NOTES ON BIRDS OF THE DELTA REGION OF THE PEACE AND ATHABASCA RIVERS.

BY CLARENCE S. JUNG.

In the northeast corner of the Province of Alberta, Canada is the unique geographical phenomenon of two great rivers joining to form a delta of such magnitude as is found as a rule, only when rivers empty into the sea. The Athabasca and Peace Rivers have deposited vast quantities of alluvium at their joining point, and have filled in the west end of Lake Athabasca until its shoreline has been pushed about sixty miles east of its ancient margin. This filled-in country is a vast network of channels, sloughs, shallow lakes, and muskeg or swamp. The largest body of water in the delta is known as Lake Claire. It is about 35 miles long and 30 miles wide, and so shallow that an outboard motor can be used only in the deeper portions of the lake. Beside being fed by the Athabasca and Peace Rivers a third stream of some magnitude, the Birch River, enters into the lake from the southwest.

Along the rivers and watercourses are to be found dense growths of Balsam Poplar (*Populus balsamifera*) and Black Spruce (*Picea mariana*) back of which vast marsh meadows spread out mile after mile. There is no high land to be found except the occasional outcroppings of granite toward the east portion of the area. In fact in traversing the country in June, it is sometimes difficult to find a place sufficiently dry for a comfortable camp.

The country is quite wild, being used only for trapping and hunting grounds in winter, by the Indians and few Whites who live in the region. A vast wild-life refuge is being established here by the Canadian Government which, with an eye to the future development of its northern empire, has set aside over 17,000 square miles for the perpetuation of its animal and bird life.

Here the only remaining herds of wild buffalo on the continent are to be found. In the spring and fall the Geese that nest in the country bordering the Arctic Ocean stop in this district in countless numbers to feed and fatten before their long flights. Even in the absence of these birds in June, evidence of their abundance was to be noted in the places where they had preened themselves. One could often find locations in meadows and along the river banks where, under the grass, there was a matting of the sloughed feathers of Ducks, Geese, and Swans.

It was to this region that the writer and Mr. Jos. Simons of Chicago went to spend the month of June, 1928, with the objective of procuring some motion pictures of the bird life for the Milwaukee Public Museum. Leaving Edmonton June 5, we reached the end of steel at Waterways the next day. Here several days were spent waiting for a steamer to take us north, down the Athabasca River, to the lake of that name. The final jumping-off place was the little settlement Chipewyan, from which we went west into the wet flat country, across Lake Claire and up the Birch River some twenty miles. Then retracing our route we recrossed Lake Claire, and spent five days on the Quatre Fourches Channel, one of the largest streams in the delta. A trip was taken north down the Slave River as far as Smith Rapids and Ft. Smith, famous ornithologically for the colony of White Pelicans that have nested on the inaccessible islands of the rapids since time immemorial. The return trip began June 28.

The following are notes of the avian life observed during our sojourn in the region.

Colymbus auritus. Horned Grebe.—Six males in fine breeding plumage seen June 18 in a little slough near the Quatre Fourches River.

Larus argentatus. Herring Gull.—Common throughout the region. Larus brachyrhynchus. Short-billed Gull.—Common around Fitzgerald and Ft. Smith on the Slave River. They were feeding on dead bugs and insects that gathered in the eddies of the river. Garbage thrown to them was not touched by the birds, although freely taken by Herring Gulls among them. The field mark that most easily distinguishes them from their larger cousins is the eye, which appears much darker due to the carmine eye-ring. Three males, collected June 25, are in the Milwaukee Public Museum.

Larus franklini. Franklin's Gull.—This species seemed much more common than the next and was observed on Lake Claire and the Birch River daily flying in a north-easterly direction mornings, and returning south-west evenings. Preble¹ does not include this Gull in his list of birds for the Athabasca-McKenzie Region.

¹ North American Fauna No. 27—A Biological Survey of the Athabasca-McKenzie Region by E. A. Preble.

Larus philadelphia. Bonaparte's Gull.—A few seen on Lake Athabasca.

