NOTES ON THE BIRD LIFE OF NORTHWESTERN WASHINGTON.

BY THOMAS D. BURLEIGH.

FROM the latter part of September, 1919, until the end of June, 1920, I was in Seattle, Washington, and these notes cover my experiences with the bird life of that part of the state during that time. The larger part of each week was spent in and about Seattle itself, but the week ends, especially from the latter part of the winter on, were spent at Tacoma, some forty odd miles south. For several days, however, during the latter part of March I was at Westport, in Grays Harbor County, and directly on the ocean, while short trips of a day or so were made to the Snoqualmie River, at the edge of the Cascades, and to Hoods Canal, well down the Sound.

Unfamiliarity with this region would have handicapped me considerably but I was very fortunate in early making the acquaintance of D. E. Brown, one of Seattle's veteran ornithologists, and through his cordial interest and coöperation I succeeded in soon acquiring a reasonable knowledge of the country about the city. Through him I learned of stretches of woods along the shore of Lake Washington favored by certain species uncommon elsewhere, of the wooded ridge at Kirkland, a small town on the far side of the lake, where the Band-tailed Pigeon and Oregon Jay nested, of Ravenna Park, a wooded ravine well within the city limits, where the Western Winter Wren and Varied Thrush could be found during the summer months, and of the stretch of alders and willows at Renton, a point on the lake a short distance from the city, where such species as the California Yellow Warbler, Oregon Chickadee and Gairdner's Woodpecker nested in more or less abundance. As opportunity offered I devoted my time to other spots in and about the city, lying in King County, but not with the thoroughness that perhaps they may have deserved.

It was through the hospitality of E. A. Kitchin that I found it possible to spend many week ends at Tacoma, in Pierce County. Here I had the plesaure of frequent days in the field both with him and with J. Hooper Bowles, and as might be expected I profited to a large extent by their knowledge of local conditions. In their company I tramped the open prairie country that stretches from the edge of the city to the foot of Mt. Rainier, so unlike that about Seattle, and characterized by wide vistas of open rolling land, dotted here and there with groves of Douglas firs and, more rarely, stretches of scrub oaks. Or splashed about the large swamp south of the city, the haunt of such species as the Tule Wren, Northwestern Redwing, Coot and various Ducks, or tramped the tide flats, or hunted certain favored ravines within the city limits. The open prairie country, however, had the most appeal to me, for certain species nested there, among them the Streaked Horned Lark, the Oregon Vesper Sparrow and the Hermit Warbler, which were entirely lacking elsewhere, and never seen about Seattle during my entire stay there.

The following list is based entirely on data personally taken during my stay in Seattle, and comprises notes on the distribution, migration and breeding habits of the species observed.

Aechmophorus occidentalis. WESTERN GREBE.—Two birds were seen Dec. 21, and one bird Feb. 10, each time on Lake Washington, and feeding well in toward the shore. Possibly a fairly common winter resident here.

Colymbus holboelli. HOLBOELL'S GREBE.—This species proved to be a fairly plentiful winter resident and was frequently found on Lake Washington, but always single birds were seen, and usually they were well out from the shore.

Colymbus auritus. HORNED GREBE.—A plentiful winter resident, and especially common on Lake Washington where single birds, or at times two together, were frequently found feeding close to the shore.

Podilymbus podiceps. PIED-BILLED GREBE.—This species, in my experience at least, is of uncommon occurrence during the winter, but is a plentiful summer resident in the stretches of reeds and cat-tails that fringe the lakes and scattered swamps. A nest found April 3 in the swamp south of Tacoma held six slightly incubated eggs, and was a mass of decayed and very wet reeds, grasses, etc., floating in two feet of water at the outer edge of a stretch of reeds. No birds were seen about the nest, and the eggs were well covered with a layer of wet reeds.

Gavia immer. Loon.—A fairly plentiful winter resident, arriving early in October and remaining until early spring. I saw it at frequent intervals on Lake Washington as well as in the Sound.

Gavia pacifica. PACIFIC LOON.—Possibly like the last a fairly plentiful winter resident, although I saw it only on the Sound and then at infrequent intervals. One bird was seen Dec. 7, and two Jan. 18, each time flying by low overhead. Brachyramphus marmoratus. MARBLED MURRELET.—I found this species quite plentiful during the winter months on the Sound, scattered small flocks being seen. A single bird was noted at Eagle Harbor on Dec. 7 that fed within ten feet of the boat landing with little or no concern for the people passing by.

Cepphus columba. PIGEON GUILLEMOT.—This species is resident here, and was seen on all my numerous trips on the Sound. When approached as they rested on the water they either flew or, if they had permitted the boat to approach uncomfortably close, they would dive and would not be seen again. One bird that was taken unawares made several ineffectual attempts to leave the water, and then became alarmed and dived. Several birds were seen Dec. 7 that were in full black and white winter plumage, while on March 21, one was for the first time seen in the complete black spring plumage.

Uria troille californica. CALIFORNIA MURRE.—Two birds were seen Jan. 18, between Seattle and Tacoma, flying by low over the water in the middle of the Sound.

Stercorarius parasiticus. PARASITIC JAEGER.—I saw this species for the first time on May 24, when it was found to be fairly plentiful in the harbor at Seattle, small groups resting on the water or flying by low overhead. Five days later, on the 29th, single birds were seen several times in the middle of the Sound between Seattle and Tacoma.

