGBIRD, *Selasphorus rufus* (Gmelin).—A very common summer resident. A nest was found on the side hill above camp on December 28, 1945. The nest was near the end of a dead bough of a hemlock, about six feet above ground. The exposure was north-westerly, and while the nest was built on a dead branch, it was closely surrounded by live boughs. From the condition of the nest, it appeared to have been built during the current summer.

CALLIOPE HUMMINGBIRD, *Stellula calliope* (Gould).—One record only—a female taken at Alta Lake on July 29, 1932. It was identified by the late Dr. Joseph Grinnell.

WESTERN BELTED KINGFISHER, *Megaceryle alcyon caurina* (Grinnell).—A common summer resident over the whole district up to four years past; since then, somewhat scarce.

NORTHWESTERN FLICKER, *Colaptes cafer cafer* (Gmelin).—The common breeding Red-shafted Flicker. One of these birds was seen at Alta Lake on December 31, 1945.

COMMON RED-SHAFTED FLICKER, *Colaptes cafer collaris* Vigors.—An adult male of this subspecies was taken at Alta Lake, June 10, 1945—No. 3131.

NORTHERN PILEATED WOODPECKER, *Hylatomus pileatus abieticola* (Bangs).—A fairly common resident. Four young birds were seen about camp on August 9, 1932. Adult birds are frequently heard and seen.

NORTHERN RED-BREASTED SAPSUCKER, *Sphyrapicus varius ruber* (Gmelin).—A common summer resident and breeder. By mid-fall these sapsuckers move to lower altitudes near the sea, where many remain all winter.

HARRIS'S WOODPECKER, *Dendrocopos villosus harrisi* (Audubon).—Resident; breeds. A young male was taken at Alta Lake, July 4, 1921, and another on June 18, 1924.

BATCHELDER'S WOODPECKER, *Dendrocopos pubescens leucurus* (Hartlaub).—Casual in fall and winter. A male was taken December 18, 1935, at Alpha Lake, and a female was collected at Alta Lake, November 11, 1944.

GAIRDNER'S WOODPECKER, *Dendrocopos pubescens gairdneri* (Audubon).—Resident; breeds. Not common. An adult male was taken December 26, 1944.

ALASKA THREE-TOED WOODPECKER, *Picoides tridactylus fasciatus* Baird.—Uncommon but apparently breeds, as a young male was taken on August 16, 1937—No. 2301. On August 23, 1941, a female was taken by Dr. Cowan.

EASTERN KINGBIRD, *Tyrannus tyrannus* (Linnaeus).—A sight record only; one was seen near Rainbow Lodge, August 14, 1937.

HAMMOND'S FLYCATCHER, *Empidonax hammondii* (Xantus).—The most common breeding flycatcher in the region.

WESTERN WOOD PEWEE, *Contopus richardsonii richardsonii* (Swainson).—A common nesting bird.

OLIVE-SIDED FLYCATCHER, *Nuttallornis borealis* (Swainson).—Found breeding in all suitable localities from Pemberton to Maguire.

PALLID HORNED LARK, *Eremophila alpestris arctica* (Oberholser).—Numerous at high elevations, and found nesting between 6,500 and 7,500 feet altitude.

VIOLET GREEN SWALLOW, *Tachycineta thalassina lepida* Mearns.—Not numerous but seen on several occasions. A pair of these swallows nested in the section bunkhouse in 1946. They have only been noted about Alta Lake since 1942.

TREE SWALLOW, *Iridoprocne bicolor* (Vieillot).—One was seen June 9, 1945, and two were noted on the 11th. These were flying over Alta Lake near a small island.

ROUGH-WINGED SWALLOW, *Stelgidopteryx ruficollis serripennis* (Audubon).—Four were seen June 11, 1945, near Alta Lake Station.

BARN SWALLOW, *Hirundo rustica erythrogaster* Boddaert.—Seen occasionally each year, but becoming more common. Six were seen near Alta Lake Station, August 27, and eight on the 29th, 1945. Of these, four were young birds being fed by the parent birds.

NORTHERN CLIFF SWALLOW, *Petrochelidon pyrrhonota pyrrhonota* (Vieillot).—Found nesting in an old barn at the north end of Alta Lake. Five were seen June 9, 1945, and one on the 10th.

