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A LIST OF THE BREEDING BIRDS OF THE ATHABASCA DISTRICT, ALBERTA

By T. E. RANDALL

HAVING now completed my fourth year in this district, during which time a considerable amount of oological and ornithological work has been accomplished, I think, perhaps the time has come when the results obtained should be passed on to other bird students in the hope that they will find therein something of value and interest. While I recognize the fact that four years is too short a time in which to make a complete list of the birds of a district, yet I believe that the following is sufficiently comprehensive to form a reliable guide to any ornithologist who may visit the Athabasca district in the future.

The district covered by this article comprises the country lying east and west of the Canadian National Railway between the towns of Athabasca (Athabasca Landing, 80 miles north of Edmonton, on the older maps), at the north and Rochester at the south, within fifteen miles of the railway. This country is very diversified in character, which accounts for the large number of species of birds to be found there. Muskeg areas are very extensive in the southern part of the district and heavy stands of black spruce and tamarack occur. Lakes are numerous and usually bordered by considerable areas of grassy bog. The numerous ridges are for the most part sandy and more or less thickly clothed with stands of jack pine, white spruce, aspen poplars, white birch and willow. In the northern half of the district the areas of muskeg are smaller, large patches of alder occur and on the west side the country is intersected by numerous deep coulees which at intervals widen out into small lakes. Throughout the entire district agricultural clearings are found and in some places are of large size. Owing to the fires that annually sweep large areas of bush land, large timber is found only in small isolated patches while much of the original timberland is now covered with low brush interspersed with numerous bare, blackened tree-trunks. These burned-over areas attract a large bird population

and are favourite breeding places for Lesser Yellow-legs, Nighthawks, Alder Flycatchers, White-throated Sparrows as well as those species which make use of old woodpecker holes for nesting purposes.

In some instances the concentration of birds in such areas is extraordinary. Thus in 1931, on 320 acres I found the following nests containing eggs or young:—Cedar Waxwing, 19; Alder Flycatcher, 18; Robin, 16; Clay-colored Sparrow, 15; Least Flycatcher, 8; Redstart, 10; White-throated Sparrow, 1; Brewer's Blackbird, 5; Meadow Lark, 1; Hermit Thrush, 2; Flicker, 4; Kingbird, 5; Vesper Sparrow, 2; Red-eyed Vireo, 5; Philadelphia Vireo, 3; Yellow Warbler, 6; Maryland Yellow-throat, 4; Catbird, 1; Goldfinch, 5—a total of 130 nests which were all found after June 15th. As at that time many broods of young had left the nest and many nests escaped my notice it is quite easy to realize how dense was the bird population of these two quarter sections.

During the four years spent in the district, I have personally recorded the occurrence of 206 species of birds, of which number 142 species nest within the boundaries of the district. Further work will undoubtedly result in the addition of a number of species to this list, especially if that part of the district lying north of the Athabasca River is included. So far I have not touched this area at all.

Unless otherwise stated or inferred, occupied nests or very juvenile young have been found in all the following species. The nomenclature is that of the A.O.U. Check-list of North American Birds, Fourth edition, 1931. As series of specimens are not available for comparison and few definite racial identifications from the locality have been made, the subspecies has been disregarded and only the specific binomial given. For geographic probabilities, the only other means of identification, the reader is referred to the above Check-list or other distributional publications.

Gavia immer, COMMON LOON.—Every muskeg lake has its pair of Loons.

Colymbus grisegena, HOLBÖELL'S GREBE.—Breeds in considerable numbers on all our lakes.

Colymbus auritus, HORNED GREBE.—Common on small muskeg ponds and larger lakes alike, but nests in isolated pairs.

Colymbus nigricollis, EARED GREBE.—Small colonies are found on most of the larger lakes.

Aechmophorus occidentalis, WESTERN GREBE.—A few pairs nest on Baptiste Lake. Most of our lakes lack the reed beds that form the favourite nesting grounds of this bird.

Podilymbus podiceps, PIED-BILLED GREBE.—Not common. A few pairs nest in the rush-covered margins of our lakes.