Larus glaucescens. GLAUCOUS-WINGED GULL.—This was unquestionably the commonest of the Gulls that were found throughout the winter about the docks and boat landings on the Sound. It was no uncommon sight to find fifty or seventy-five of them resting on a pier, or feeding about a garbage dump, and they likewise in good numbers followed the boats for scraps of food which experience had taught them would sooner or later be thrown to them. Often they would fly so close in the rear that they could almost be touched, and frequently, if afforded the opportunity, would rest on the rail of the upper deck.

Larus occidentalis. WESTERN GULL.—Unlike the other Gulls this was a bird of the ocean beaches and wide stretches of salt water, never, as far as my experience went, venturing far up the Sound or feeding in the harbors. Three birds were seen Nov. 28, while halfway between Seattle and Victoria, B. C., and on March 28 small scattered flocks were seen at Westport feeding with Herring Gulls on the beach fronting the ocean.

Larus argentatus. HERRING GULL.—Common throughout the winter, and frequently seen, singly or in small flocks, feeding in the harbor at Seattle, and on Lake Washington and Lake Union, about boat landings or garbage dumps, or well out from the shore.

Larus californicus. CALIFORNIA GULL.—Like the preceding common throughout the winter, and frequently seen feeding about the same boat landing or garbage dump. On Dec. 21 fully seventy-five were found on the campus of the University of Washington, feeding, scattered out, on the lawn in front of one of the buildings. Larus delawarensis. RING-BILLED GULL.—One bird was seen Nov. 9, resting on a piling near the boat landing at Kirkland, and it evidently remained in this vicinity during the larger part of the winter for it was later seen on two other occasions, Dec. 21 and Jan. 11, resting on this same piling.

Larus brachyrhynchus. SHORT-BILLED GULL.—Three birds were seen Dec. 7 in the harbor at Seattle, feeding about the boats at anchor there.

Larus philadelphia. BONAPARTE'S GULL.—I found this species fairly common during the winter, although I invariably saw it on the Sound. March 21 a flock was seen in which there were fully a hundred and fifty of these birds, feeding in an inlet on a mud flat exposed by the low tide.

Phalacrocorax pelagicus resplendens. BAIRD'S CORMORANT.—On Nov. 29 I made the trip by boat from Seattle to Vancouver, B. C., and found this species fairly plentiful throughout the day. Single birds, or at times two or three together, were seen, and I was interested to note that they never permitted the boat to approach very close to them before flying.

Mergus serrator. RED-BREASTED MERGANSER.—This species was a fairly plentiful winter resident, small flocks being frequently seen on the Sound, resting on the water or flying by overhead.

Anas platyrhynchos. MALLARD.—I found this species resident here, and plentiful at all times. During the winter large flocks were noted on Lake Washington feeding in the stretches of reeds and cat-tails that fringed the shore. On Dec. 21 one flock was flushed from a marshy field bordering the lake near Kirkland in which there were fully seventyfive birds. On April 4 scattered pairs were seen about the large swamp south of Tacoma, and apparently few of the birds were breeding then. Less than a week later, however, on April 10, a bird was flushed from a nest that held eleven slightly incubated eggs that was in the middle of a large stretch of reeds at the upper end of this swamp. It was over a foot and a half of water, and was a substantial deeply cupped bed of short pieces of dry reeds with a slight lining of down. A second nest was found in this swamp on May 8 that held eight well incubated eggs, and a third nest, on May 15, that held one young bird, just hatched, and seven pipped eggs. This last nest was an unexpected find for the swamp had but a few days before been burned over, and other nests previously found completely destroyed. The bird must have remained on the nest throughout the worst part of the fire for the flames would otherwise not only have destroyed it, but the heat would almost certainly have ruined the eggs. Where the nest was well concealed the birds did not flush until practically walked on and then fluttered through the reeds for ten or fifteen feet before taking flight, but with this last nest there was no longer any possibility of concealment and the bird left while I was still some distance away.

Chaulelasmus streperus. GADWALL.—Two pair of these birds were seen April 3 in a stretch of open water at the upper end of the swamp south of Tacoma.

Nettion carolinense. GREEN-WINGED TEAL.—I found this species fairly plentiful during the winter, small flocks being flushed at frequent intervals from the reeds fringing Lake Washington, or more rarely from the scattered small streams and ponds. One flock of possibly twenty birds was seen Feb. 15, at Renton.

Querquedula cyanoptera. CINNAMON TEAL.—This species may possibly occur here during the winter months but from my limited experience I consider it a scarce spring migrant and a very rare summer resident. Two pair were found feeding in a stretch of open water in the swamp south of Tacoma on May 8, and later that day a female was flushed here from a nest that held four fresh eggs. It was a substantial bed of reeds and marsh grass, slightly cupped, and was over two feet of water in the middle of a wide stretch of reeds. The male was loitering close by, and the female at once rejoined him and both swam off together.

Spatula clypeata. SHOVELLER.—One pair of these birds was seen April 3 in open water in the middle of the large swamp south of Tacoma.

Dafila acuta. PINTAIL.—I found this species a rather scarce migrant here, but it is probably commoner than my few records would indicate. Two birds were seen Feb. 1, near Kirkland, resting quietly on the water a short distance out from the shore of Lake Washington, and on March 6 a flock of eight birds was flushed from a small pond on the tide flats near Tacoma.

Marila valisineria. CANVAS-BACK.—This species was fairly plentiful during the winter, small flocks being seen at frequent intervals on Lake Washington, feeding close to the shore. One flock of seven birds seen Dec. 21 was watched for several minutes, and in this casual manner a little incident witnessed that to my mind was rather interesting and somewhat out of the ordinary. Each bird was closely followed by several Coots, and on coming up from the bottom after diving for food, the Coots would at once pick off from its neck, head and even bill anything edible that was clinging there. This was apparently entirely agreeable to the bird concerned for no indignation was shown as this was repeated again and again, nor any effort made to drive the Coots away.