GRAY JAY, *Perisoreus canadensis griseus* Ridgway.—Very common resident, and constantly seen about camp. It was noted that these jays frequently imitate the call of the Pygmy Owl.

STELLER'S JAY, *Cyanocitta stelleri stelleri* (Gmelin).—Abundant resident, but during 1943 it became scarce. However, since that time its numbers have increased. Specimens taken of some of these jays have shown intergradation with *annectens*. A nest with eggs was found by John Bailiff by the side of a stream behind Alta Lake Station.

NORTHERN RAVEN, *Corvus corax principalis* Ridgway.—Resident, and frequently seen and heard. It appears to be increasing in numbers. On December 25, 1945, a flock of ten was seen flying northward over Alta Lake.

NORTHWESTERN CROW, *Corvus caurinus* Baird.—Occasionally seen about Alta Lake, but very numerous about Pemberton Meadows where they nest.

CLARK'S NUTCRACKER, *Nucifraga columbiana* (Wilson).—Common resident, nesting at timberline. In June, 1924, two nests were found at an elevation of 6,000 feet. The parent birds were seen feeding the young.

LONG-TAILED CHICKADEE, *Parus atricapillus septentrionalis* Harris.—Resident; breeds. Both adults and young were seen on July 28, 1923, and specimens were taken.

OREGON CHICKADEE, *Parus atricapillus occidentalis* Baird.—Only

observed in winter time, when specimens were collected. Usually in company with kinglets.

GRINNELL'S CHICKADEE, *Parus gambeli grinnelli* (van Rossem).—Only met with above 3,000 feet elevation on Sproat Mountain. An adult male (No. 1134) was collected at Tenquil Creek, Pemberton, B. C., altitude 3,100 feet, on October 15, 1931.

CHESTNUT-BACKED CHICKADEE, *Parus rufescens rufescens* Townsend.—The most common of all four local chickadees, and flocks ranging from three or four to a dozen or more are frequently seen. For some unknown reason their numbers appeared to be very much reduced during 1945.

RED-BREASTED NUTHATCH, *Sitta canadensis* Linnaeus.—At one time quite numerous, but during the past six or seven years their numbers have seriously decreased. They now seem to be on the increase once more. Found from low levels up to timberline.

CALIFORNIA CREEPER, *Certhia familiaris occidentalis* Ridgway.—Nowhere common, but of constant occurrence.

DIPPER, *Cinclus mexicanus unicolor* Bonaparte.—Resident. Frequently seen feeding in the coldest weather along the streamlets which do not freeze over. A nest was found by J. Bailiff on a rocky ledge overhanging a waterfall on Mons Creek. The nest contained young which were fed by the parent birds while we were watching, on June 11, 1945.

WESTERN WINTER WREN: *Troglodytes troglodytes pacificus* Baird.—Common throughout the district.

NORTHWESTERN ROBIN, *Turdus migratorius caurinus* (Grinnell).—An extremely common bird that nests in every possible location about the lake shores. Found up to 6,000 feet elevation.

PACIFIC VARIED THRUSH, *Ixoreus naevius naevius* (Gmelin).—Common up to 6,000 feet. It breeds from 3,000 feet upwards, but the main nesting ground appears to be just above 5,000 feet, where a number were heard in full song the latter part of June, 1924.

DWARF HERMIT THRUSH, *Hylocichla guttata nanus* (Audubon).—Frequently found at high altitudes. It breeds from 1,800 feet upwards. A nest containing three eggs was found on a rocky ledge by Cheakamus River, on August 24, 1929. A male was collected on Sproat Mountain at an altitude of 4,400 feet on September 11, 1937. These thrushes were seen daily at this elevation; later they come to lower levels in migration.

RUSSET-BACKED THRUSH, *Hylocichla ustulata ustulata* (Nuttall).—The common nesting thrush of the lower levels. A few remain until September about the thickets surrounding the lakes.

WESTERN BLUEBIRD, *Sialia mexicana occidentalis* Townsend.—Not as common as formerly, and now only occasionally seen. On June 18, 1924, a pair of these birds nested on a tall cottonwood tree, on what was known as the Archibald ranch.