Sterna hirundo. Common Tern.—Observed along west shore of Lake Claire.

Chlidonias nigra surinamensis. BLACK TERN.—Very common nester. Eggs heavily incubated June 15.

Anas platyrhynchos. Mallard.—Fairly common nester. Two clutches of ten and twelve eggs found June 18 were heavily incubated.

Mareca americana. BALDPATE.—Several mated pairs observed, but no nest found.

Nettion carolinense. Green-winged Teal.—Ducklings two days old and their parents were photographed on the Quatre Fourches River June 17. Several flotillas of these youngsters seen would indicate that they are the first Ducks to hatch.

Querquedula discors. Blue-winged Teal.—Less common than the preceding.

Spatula clypeata. Shoveller Duck.—Shares with Pintail the honor of being the most common Duck in the country visited.

Dafila acuta. Pintail.—These graceful birds were everywhere. Two nests with pipped eggs found in a hay meadow June 11.

Nyroca americana. Redhead.—One pair observed in a pond near the Quatre Fourches River, June 19, bowing heads and swimming around one another.

Nyroca valisineria. Canvasback.—Three nestings located. These birds are extremely wary, and when flushed, will not return to their eggs as long as the intruder is within visible distance of the nest. Birds flushed at three one afternoon had not returned at ten o'clock that evening. The eggs of two clutches were quite prominently blood smeared. This, I was told by a trapper, indicated that it was the female's first nesting, that in laying the first clutch there is some bleeding in the ova duct.

Nyroca affinis. Lesser Scaup Duck.—One small flock seen on one of the smaller lakes.

Glaucionetta clangula americana. Golden-eye.—A pair had a nest in the neighborhood of our camp and would race up and down the Quatre Fourches River several times a day. They investigated tree holes at times in the course of their daily racings.

Charitonetta albeola. BUFFLE-HEAD.—One of these would be seen flying down the river, by our camp on the Quatre Fourches. The bird would stop to examine two tree holes directly across from our site, and then pass on around a bend in the river.

Erismatura jamaicensis rubida. Ruddy Duck.—A flock of four of these diminutive ducks noted in a pond about twenty miles south of Waterways on June 7.

Anser a. albifrons. White-fronted Goose.—One flock of eight passed overhead while I was engrossed in photographing some young Canvasback Ducks June 19.

Branta c. canadensis. Canada Goose.—The one great disappointment of our visit to this region was the almost complete absence of Geese. We had been told of the myriad Geese and Wavies, grey and white that are to be found in the vast marsh meadows of the delta country, and thought that by getting into the country as soon as the ice was off the lakes, that we would be in good time to see the impressive spectacle of these birds in great numbers. Ice still covered the east end of Lake Athabasca when we reached Chipewyan, and yet we were too late to see the Geese. In our wanderings we flushed only one flock of seven of this species.

Cygnus columbianus. WhistLing Swan.—One lone bird seen on Lake Claire, June 13, and one heard late at night near our camp on the Quatre Fourches River, June 20.

Botaurus lentiginosus. BITTERN.—Fairly common on the Birch River and Lake Claire.

Ardea h. herodias. Great Blue Heron.—A single bird lit in a tree a few hundred yards down the river from our camp on the Quatre Fourches. We were told that the birds breed along the south shore of Lake Athabasca.

Porzana carolina. Sora Rail.—Common throughout the region.

Fulica americana. Coor.—Common breeder.

Steganopus tricolor. Wilson's Phalarope.—One male collected on the east shore of Lake Claire June 11.

Gallinago delicata. Wilson's Snipe.—Where ever we went, the aerial gyrations of the 'Jacks' were evening entertainment for us. As many as eight were observed at one time flying over a hay meadow, producing their weird feather whistling. Three young about forty-eight hours old were banded June 18.

Crocethia alba. Sanderling.—One patrolled about a half mile of the shore at Chipewyan.