Marila marila. SCAUP DUCK.—Three birds were seen Oct. 25, in an inlet on Lake Washington, and from that date through the latter part of March small flocks were of common occurrence both on the Lake and on sheltered parts of the Sound.

Marila collaris. RING-NECKED DUCK.—Two pair of these birds were seen April 4, feeding in open water in the swamp south of Tacoma. I have no other record for their occurrence here.

Clangula clangula americana. GOLDEN-EYE.—One bird was seen Dec. 21, feeding close to the shore of Lake Washington, and later during the winter single birds were noted several times, but from my limited experience I consider this species a rather scarce migrant.

Clangula islandica. BARROW'S GOLDEN-EYE.—Single birds were seen Nov. 6 and Nov. 9, each time on Lake Washington.

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Charitonetta albeola. BUFFLE-HEAD.—A flock of six birds, all of them males, was seen Nov. 2, feeding, well scattered out, along the shore of Lake Washington.

Oidemia americana. SCOTER.—This species rarely leaves salt water, or ventures far inland, and I recorded it but once, a flock of four birds being seen March 27, at Westport, resting quietly on the water a short distance out from the ocean beach.

Oidemia deglandi. WHITE-WINGED SCOTER.—I found this species fairly plentiful on the Sound during the winter, small flocks being frequently seen between Seattle and Tacoma. Only once were any seen on Lake Washington, a flock of six birds being noted there Dec. 6.

Oidemia perspicillata. SURF SCOTER.—Like the last this species was fairly plentiful during the winter on the Sound, and practically always the single birds or small flocks seen were well out from the shore. March 25, I was at Hoods Canal, and found the birds unusually plentiful there that day.

Erismatura jamaicensis. RUDDY DUCK.—Small flocks were seen during the winter on Lake Washington, and during April several males were noted in the swamp south of Tacoma where there is a possibility that they nested.

Botaurus lentiginosus. BITTERN.—My first record for this species for the spring migration was April 10, a bird being heard "pumping" from the edge of the large swamp south of Tacoma. It was heard here frequently for the following month or so, and possibly nested, although breeding records west of the Cascades are very rare.

Ardea herodias fannini. NORTHWESTERN COAST HERON.—I saw this bird for the first time on Dec. 7, on a buoy in the harbor at Seattle, and during the remainder of the winter single birds were seen at frequent intervals both on the Sound and about Lake Washington. While at Renton on March 14 I witnessed what was seemingly a courtship flight, eight birds circling and soaring high overhead, occasionally tumbling swiftly in pursuit of each other and then rising again until a mere speck in the sky.

Rallus virginianus. VIRGINIA RAIL.—This species is seemingly resident here, and fairly plentiful in the stretches of reeds and cat-tails bordering the scattered swamps and larger bodies of open water. One bird was flushed on Dec. 13 from the reeds fringing the shore of Lake Washington, and on April 10 several were seen in the large swamp south of Tacoma where in past years they have been found breeding.

Fulica americana. Coor.—Resident, and plentiful throughout the year. Oct. 12 fully a thousand birds were found on Lake Washington, scattered everywhere, close to the shore and well out toward the middle of the Lake, and this proved no uncommon sight during the winter months. On April 4 I spent several hours wading through the swamp south of Tacoma and succeeded in finding five nests, two with nine eggs each, one with eight, one with seven and one with six. All were well out from the

shore, over several feet of water, and were substantially built of pieces of green reeds, the lining being of the same material but dry and of pieces well crushed. Two other nests were found here April 10, in each nine slightly incubated eggs, and while again in this swamp on May 8, another nest was found with five fresh eggs. I never succeeded in actually flushing a bird from a nest, but both would sconer or later appear and show great concern over my intrusion. At one nest both birds appeared and seemingly attempted to distract my attention by coming within a few feet of me and, rising out of the water, splashing vigorously with both feet, repeating this until I wearied watching them.

Gallinago delicata. WILSON'S SNIPE.—I found this species fairly plentiful during the winter, single birds being frequently flushed from marshy spots bordering the Lake. June 6 two birds, both of them undoubtedly males, were seen, late in the afternoon, circling high over a marshy field near Tacoma, dropping at times with a loud hollow rumble and then flying swiftly on again. This "courtship" flight, and the late date, seem conclusive evidence that these birds were breeding here although they have never been recorded before west of the Cascades during the summer months.

Macrorhamphus griseus scolopaceus. LONG-BILLED DOWITCHER.— One bird, an early migrant, was seen March 28 at Westport, feeding at the edge of a small pond in an open field.

Pelidna alpina sakhalina. RED-BACKED SANDPIPER.—During the four days that I was at Westport, from the 27th through the 30th of March, I found this species fairly plentiful on the ocean beach. Small scattered flocks of from three to eight birds were seen, feeding at the water's edge or among the scattered drift wood, in the latter case often some distance from the water.

Ereunetes mauri. WESTERN SANDPIPER.—A flock of possibly thirtyfive birds was seen at Westport, March 29, feeding on the ocean beach. This species does not winter here, so this record is of interest as evidence of the early date that these birds migrate north.

Crocethia alba. SANDERLING.—This species was not noted during my first two days at Westport but March 29, three were seen feeding on the ocean beach, and the following day they were found to be unexpectedly fairly plentiful. Small scattered flocks were seen that day, both at the water's edge and well up among the scattered driftwood.