MOUNTAIN BLUEBIRD, *Sialia currucoides* (Bechstein).—A male was seen on the east side of Alta Lake, June 18, 1924. Several were seen at Alpha Lake in early June, 1924, by Dr. A. G. Naismith. On June 22, 1924, a male was seen on the telephone wire near Green Lake, and appeared to be feeding young. A section man mentioned that during the latter part of April, 1924, he had seen a large flock of these bluebirds near Green Lake, and that recently he had seen a pair feeding young.

On August 2, 1928, a nest was found containing four young. The nest was situated in an old decayed spruce stump about five feet from the ground. Young were being fed by the parents, and were almost fully fledged. This nest was in the third valley on Mount Whistler, at an altitude of about 6,000 feet.

TOWNSEND'S SOLITAIRE, *Myadestes townsendi* (Audubon).—Occasionally seen about Alta and Nita lakes, in both summer and winter. On December 29, 1945, when walking down the track near Nita Lake, the writer saw a Townsend's Solitaire fly to the top of a dead stub, whence it flew up the mountainside into the thick woods. This bird was again seen the following day. At this time, the snow was about four feet deep.

WESTERN GOLDEN-CROWNED KINGLET, *Regulus satrapa olivaceus* Baird.—Very abundant, both in summer and winter, and often in company with chickadees.

WESTERN RUBY-CROWNED KINGLET, *Regulus calendula cineraceus* Grinnell.—Frequently seen during the summer months, and heard in full song.

WESTERN PIPIT, *Anthus spinoletta pacificus* Todd.—Common, and breeds above 6,000 feet elevation. Occasional flocks are seen at lower levels about the railway tracks in the fall. A nest containing five eggs was found in the grass under the edge of a boulder at 7,000 feet, on June 26, 1924. The eggs were half incubated.

BOHEMIAN WAXWING, *Bombycilla garrulus pallidiceps* Reichenow.—Not very common, but seen in flocks during January, 1937. A nest containing young was found by Dr. Cowan on August 9, 1941. The female was seen feeding large young. The nest was situated about 30 feet above ground on the end of a branch of a tall hemlock, overhanging the water. Our clothesline was attached to the nesting tree, and its use did not disturb the birds.

CEDAR WAXWING, *Bombycilla cedrorum* Vieillot.—Very common; nests. Both adults and young have been seen each year. Flocks of twenty-five to thirty are of frequent occurrence.

RED-EYED VIREO, *Vireo olivaceus* (Linnaeus).—One of these birds was seen at Archibald's ranch on June 8, 1945.

WESTERN WARBLING VIREO, *Vireo gilvus swainsonii* Baird.—Quite a common bird; nests. Three were seen on June 9 and again on June 10, 1945.

CALAVERAS WARBLER, *Vermivora ruficapilla ridgwayi* van Rossem.—Found nesting in a willow swamp north of Pemberton Station, where twelve of these birds were seen. A juvenile female was taken at Alta Lake by Dr. Cowan on August 18, 1938.

ALASKA YELLOW WARBLER, *Dendroica petechia rubiginosa* (Pallas).—A common breeding bird up to 3,000 feet elevation: Pemberton, June 22, 1924—3; Alta Lake, August 9, 1937—3; Alta Lake, June 29, 1941—6 (a breeding female taken); Alta Lake, June 9, 1945—5 (and then daily).

AUDUBON'S WARBLER, *Dendroica auduboni auduboni* (Townsend).—Not common. At Alta Lake, on June 29 and 30, 1941, two pairs were seen each day on the Archibald ranch, and others seen at 21 Mile Creek near Rainbow. A small flock was seen on Mt. Whistler on August 2, 1928, at an altitude of 6,000 feet. Four were seen on August 11 and again on August 27, 1944, by Dr. Cowan.

BLACK-THROATED GRAY WARBLER, *Dendroica nigrescens* (Townsend).—Seen at Pemberton on June 22, 1924. A young male was taken by Dr. Cowan at Alta Lake on August 18, 1938.

TOWNSEND'S WARBLER, *Dendroica townsendi* (Townsend).—Seen at Nita Lake on July 1, 1922; altitude 2,500 feet. These birds apparently nest about the district. I collected an adult female on August 23, 1937, and on September 16 a juvenile male which came to a Pygmy Owl call. On June 29, 1941, a nesting pair was seen by the lake shore near camp. Three were seen in migration on August 23, and four on September 11, 1937. Six were seen by Cowan on August 24, 1944. Three were seen on a hillside near Nita Lake, June 10, 1945, and two on the side of Sproat Mountain, August 18, 1941.