Totanus flavipes. Yellow-legs.—Common breeder. A pair of these birds made great efforts to draw me from a spot where I was making movies of them. Upon very careful scrutiny of the surrounding bit of swamp, I discovered their fretfulness due apparently to the presence of three young Wilson's Snipe, for when the little ones were found, the Yellow-legs made a great to do of me, while the parent Snipe skulked around in the grass affecting a broken wing.

Actitis macularia. Spotted Sandpiper.—Very common along all water courses.

Squatarola squatarola. BLACK-BELLIED PLOVER.—Six in rather ragged plumage seen sitting on a log near the mouth of the Birch River June 13. They were probably immature non-breeders.

Oxyechus vociferus. Killdeer.—Nesting with eggs heavily incubated June 20.

Arenaria interpres morinella. RUDDY TURNSTONE.—One in poor plumage was in company with Black-bellied Plover at the mouth of the Birch River.

Bonasa umbellus. Ruffed Grouse.—Not very common. We were told that in former years they were very abundant, and that the decimation of these fine birds was due to parasitic diseases.

Zenaidura macroura carolinensis. Mourning Dove.—On June 11 one was seen feeding along a path in Chipewyan. The bird was accomodating enough to remain on the pathway while I ran a mile or more to where my duffle lay, dug a gun from the bottom of the bag, and returned to the bird. Fortune favored the bird however, for as I approached it, a stray sled dog became interested in my caution, and chased the pigeon into some heavy brush. This species has never been reported from the Athabasca-region.

Circus hudsonius. Marsh Hawk.—Fairly common.

Astur a. atricapillus. Goshawk.—An individual noted skirting a meadow in which numerous nesting Ducks were found.

Buteo b. borealis. Red-tailed Hawk.—Commonest Hawk seen.

Buteo platypterus. Broadwinged Hawk.—One observed flying low along the Quatre Fourches Channel.

Archibuteo lagopus sanctijohannis. Rough-legged Hawk.—A pair of these birds in the dark phase nested in a fine stand of Black Spruce on the west bank of the Athabasca River about fifty miles north of Ft. McKay. There were two half grown young in the nest that could be seen from the ground.

Falco peregrinus anatum. Duck Hawk.—A pair nested on an inaccessible rocky ledge about five miles from our camp on the Quatre Fourches.

Cerchneis s. sparverius. Sparrow Hawk.—A lone individual was noted hunting in company with the Broadwinged Hawk. These two skimmed over the tree tops for a half a mile around our camp, the Broadwing, always a few yards in the lead. They spent the better part of an afternoon within sight, and were indeed an unusual hunting combination.

Asio flammeus. Short-eared Owl.—Quite common. Had a wing-tipped one as a camp pet for a week. A spectacular encounter between one of these Owls and a Marsh Hawk was one of the most thrilling experiences of the entire trip. The Owl pursued the Hawk, flying above the retreating bird. Hovering some ten feet above the Hawk, the Owl would suddenly swoop down in a fierce attack. In the same instant the Hawk would half turn like a tumbler pigeon, in such a manner so as to strike the Owl with its talons as that bird passed. The dexterity and maneuver of the two birds was amazing. The attack was repeated seven or eight times. It is to be supposed that the Hawk disturbed the Owl's nest and was being driven away.

Bubo virginianus subarcticus. Arctic Horned Owl.—One noted along south shore of Lake Claire harassed by Crows.

Ceryle a. alcyon. Belted Kingfisher.—Fairly common.

Dryobates v. villosus. Northern Hairy Woodpecker.—Common throughout the wooded areas.

Sphyrapicus varius. Yellow-bellied Sapsucker.—Common breeder. Colaptes auratus luteus. Flicker.—Common breeder.

Chordeiles virginianus. Nighthawk.—One observed on the Birch River June 14.

Tyrannus tyrannus. Kingbied.—Common nester. Eggs June 16. Sayornis phoebe. Phoebe.—Very common.

Empidonax trailli alnorum. ALDER FLYCATCHER.—To be seen along all the river courses.

Empidonax minimus. Least Flycatcher.—Very common nester. The chebeck call is to be heard along all the water courses in the region.