Helodromas solitarius cinnamomeus. WESTERN SOLITARY SAND-PIPER.—I have but one record for the occurrence of this species here for it is a rather scarce migrant. A single bird was seen May 8 at the edge of the swamp south of Tacoma.

Actitis macularia. SPOTTED SANDPIPER.—This species is said to winter here sparingly but it was not until May 9 that I noted it for the first time, a single bird being seen feeding at the edge of a pond on the tide flats near Tacoma.

Oxyechus vociferus. KILLDEER.-Resident, and fairly plentiful where

conditions were suitable. During the winter small noisy flocks were seen, feeding on marshy ground bordering Lake Washington, or about small streams in open fields, but by the first week in March the birds had paired off and were noted then in pastures or open fields away from water where they undoubtedly nested.

Aegialitis nivosa. SNOWY PLOVER.—A single bird was seen March 27 at Westport, feeding close to the water's edge on the ocean beach. This was my only record for this species here so it evidently breeds but sparingly.

Colinus virginianus texanus. TEXAS BOB-WHITE.—This species has of recent years been introduced about Tacoma but apparently is increasing but slowly there. I recorded it but once, two birds being flushed May 9 from the edge of an open field.

californica. Lophortyx californica CALIFORNIA QUAIL.-This species has likewise been introduced here and has increased in numbers each vear until at present it is remarkably plentiful. It was no uncommon occurrence during the winter to flush three or four coveys, in each from twenty to forty birds, while taking a short tramp through the open country about Seattle. A light fall of snow on Dec. 13 brought the birds out into the open and they were much in evidence that day as they fed on many of the roads well within the city limits. My first nest, that held fourteen fresh eggs, was found May 30 at Tacoma. It was a slight hollow in the ground thickly lined with dry Douglas fir needles, in which many feathers of the incubating bird were mixed, and was well concealed under a dried out fir branch lying on the ground at the edge of a short stretch of open woods. The following morning a bird was flushed from another nest that held eighteen slightly incubated eggs, a hollow in the ground thickly lined with dry grasses concealed under an old limb lying in a small clump of bushes at the edge of a short stretch of open woods. Later that same day I found a third nest by practically walking on the bird as I stepped over an old log that was lying in a small clearing in a steep wooded ravine. It held nineteen incubated eggs, and was a mere hollow in the ground at the side of and partly under the log, lined well with grasses.

Dendragapus obscurus fuliginosus. SOOTY GROUSE.—This was a bird of the deeper woods, and large stretches of thick timber, but in such spots as this it was fairly plentiful. At intervals during the winter single birds were flushed from the side of a road or trail through the woods, and on March 21 one was heard hooting for the first time. I spent the larger part of the day on April 18 at Kirkland and birds were frequently heard then hooting deep in the woods. But one was seen indulging in this odd form of "courtship," and it was in the top of a large Douglas fir well out toward the end of a branch where it was rather conspicuous for some distance. A nest was found May 30 at Tacoma that held seven well incubated eggs, a slight hollow in the ground lined with dry oak leaves and a few feathers, in the middle of a small clump of scrub oaks a short distance out on the open prairie near a stretch of open woods. Another nest with seven well incubated eggs was found June 2 at Kirkland. It was a hollow in the ground in a depression under an old log lying in the middle of an open slashing in the woods, and lined merely with the litter that covered the ground here, dead leaves, twigs etc., and a few feathers from the incubating bird.

Bonasa umbellus sabini. OREGON RUFFED GROUSE.—Fairly plentiful in the scattered short stretches of woods where single birds were flushed at frequent intervals during the winter months. A bird was heard drumming for the first time on March 20, and on May 23, at Tacoma, a female with newly hatched young was seen in the middle of a short stretch of open woods. As I approached the young scattered in all directions and the old bird displayed real courage in their defense. charging, with feathers puffed out and tail spread, to within five feet of me, hissing vigorously and uttering a peculiar whine.

Phasianus torquatus. RING-NECKED PHEASANT.—I saw this species for the first time on Dec. 21 when seven birds, four of them males, were flushed from the edge of an open field at Kirkland. It is unquestionably increasing steadily in numbers since its introduction here, and is fairly plentiful now. While at Renton, April 25, males were frequently heard during the day uttering their peculiar short "crow" from the edges of short stretches of woods.

Columba fasciata fasciata. BAND-TAILED PIGEON.—I found this species one of the scarcest of the breeding birds here, and during the spring saw it only on the thickly wooded ridge near Kirkland. On May 26 while following a trail here through a stretch of thick second growth Douglas fir I flushed a bird from a nest that held one slightly incubated egg. It was fifteen feet from the ground in a crotch of a small somewhat bent Douglas fir within ten feet of the trail, and although rather flat was quite substantially built of large coarse fir twigs. Because of its size, and the fact that no attempt had been made at concealment, it was by no means inconspicuous but the bird did not leave until the tree was touched.

Cathartes aura septentrionalis. TURKEY VULTURE.—A fairly plentiful summer resident. I saw it for the first time during the spring on April 11, ten birds being noted that day soaring and circling together high overhead.

Circus hudsonius. MARSH HAWK.—This species was seen at irregular intervals during the winter months and apparently is an uncommon migrant. The first bird appeared on Oct. 25, being found that day feeding over marshy ground fringing Lake Washington.

Accipiter velox. SHARP-SHINNED HAWK.—I saw this species but twice during the latter part of the winter, but it may be commoner than my records indicate. One bird was seen Feb. 29 at Kirkland, and on March 6 a bird was observed in the open prairie country south of Tacoma, hovering over a field in which a flock of Streaked Horned Larks were feeding and causing them much evident uneasiness.