MACGILLIVRAY'S WARBLER, *Oporornis tolmiei* (Townsend).—Very common up to 2,500 feet elevation. A nest was found on June 16, 1923, situated in a red osier bush about 15 inches above ground, by the side of Mons Creek, Alta Lake. The nest contained three eggs. Between June 29 and July 1, 1941, ten pairs of these birds were seen in the thickets surrounding the lakes and streams. Eleven, all apparently nesting birds, were seen on June 9, 1945.

WESTERN YELLOW-THROAT, *Geothlypis trichas occidentalis* Brewster.—Very numerous, especially about the north end of Alta Lake, in the hardhack and other brush that grows so abundantly in that swampy area.

NORTHERN PILEOLATED WARBLER, *Wilsonia pusilla pileolata* (Pallas).—Frequently seen on hillsides and alder bottoms about lake margins. Two were seen in migration on August 28, 1945.

AMERICAN REDSTART, *Setophaga ruticilla* (Linnaeus).—Found nesting in a willow swamp at Pemberton on June 3, 1924; elevation 600 feet.

NORTHWESTERN RED-WING, *Agelaius phoeniceus caurinus* Ridgway.—Seen at the north end of Alta Lake and at Pemberton; breeds.

BREWER'S BLACKBIRD, *Euphagus cyanocephalus* (Wagler).—Individuals and flocks seen about Alta Lake each year. A flock of 21 was seen feeding on the track near a water tank, August 18, 1946.

WESTERN TANAGER, *Piranga ludoviciana* (Wilson).—Frequently met with up to 3,000 feet elevation; breeds. A nest was found on June 22, 1924, at Pemberton, about a mile north of the station. The nest, with young, was in a fir tree, about 30 feet above ground, and was placed near the end of the branch. I watched the parents feeding the young. The species is very common about Alta Lake.

BLACK-HEADED GROSBEAK, *Phencticus elanocephalus maculatus* (Audubon).—On June 30, 1941, at Mile 38.8 P. G. E. R. R., I heard a male singing, and after a little search, found the nest in dense bush. The nest was constructed of twigs and rootlets with two or three pieces of dry hay, and was situated seven feet from the ground in a small elderberry bush quite close to 21 Mile Creek. A singing male was seen and heard about camp on July 1 and 2, 1941.

WESTERN EVENING GROSBEAK, *Hesperiphona vespertina brooksi* Grinnell.—A pair nested just above the camp at Alta Lake in 1938, and both adult and young were seen. Two were seen December 27, 1945. A female was picked up on May 3, 1946, having been killed by striking a clothesline wire.

CALIFORNIA PURPLE FINCH, *Carpodacus purpureus californicus* Baird.—Not common. Three were seen at Pemberton, June 22, 1924—a male and two females. One was seen by Dr. Cowan at Alta Lake on August 8, and again on the 15th, 1941.

ROCKY MOUNTAIN GROSBEAK, *Pinicola enucleator montana* Ridgway.—An uncommon winter visitor; a number were seen during the month of December, 1935. Three, two males and a female, were collected on December 27, 1935. On examination, the stomachs of these birds were found to contain the following:

No. 423 Male—75% gravel, 25% wood chips.

No. 424 Male—50% white gravel, 50% wood chips.

No. 425 Female—50% white gravel, 50% ground seeds—probably of conifers.

HEPBURN'S ROSY FINCH, *Leucosticte tephrocotis littoralis* Baird.—Flocks were seen on the side of Red Mountain on June 25, 1924; altitude 6,200 feet. Seen at 7,000 feet elevation on Mt. Whistler on August 2, 1928. Both adult and young birds were seen about the snow fields above Tenquill Valley, Pemberton, B. C., on July 21, 1930; altitude 7,500 feet. Two juveniles were collected there.

COMMON REDPOLL, *Acanthis flammea flammea* (Linnaeus).—A winter visitant only at Alta Lake, where flocks are seen from a dozen to more than 250. They appear to be very partial to the seeds of the Black Mountain alder which grows abundantly about the lake margin.