Otocoris alpestris hoyti. Hoyt's Horned Lark.—It was probably this sub-species that was seen near the railroad tracks twenty miles south of Waterways.

Perisoreus canadensis. Canada Jay.—Fairly common in the black spruce timber.

Corvus b. brachyrhynchos. Crow.—Common. An unusual note was made regarding a nest which on June 15 contained three eggs and one young bird about a week old. The next morning when the nest was visited a fourth egg had been added. There were three Crows in the neighborhood, who so far as I could tell spent most of their time bothering an Arctic Horned Owl. Possibly these three birds had a community nest. It is to be noted that while it has been reported that these birds do considerable damage to the eggs of nesting waterfowl, there was no evidence anywhere that the Crows had caused disturbance.

Molothrus a. ater. Cow Bird.—Abundant around McMurray. Called Buffalo Bird by the natives.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird.— A few noted along the delta of the Birch River on the southwest shore of Lake Claire.

Agelaius p. phoeniceus. Red-winged Blackbird.—Abundant breeder.

Euphagus carolinus. Rusty Blackbird.—Fairly common.

Quiscalus quiscula aeneus. Bronzed Grackle.—Common breeders in swamps near the Quatre Fourches River. Their nests are built in last year's cat-tails, like those of the Red-wing. One is astonished at the similarity in color and markings between the eggs of the Grackle and the Crow and the first thought entering my mind when finding the first of several nests was "pint-size Crow's eggs."

Carpodacus p. purpureus. Purple Finch.—Fairly common in wooded areas along sloughs and rivers of the delta.

Loxia curvirostra minor. AMERICAN CROSSBILL.—Observed on two occasions, a flock of eight near camp on the Quatre Fourches, June 20, and six miles north of Fitzgerald on the Slave River, June 24.

Spinus pinus. PINE SISKIN.—A flock of about 25 individuals noted in an alder thicket on southwest shore of Lake Claire, June 15.

Plectrophenax n. nivalis. Snow Bunting.—This spectacular bird

was observed on two occasions. A flock of thirty or more came down into a meadow near our camp on the Quatre Fourches, June 20, like a cloud of confetti. On the Slave River, six miles north of Fitzgerald, another small flock was seen.

Poocetes gramineus confinis. Western Vesper Sparrow.—Noted only around the settlements, especially McMurray, and Fitzgerald.

Passerculus sandwichensis alaudinus. Western Savannah Sparrow.—The most abundant Sparrow throughout the region. In the swamp meadows on the south-east shore of Lake Claire I found five nests in an area 100 yards square, and indications were that for over five square miles in the immediate vicinity, the birds must have averaged better than one nest to every hundred yard square block. On June 15, nests were found in every stage of development from those with a single egg, to some containing fledglings almost ready to fly.

Zonotrichia albicollis. White-throated Sparrow.—Common around McMurray.

Spizella passerina arizonae. Western Chipping Sparrow.—This bird is also most common around the settlements. Nests with eggs and young birds noted at Chipewyan June 22.

Spizella pailida. CLAY-COLORED SPARROW.—A small colony of these birds was located directly across the street from the row of buildings that constitute the main street of McMurray June 9.

Junco h. hyemalis. Junco.—Common on the rocky hillsides near Chipewyan.

Melospiza m. melodia. Song Sparrow.—This ubiquitous species is found wherever there is open country.

Melospiza lincolni. Lincoln's Sparrow.—Fairly common.

Melospiza georgiana. Swamp Sparrow.—To be seen scurrying among the weeds wherever one went. Common nester.

Passerella i. iliaca. Fox Sparrow.—In June, the song of this fine bird can be heard ringing all day long on the hillsides back of McMurray.

Passerina amoena. Lazuli Bunting.—At Waterways, the end of the railroad, I took a walk through the heavy timber very shortly after getting off the train. A brilliant song, like that of the, to me more familiar Indigo Bunting, drew me on into a most disheartening plague of mosquitoes. It was a reward for the nuisance however to get a momentary flash of the brilliant plumage of a fine male of this species.