Accipiter cooperi. COOPER's HAWK.-This species is a scarce breed-

ing bird, and by no means common at any time during the year. Two were seen April 18 at the edge of a stretch of woods where a nest had been found the previous year, but I was unsuccessful in locating the nest that they were possibly then using.

Buteo borealis calurus. WESTERN RED-TAIL.—At irregular intervals during the spring a single bird was seen at Kirkland, soaring high overhead. Very probably it was breeding somewhere close by, although this species is very rare as a breeding bird, and in fact throughout the larger part of the year.

Buteo swainsoni. SWAINSON'S HAWK.—I have but one record for the occurrence of this species here. On Feb. 15 one bird was seen at Renton, flying slowly by overhead.

Haliaeetus leucocephalus leucocephalus. BALD EAGLE.—While at Westport a single bird was seen March 28 feeding on the ocean beach. Judging from its dark plumage it was a young bird of the past spring.

Falco columbarius columbarius. PIGEON HAWK.—This species is of regular occurrence during the winter, but by no means common. One bird that was seen Dec. 28 darted suddenly into a nearby thicket as I stood watching it and carried off a Rusty Song Sparrow that I had not even realized was there, flying so swiftly that it was gone before I understood fully what it was doing. Another bird seen Jan. 25 was on a telephone wire at the side of a road, and permitted me to approach directly beneath it without showing the slightest concern.

Falco sparverius phalaena. DESERT SPARROW HAWK.—Resident, and fairly plentiful about slashings and open fields. Single birds were seen at frequent intervals during the winter months but it was the latter part of March before this species was at all plentiful or much in evidence.

Asio flammeus. SHORT-EARED OWL.—This species has been found breeding on the tide flats near Tacoma but is rather uncommon during the summer months. I found it fairly plentiful however during the winter and frequently saw it, even at noon when it was somewhat cloudy, beating low over open marshy fields in search of food.

Cryptoglaux acadica scotaea. NORTHWESTERN SAW-WHET OWL.— There are few actual records for the occurrence of this species here so I was rather fortunate in seeing one bird during my stay in Seattle. I was passing a hillside covered with rather thick underbrush when my attention was attracted to a sudden commotion among a flock of Bush-Tits near me, and an investigation showed this little Owl to be the cause of their excitement. It was in a thick bush and very well concealed for I had passed very close to it without seeing it, and then was within a few feet of it before I finally noticed it watching me closely. This was on Feb. 19, so whether it was a breeding bird or not is uncertain.

Otus asio kennicotti. KENNICOTT'S SCREECH OWL.—Only at infrequent intervals did I see this species here although it is said to be fairly common as a breeding bird. Three birds, two of them young of the year fully grown but with their feathers still fluffy, were seen June 16, scattered in several small firs at the side of a path through a short stretch of woods.

Bubo virginianus saturatus. DUSKY HORNED OWL.—I saw this species but once, on Dec. 14, one bird being frightened from the top of a Douglas fir in a stretch of thick woods near Kirkland.

Glaucidium gnoma grinnelli. COAST PYGMY OWL.—My experience with this tiny Owl was limited to a bird seen Jan. 1 that was brought in alive to D. E. Brown. It was caught after it had killed a Rusty Song Sparrow and was trying, without much success, to carry it away.

Coccyzus americanus occidentalis. CALIFORNIA CUCKOO.—This species was fairly plentiful in the scattered short stretches of thick swampy woods bordering Lake Washington, but scarce elsewhere. I saw it for the first time in the spring on June 8, a rather late date in my opinion for the first record for the spring migration. Within a few days however single birds were frequently seen or heard about the Lake.

Ceryle alcyon caurina. NORTHWESTERN BELTED KINGFISHER.—Resident, and plentiful, both on the Sound and about fresh water. A favored spot during the winter months was a piling in any of the numerous harbors, for it was here that birds were often seen. On March 24, one was noticed leaving a hole in a high bank in an inlet on the Sound where evidently it had already begun nesting.

Dryobates villosus harrisi. HARRIS'S WOODPECKER.—It was Oct. 29, over a month after I had arrived in Seattle, before I saw one of these birds for the first time, and only at infrequent intervals was one seen later during the winter. It apparently is more plentiful in the mountains for while at Snoqualmie Nov. 15 birds were frequently seen in the open slashings and about the logging camps. A nest was found at Tacoma, May 31, with noisy young, that was twenty feet from the ground in a fir stub in the middle of a large open slashing.

Dryobates villosus orius. SIERRA WOODPECKER.—A Hairy Woodpecker seen at Kirkland Dec. 21 aroused my suspicions because of its unusually white underparts so it was shot and proved to be this subspecies. Being the breeding form east of the Cascades it is not surprising that an occasional bird should wander across the mountains to the coast.

Dryobates pubescens gairdneri. GAIRDNER'S WOODPECKER.—This species was quite plentiful, and frequently seen in the scattered short stretches of woods. A nest found May 17, in a wooded ravine on the campus of the University of Washington, held three slightly incubated eggs and was fifteen feet from the ground in a dead limb of a large Oregon maple. Another found May 19 at Renton held five well incubated eggs and was fifteen feet from the ground near the top of an old rotten willow stub at the edge of a stretch of underbrush bordering a stream.

Sphyrapicus ruber notkensis. NORTHERN RED-BREASTED SAP-SUCKER.—I have but two records for the occurrence of this species about Seattle, although it is said to breed sparingly. On Dec. 16, and again on April 12, an adult male was seen in the same short stretch of woods.