NORTHERN PINE SISKIN, *Spinus pinus pinus* (Wilson).—Resident and apparently breeds. Very abundant in winter when there is a good hemlock cone crop. Found to be numerous up to 6,000 feet altitude in June, 1924.

WILLOW GOLDFINCH, *Spinus tristis salicamans* Grinnell.—Breeds, but is a rather uncommon bird. A small flock was seen in migration on September 12, 1941. A breeding female was collected at Mile 38, June 30, 1941.

SITKA CROSSBILL, *Loxia curvirostra sitkensis* Grinnell.—Very common in good cone years. In July and August a flock was constantly about camp, feeding on hemlock cone seeds. In December, 1945, flocks of three to 50 or 60 were frequently seen. These birds were feeding on the seeds of cedar, hemlock and white pine, and were often in company with redpolls and Pine Siskins.

BENDIRE'S CROSSBILL, *Loxia curvirostra bendirei* Ridgway.—The foregoing remarks relating to the Sitka Crossbills are also applicable to this subspecies which we found abundant during the winter of 1945–1946. Specimens taken are of this race.

OREGON TOWHEE, *Pipilo maculatus oregonus* Bell.—Not common but occasionally seen in thickets bordering the lakes.

WESTERN SAVANNAH SPARROW, *Passerculus sandwichensis anthinus* Bonaparte.—Numerous from Avalanche Valley toward the main peak of Mt. Whistler, between 5,800 and 7,000 feet altitude. A breeding female was collected on Mt. Whistler on June 25, 1924, at an altitude of 5,800 feet. A young female was taken on August 28, 1932, at 6,650 feet. Frequently seen during fall migration along the railroad track bordering Alta Lake.

WESTERN VESPER SPARROW, *Pooecetes gramineus confinis* Baird.—Only very occasionally seen, and then in migration. A young male

bird was taken on the side of the railway embankment, September 3, 1927. On August 2, 1941, a juvenile was taken by Dr. Cowan.

SHUFELDT'S JUNCO, *Junco oreganus shufeldti* Coale.—A common summer resident, breeding up to 6,000 feet altitude, where a nest with four fresh eggs was found on June 25, 1924. A breeding female was taken at 5,700 feet altitude on Mt. Whistler, on June 24, 1924, and a juvenile female was taken at Nita Lake on July 1, 1941.

EASTERN CHIPPING SPARROW, *Spizella passerina passerina* (Bechstein).—Only met with at Pemberton, where a breeding male was taken June 22, 1924.

PUGET SOUND SPARROW, *Zonotrichia leucophrys pugetensis* Grinnell.—Only seen in migration. A specimen which proved to be a young male was secured on September 17, 1923, from a flock of about a dozen birds, all of which were young. On August 4, 1941, Dr. Cowan took a young one at Alta Lake.

GOLDEN-CROWNED SPARROW, *Zonotrichia coronata* (Pallas).—Common in migration, and breeding at high elevations. A young male was taken at an elevation of 6,500 feet on August 1, 1928, above Avalanche Pass, on Mount Whistler. These birds were found to be quite common about the 6,000-foot level on Mt. Whistler, August 1, 1928, and were still feeding the young. Several times the adult birds were heard in song at this late date.

ALBERTA FOX SPARROW, *Passerella iliaca altivagans* Riley.—Frequently seen in the month of September, during migration, and found breeding on the higher levels between 5,500 and 7,000 feet elevation on the surrounding mountains. They were quite common during the latter part of June, 1924, at the above elevations.

SOOTY FOX SPARROW, *Passerella iliaca fuliginosa* Ridgway.—Seen in migration only. A male was taken on September 12, 1937, at Alta Lake—No. 2322.

RUSTY SONG SPARROW, *Melospiza melodia morphna* Oberholser.—This is the common breeding bird, and is found throughout the district. It winters in limited numbers.

"YELLOW-HEADED SONG SPARROW, *Melospiza melodia inexpectata* Riley."—A wintering bird only. Specimens of this race (not accepted by the A. O. U. Check-List) have been taken in winter about Alta Lake.

SNOW BUNTING, *Plectrophenax nivalis nivalis* (Linnaeus).—A very uncommon winter visitant. An adult male was taken at Alta Lake, November 11, 1944.

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