Ardea herodias, GREAT BLUE HERON.—Three pairs nest at one place in the district.

Botaurus lentiginosus, AMERICAN BITTERN.—Fairly common throughout the whole district.

Branta canadensis, CANADA GOOSE.—A few pairs still nest near some of our more isolated lakes, also on the gravel bars of the Athabasca River.

Anas platyrhynchos, MALLARD.—Common everywhere in the district.

Chaulelasmus streperus, GADWALL.—This duck, plentiful a few years ago, is now quite rare. During the shooting season of 1931, the writer saw but two birds of this species.

Mareca americana, BALDPATE.—Fairly numerous on the larger and deeper lakes. As the nest is always under cover of bushes, they are not rifled by crows as often as are the nests of Mallard, Pintail and other species that nest in the open grass lands.

Dafila acuta, AMERICAN PINTAIL.—Fairly common throughout the district.

Nettion carolinense, GREEN-WINGED TEAL.—Another once plentiful duck that is disappearing at an alarming rate. In 1931 the writer failed to discover a single nest or bird.

Querquedula discors, BLUE-WINGED TEAL.—Unlike the last-named, the Blue-wing appears to be increasing in numbers. Certainly in 1931 they were more numerous than in any previous year in my experience.

Spatula clypeata, SHOVELLER.—Another duck that was unusually numerous in 1931. Breeds in fair numbers on all the lake marshes.

Nyroca americana, REDHEAD.—Breeds in considerable numbers in the marshy area at the south end of Flat Lake. A few pairs are found on the other lakes of the district.

Nyroca collaris, RING-NECKED DUCK.—A duck of the muskeg ponds. The nest is invariably

placed in a clump of grass overhanging water.

Nyroca valisineria, CANVAS-BACK.—Every fair-sized lake has one or more pairs of Canvas-backs. They nest early and have all gone south by the beginning of September.

Nyroca affinis, LESSER SCAUP.—Abundant wherever lakes are bordered by rough grass-land.

Glaucionetta clangula, AMERICAN GOLDENEYE.—Common throughout the district, nesting in hollow stumps or old woodpecker holes, often a mile from water. A nest found by me contained 23 eggs.

Charitonetta albeola, BUFFLEHEAD.—Quite common. The nest in a hollow tree is never very far from water.

Melanitta deglandi, WHITE-WINGED SCOTER.—Common. The eggs are laid about the end of June. The nest is often at a considerable distance from water.

Erismatura jamaicensis, RUDDY DUCK.—Common on all lakes that are bordered by a thick growth of tules or reeds. Another late breeder.

Astur atricapillus, AMERICAN GOSHAWK.—Fairly common. The only hawk that spends the entire year with us.

Accipiter velox, SHARP-SHINNED HAWK.—Not plentiful but evenly distributed over the district.

Buteo borealis, RED-TAILED HAWK.—Common in all parts of the district.

Buteo platypterus, BROAD-WINGED HAWK.—Only a few pairs of Broad-wings use our woods for nesting. We lack the groves of large aspen poplar that form their favorite nesting grounds.

Circus hudsonius, MARSH HAWK.—Fairly common. Although the adults do little harm, the immature birds prey largely upon the young of ducks and Black Tern late in the summer.

Pandion haliaëtus, OSPREY.—Occasionally seen during the spring and summer. A pair used to nest at Baptiste Lake and it is likely that one or two pairs nest near the more isolated lakes in the western part of the district.

Falco peregrinus, PEREGRINE FALCON.—One or two pairs nest on the steep banks along the Athabasca River.

Falco sparverius, AMERICAN SPARROW HAWK.—Common throughout the district, nesting in old woodpecker holes.

Canachites canadensis, SPRUCE GROUSE.—Fairly common in the muskeg areas.

Bonasa umbellus, RUFFED GROUSE.—At the time of writing (April, 1932), our three grouse are probably at their peak of abundance. The present species is plentiful everywhere and one may encounter from eighty to one hundred birds

in a day's walk through the woods.

Pedioecetes phasianellus, SHARP-TAILED GROUSE.—Abundant throughout the district.