Phloeotomus pileatus picinus. WESTERN PILEATED WOODPECKER.-

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One bird was seen Feb. 29 in a stretch of woods near Kirkland, lustily drumming in the top of a large dead fir, and on April 17 two were seen in a wooded ravine in Washington Park well within the city limits of Seattle. There is little question in my mind that this pair nested here for later a single bird was found at this spot several times but my efforts to find the nest were unsuccessful.

Asyndesmus lewisi. LEWIS'S WOODPECKER.—This species was a fairly plentiful summer resident, and was found in open slashings and about dead trees at the edge of fields and clearings in the woods. It was first seen in the spring on May 6, and within a week was reasonably abundant.

Colaptes cafer saturatior. NORTHWESTERN FLICKER.—Resident, and plentiful throughout the year, especially in the more open country. My first nest was found May 20, and held on that date seven fresh eggs. It was twelve feet from the ground, and was a cavity twenty inches deep near the top of an old rotten alder stub near the edge of a short stretch of woods. Another found May 31 at Tacoma held but four well incubated eggs, and was thirty-five feet from the ground in a tall dead fir in a clearing in a wooded ravine. A third found June 13 at Tacoma held seven slightly incubated eggs and was twenty feet from the ground in a dead limb of a large apple tree at the side of a road.

Chordeiles virginianus hesperis. PACIFIC NIGHTHAWK.—I noted this species for the first time in the spring on June 6, a single bird being seen feeding over the business district of Seattle. Within a few days however these birds were fairly plentiful, both in the city and in the open country. A nest was found June 25 on a stretch of open prairie near Tacoma that held one slightly incubated egg, the egg merely lying on the gravelly soil in a slight depression recently rooted up by a hog.

Cypseloides niger borealis. BLACK SWIFT.—While at Kirkland June 14, I had the unexpected pleasure of seeing a flock of fully a hundred of these birds drifting by overhead in small scattered groups. They were working southeast toward the Cascades, and as it was a gloomy windy afternoon they were feeding considerably lower than I am told they are usually seen, giving me a much appreciated opportunity of seeing them at close range. Eight days later, on June 22, the weather was again gloomy and rainy, and toward the middle of the morning I saw a flock of possibly thirty of these birds circling and feeding low over a stretch of woods.

Chaetura vauxi. VAUX'S SWIFT.—A fairly plentiful summer resident, and seen first in the spring on May 10, three birds, feeding overhead. That this species is gradually adapting itself to civilization is evidenced by the fact that on June 16 two birds were seen dropping down into a large chimney on the campus of the University of Washington where they were unquestionably nesting. Actual records of breeding in other than hollow trees are very scarce, and it will be interesting to see if chimneys will in time be generally accepted as suitable nesting sites.

Selasphorus rufus. RUFOUS HUMMINGBIRD.---A plentiful summer

resident, and one of the earliest of the migrants to appear in the spring. One bird was seen March 27 at Westport, and although the weather that week was gloomy and rather cold they were found to be actually plentiful the following day in the open woods near the beach. It was March 31 before I was again in the woods about Seattle but that day I saw one of these birds at frequent intervals, and recorded them in my note book as already fairly plentiful. My first nest was found May 9 at Tacoma and held two slightly incubated eggs. It was eight feet from the ground at the outer end of a drooping limb of a large Douglas fir in a short stretch of open woods, and was compactly built of white plant down, covered on the outside with green moss and then numerous lichens. My experience with western Hummingbirds, in so far as their breeding habits are concerned, has been rather limited but I know of no other species that invariably covers its nest in this manner with fresh green moss. Four other nests were later found, and each time the moss had been used, this characteristic, together with its large size, making the nest one not easily confused with any other of this family. Each of the other nests held two slightly incubated eggs, two being at the outer end of drooping limbs of Douglas firs, one on a dead twig at the outer end of a limb of a small scrub oak on the open prairie near Tacoma, and the last but two feet from the ground in a spirea bush at the edge of a short stretch of woods. June 20 was the latest date on which a nest with eggs was found.

Tyrannus tyrannus. KINGBIRD.—This species is seemingly rather scarce as a breeding bird, and very local in its distribution during the summer months. I noted it for the first time in the spring of June 4, one bird being seen at the edge of an open field near Renton.

Nuttallornis borealis. OLIVE-SIDED FLYCATCHER.—A fairly plentiful summer resident, scattered pairs being found at the edge of slashings and in open spots in the woods. My first record for the spring migration was a bird seen May 26 at Kirkland, in the top of a large dead fir in a clearing deep in the woods.

Myiochanes richardsoni richardsoni. WESTERN WOOD PEWEE.— This species was likewise a fairly plentiful summer resident, and was seen in many of the scattered short stretches of woods. The first bird appeared in the spring on May 19, and by the 21st all were apparently back from their winter home in South America.