Progne s. subis. PURPLE MARTIN.—Ten or a dozen of these birds were seen at McMurray on June 7. Preble reports these to be rare in the region.

Petrochelidon 1. lunifrons. CLIFF SWALLOW.—Several hundred nests were just being built under the eaves of the Hudson Bay Company's great warehouse at Waterways, on June 7 when we arrived, and the days following. Wherever the Devonian Limestone was showing along the banks of the Athabasca River, there would be seen a colony of these birds, busy with their family affairs.

Hirundo erythrogastra. Barn Swallow.—Noted especially around the settlements.

Iridoprocne bicolor. Tree Swallow.—Fairly common in the wooded parts of the region.

Riparia riparia. Bank Swallow.—Thousands seen along the banks of the Clearwater, and Athabasca Rivers.

Bombycilla cedrorum. CEDAR WAXWING.—Noted along the Birch and Quatre Fourches Rivers.

Vireosylva olivacea. Red-eyed Vireo.—Their lusty call is to be heard wherever brush and timber grow.

Vireosylva philadelphica. Philadelphia Vireo.—On June 7 the following note was made regarding this species: Warbling Vireo common in woods back of McMurray, 20–30 of these seen one of which seemed referable to Phil. Vireo. Had no gun along to collect. The eye-line quite pronounced, and underparts unusually creamy. Definition of markings gave effect of especial trimness.

Vireosylva g. gilva. WARBLING VIREO.—Very common.

Lanivireo s. solitarius. Blue-headed Vireo.—One collected on the Quatre Fourches, June 18. A habitue of the heavy timber, and as persistent a singer as the other members of his tribe, but certainly no quality to his song.

Mniotilta varia. Black and White Warbler.—Observed near Chipewyan June 19.

Vermivora celata. Orange-crowned Warbler.—Several observed along the banks of the Athabasca River June 9.

Vermivora perigrina. TENNESSEE WARBLER.—One noted in the heavy timber back of McMurray June 8.

Dendroica a. aestiva. Yellow Warbler.—Commonest of the Warblers. Nests with eggs, Lake Claire, June 15.

Dendroica virens. Black-throated Green Warbler.—Several seen at entrance of Birch River into Lake Claire.

Seiurus aurocapillus. Oven-bird.—Common throughout timbered areas.

Seiurus noveboracensis notabilis. Grinnell's Water Thrush.—Common along water courses. One collected near the entrance of the Birch River into Lake Claire, June 15.

Geothlypis trichas occidentalis. Western Yellow-throat.—Fairly common near McMurray, June 8.

Wilsonia p. pusilla. Wilson Warbler.—Two nests with eggs found in the heavy willow growth near the mouth of the Birch River, June 15.

Setophaga ruticilla. Redstart.-Very common.

Troglodytes aedon parkmani. Western House Wren.—Breeds abundantly throughout the region. Two nests with eggs seen at Mc-Murray June 7.

Telmatodytes p. palustris. Long-billed Marsh Wren.—On several occasions, when tramping through wet meadows, some of these little fellows were flushed, and would scold us from a nearby reed.

Sitta canadensis. Red-breasted Nuthatch.—A nesting pair seen at McMurray, June 8.

Penthestes atricapillus septentrionalis. Long-tailed Chickadee. —Very common.

Regulus c. calendula. Ruby-crowned Kinglet.—The strong clear song of this minimum bit of bird was indeed a pleasure to hear in the depths of the Black Spruce forest back of our camp on the Quatre Fourches River.

Hylocichla ustulata swainsoni. OLIVE-BACKED THRUSH.—The first nest I found in wandering through the woods back of McMurray was of this bird. An attempt was made to photograph this lovely bit of bird architecture, but the mosquitoes were so bad that I could not handle the camera. I was led to wonder how the naked young could withstand these terrific pests while the parent birds were away in search of food.

Planesticus m. migratorius. Robin.—The Robins in the country seemed especially plump and dark in color.

518 Stratford Ct.

Milwaukee, Wis.