Empidonax difficilis difficilis. WESTERN FLYCATCHER.—A very plentiful summer resident, with an evident preference for cool moist ravines and thick woods. My first record for the spring migration was April 26, one bird being seen in an open wooded ravine. By the 30th they had become fairly plentiful and were seen daily thereafter. My earliest breeding record was a nest found May 20 with four fresh eggs, my latest a nest found June 25 with three slightly incubated eggs. At almost any time between these two dates it is possible to find fresh eggs so it is probable that two broods are raised by a few of the birds at least. Four eggs are usually laid for of ten nests personally seen seven held four eggs while

but three held three. The situation of the nest varies widely, far more so than with any other species with which I am familiar, excepting perhaps the Robin. This was rather unexpected, and decidedly interesting to me, for it was so at variance with the breeding habits of the other species in the genus Empidonax which it so closely resembles. One nest that I saw was seven feet from the ground in the hollow end of a rotten limb of a large oak, another was four feet from the ground in a bush in a thicket, a third was well concealed in the upturned roots of a recently fallen fir at the side of a stream, a fourth was placed between the trunk and a loose piece of bark on a small dead oak in a stretch of open woods, while a fifth was on a beam against the side of a partition in an old shed. Actually no two nests were situated alike, but fortunately there was little difference in their construction so there was never any question as to their identity. They were built, at times compactly but again rather loosely, of green moss intermixed with fragments of dead leaves, bits of rotten wood and shreds of bark, well cupped in the top and lined with fine grasses, gray plant fibres and, rarely, a few feathers or a few dry fir needles.

Empidonax trailli trailli. TRAILL'S FLYCATCHER.—A plentiful summer resident, but with such a decided partiality for fields or slashings overgrown with scrubby underbrush that it was rarely seen elsewhere. It was a late migrant for while the first bird was noted May 26 it was ten days later before it was finally common. It likewise nested late for it was June 22 before I found my first nest that held four fresh eggs. It was five feet from the ground in a thick bushy alder at the edge of a field overgrown with scrubby underbrush, and was well built of weed stems and grasses, lined with fine grasses and at the sides large white chicken feathers that curled well over the top. Two other nests were found in situations similar to this, and also alike in construction, even to the large chicken feathers that curled over the top, one June 23 with four fresh eggs and the other June 26 with three eggs incubated possibly two days.

Otocoris alpestris strigata. STREAKED HORNED LARK .- This species is rarely seen about Seattle and breeds only in the open prairie country south of Tacoma. Here however, it is plentiful during the summer months. and one of the characteristic birds of this part of the state. Oddly enough, considering the mild winters, these birds invariably disappear in the fall and are not seen again unti Ithe following spring. In the east the Horned Larks are unaffected by the severest winters, and regardless of deep snows and zero weather feed unconcernedly in fields exposed to the full force of the frequent blizzards, so this inconsistency is hard to understand. Feb. 8 I spent part of the day tramping over this open country about Tacoma but none of these birds was seen, and it was not until Feb. 25 that the first birds appeared, a flock of fully seventy-five being seen feeding in a recently plowed field. They apparently also breed rather late for it was not until May 29 that I found a nest that held four half incubated eggs. It was sunken flush with the ground at the base of a thick clump of grass on an open golf course, and was substantially built of fine grasses.

Cyanocitta stelleri stelleri. STELLER's JAY.-This large handsome Jay is quite plentiful here, and is a conspicuous part of the winter bird life for small noisy flocks are frequently encountered then wandering through the scattered short stretches of woods. Early in March they become quieter, gradually pair off, and by the end of the month are very largely engrossed in domestic duties. On March 19, a female, closely accompanied by the male, was seen gathering nesting material from the ground, and on being watched for a few minutes she soon revealed the nest, half built, in a small Douglas fir close by. There was one fresh egg in this nest March 31, but my curiosity seemingly proved objectionable for the nest was later found deserted. This trait of deserting a nest if it was touched before the eggs were laid is evidently not uncommon for another nest found April 18 with three fresh eggs, also in a small Douglas fir and five feet from the ground, was likewise never used. My first nest with a full set was found April 19 and held five slightly incubated eggs. It was eighteen feet from the ground at the outer end of a small bent Douglas fir overhanging a path in a wooded ravine, and was bulkily built of coarse twigs, rootlets, pieces of rotten wood and considerable mud, well cupped and lined with rootlets and fine grasses. Another. found April 22 with four well incubated eggs, was twenty-five feet from the ground in the top of a small Douglas fir deep in the woods, and like the last was rather bulky, and by no means inconspicuous.

Perisoreus obscurus obscurus. OREGON JAY.—This bird is said to be not uncommon through the mountains although while at Snoqualmie Nov. 15, I saw it but once, six being found feeding on a garbage dump at the edge of a logging camp. At Seattle it was decidedly scarce, and was seen only in a stretch of thick woods near Kirkland. Here I spent two afternoons, on April 18 and again on May 12, watching two birds as they silently fed together in the upper branches of the larger firs, but at no time did either of them give me the slightest clue as to the location of their nest. That they were nesting at the time was shown quite conclusively on June 2, when the two adult birds were seen at this spot with three fully grown young, the latter easily recognizable by their darker plumage.

Corvus brachyrhynchos hesperis. WESTERN CROW.—Plentiful throughout the year although more in evidence during the winter months when flocks of twenty to thirty birds were frequently seen. Unlike the Crow in the east they apparently had no fear of man and were frequently found feeding on lawns or in vacant lots well within the city limits of Seattle with no concern whatsoever over the people walking by. My first nest was found April 25 at Renton and held four slightly incubated eggs. It was twenty feet from the ground in a crotch of a partially dead willow in underbrush bordering a small stream, and was compactly built of coarse twigs, grasses, strips of bark and mud, well cupped and lined with fine strips and shreds of cedar bark, cow hair, horse hair and pig bristles. Two other nests were found April 27 in short stretches of open fir woods on the University of Washington campus, both twenty-five

feet from the ground in the top of one of the smaller trees, and differing little in construction from the first nest. One held five fresh eggs, and the other four.

Agelaius phoeniceus caurinus. Northwestern Red-wing.-This species was seen wherever there were any stretches of reeds or cat-tails, and as these fringed the shore of Lake Washington in many places the birds were as a result quite plentiful. Large flocks were seen during the fall, often feeding at the edge of open fields, but they gradually disappeared during the latter part of November and only a few small scattered flocks wintered. May 8 I spent part of the morning in the large swamp south of Tacoma and here I found these birds breeding abundantly. Within an hour I had glanced into nineteen nests, five of which were but half built, while ten held eggs, three held young, and from one the young had already flown, showing a surprising irregularity in the date that individual pairs nested. All were two feet above the water, in clumps of reeds or thick marsh grass well out from the shore, and were compactly built of reed stems, matted fragments of reeds and mud, rarely bits of paper and in one nest dead willow leaves, lined well with fine grasses. On June 13, a small colony of these birds was found breeding in a field overgrown with scrubby underbrush and two nests were seen, one with two fresh eggs and the other with three well incubated, both three feet from the ground in small bushy alders, and built of weed stems, grasses and mud, lined with fine grasses.

Sturnella neglecta. WESTERN MEADOWLARK.—Resident, and plentiful, occurring wherever open fields were found. Many breed in the open prairie country south of Tacoma and here they are said to be consistently robbed by Crows which carefully search the grass for their nests throughout the spring and early summer.

Euphagus cyanocephalus. BREWER'S BLACKBIRD.—This species is resident here but in my experience not very plentiful at any time during the year. Small flocks were seen at intervals during the winter, and on May 15 a small colony of possibly eight or ten pairs was found breeding on a brush covered hillside near Tacoma.

Hesperiphona vespertina montana. WESTERN EVENING GROSBEAK. —I found this species a plentiful winter resident, arriving early in October and lingering until late in the spring. Five birds were seen Oct. 2, feeding in the upper branches of a dogwood sapling at the side of a road, and within a month small flocks were found in many of the short stretches of woods. Usually eight or ten birds were seen together, although large flocks were not uncommon. Jan. 10 fully fifty birds were noted feeding on the ground beneath several bushes at the edge of an open field. They evidently breed late for they were still fairly plentiful at Tacoma June 13, and were as yet in small flocks.

Carpodacus purpureus californicus. CALIFORNIA PURPLE FINCH.— Resident, but a little scarce during the winter, being seen then at infrequent intervals. Small flocks were especially numerous the latter part of October, one in which there were possibly thirty birds being found, on the 24th, feeding on the seeds of a large Oregon maple at the side of a road. A nest found near Tacoma on May 31 held five slightly incubated eggs, and was fifty feet from the ground and twenty feet out at the outer end of a limb of a large Douglas fir at the edge of an open slashing. It was small but compact, and was built of twigs, rootlets and usnea moss, slightly lined with gray plant fibres and a few fine grasses.

Lozia curvirostra minor. CROSSBILL.—It was not until Dec. 26 that this species was noted for the first time a flock of fifteen birds being seen flying noisily by overhead. Almost at once, however, it was quite plentiful, and remained so until late in the spring. Invariably small flocks were encountered that were restless and noisy, and seldom remained in one spot long. It would be interesting to know when and where this species breeds for a flock was seen June 23, in which there were fully sixty birds, and at this late date they might reasonably be expected to be at least considering domestic duties.

Astragalinus tristis salicamans. WILLOW GOLDFINCH .--- This species was quite plentiful during the fall, flocks of from ten to fifty birds being seen in the open country about Seattle, feeding on weed seeds in fields or slashings. Early in November these flocks gradually disappeared and only at long intervals during the winter was an occasional bird seen. By the middle of March however they had become fairly plentiful again, and remained so throughout the spring and early summer. Considering the late date at which the Goldfinch breeds in the east, the latter part of July and the first of August, I felt that these birds nested early for on June 18 I found my first nest, with five slightly incubated eggs, and, within the next week, four other nests with eggs. They were, without exception, within six or eight feet of the ground in the top of bushes in fields overgrown with scrubby underbrush, and were compactly built of grasses, gray plant fibres, shreds of bark, fine rootlets and plant down, deeply cupped and lined with down. Five eggs is evidently the number usually laid for but one nest, the last found on June 26, held six.

Spinus pinus. PINE SISKIN.—I was told that this species varies in abundance year by year, being scarce at times and again quite plentiful, so I was probably fortunate in finding it very plentiful. Large flocks were seen during the winter, and as they were restless then, and noisy, they were much in evidence. My first nest was found at Kirkland May 12, and held four half incubated eggs. It was twelve feet from the ground at the outer end of a drooping limb of a large Douglas fir in a grove of firs at the side of a road, and in appearance reminded me very much of a Chipping Sparrow's nest, being small and compactly built of twigs, rootlets, weed stems and grasses, well lined with horse hair. Seemingly there is considerable variation in nests of this species for another found May 14 resembled an Audubon Warbler's found earlier in the month as it was much larger and more deeply cupped, and was compactly built of twigs, rootlets, pieces of white string, a few grasses and downy spiders' egg cases, Vol. XLVI 1929 BURLEIGH, Birds of Northwestern Washington.

well lined with rope fibre and then horse hair and a few feathers. It held four fresh eggs, and was fifteen feet from the ground at the outer end of a limb of a Douglas fir at the edge of a cemetery. A third nest found May 17 held four fresh eggs, and was twenty feet from the ground at the outer end of an upper limb of a Douglas fir at the edge of a short stretch of woods and facing an open field. It too was large and deeply cupped, and was compactly built of twigs, rootlets, weed stems, green moss and a few grasses, lined with fine rootlets, large white chicken feathers and one horse hair.

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(To be concluded.)