Perdix perdix, EUROPEAN PARTRIDGE.—This imported species has spread rapidly throughout the district and is a very welcome addition to the ranks of our game birds.

Grus canadensis, SANDHILL CRANE.—I have discovered the nesting place of only one pair of Cranes in this district. It is in the midst of a very large muskeg area.

Porzana carolina, SORA RAIL.—Abundant and breeding on any small or large marshy area.

Coturnicops noveboracensis, YELLOW RAIL.—I have flushed the Yellow Rail from tough patches of grassy muskeg on two occasions. As this was in the first half of June it is practically certain that they were nesting.

Fulica americana, AMERICANA COOT.—Abundant on all the larger lakes.

Oxyechus vociferus, KILLDEER PLOVER.—Abundant everywhere. Scarcely a farm in the district that does not provide a nesting place for at least one pair.

Capella delicata, WILSON'S SNIPE.—Plentiful on all the muskegs and lake marshes.

Bartramia longicauda, UPLAND PLOVER.—Probably not more than half a dozen pair nest in the whole district.

Actitis macularia, SPOTTED SANDPIPER.—Plentiful on lake and river alike. In 1930 I flushed a bird of this species from a Bronzed Grackle's nest eighteen feet from the ground in the top of a poplar stump. The nest contained four eggs.

Tringa solitaria, SOLITARY SANDPIPER.—This interesting Sandpiper is by no means common in this district. However a few pairs are always to be found in the muskegs, always nesting near the edge of a small pond.

Totanus melanoleucus, GREATER YELLOW-LEGS.—Not common but nests on all the larger areas of muskeg in the district. All nests found by me have been on a hummock of moss in the muskeg, whereas the next species nests almost invariably upon the dry ridges.

Totanus flavipes, LESSER YELLOW-LEGS.—Common throughout the district. Like the preceding species it often lays eggs during the last few days of April.

Limnodromus griseus, DOWITCHER.—I know of several places in the district where the species nests. Two or three nests will often be found within an area of a few square yards.

Steganopus tricolor, WILSON'S PHALAROPE.—Common and breeding in small colonies wherever lake marshes occur.

Larus philadelphia, BONAPARTE'S GULL.—One or two pairs of this gull are to be found on almost every muskeg pond and lake. The nest of lichens is placed on a branch of a spruce or tamarack usually within a few yards of water but sometimes as much as a mile from the lake. Although Herring, Ring-billed and Franklin's Gulls and Common Tern are present during the whole spring and summer, I have not yet discovered a breeding place of either species. I think however that there are lakes a few miles north where they nest.

Chlidonias nigra, BLACK TERN.—Abundant everywhere and breeding wherever found.

Coccyzus erythrophthalmus, BLACK-BILLED CUCKOO.—In July, 1931, the writer observed a bird of this species flying through the town of Athabasca and, after a short search, discovered the nest containing young birds in some bushes on the outskirts. Thus the known breeding range of the species in Alberta has been extended northwest about 250 miles.

Bubo virginianus, GREAT HORNED OWL.—Our commonest owl, breeding in all parts of the district.

Surnia ulula, AMERICAN HAWK OWL.—Not plentiful. A few pairs breed in suitable places.

Scotiaptex nebulosa, GREAT GRAY OWL.—Scarce, but a few breed here.

Asio wilsonianus, LONG-EARED OWL.—Quite rare, but a few pairs nest in the southern part of the district.

Asio flammeus, SHORT-EARED OWL.—Much more common than the preceding species.

Cryptoglaux funerea, RICHARDSON'S OWL.—Another rare owl that nests in the district.

Cryptoglaux acadica, SAW-WHET OWL.—Rather more plentiful than the two preceding species but not common.

Chordeiles minor, NIGHTHAWK.—Common, nesting in numbers in the burned-over areas.

Archilochus colubris, RUBY-THROATED HUMMINGBIRD.—Each year I encounter a number of Hummingbirds, sometimes deep in the poplar bush, more often in the flower gardens of farmers. I have not so far discovered a nest but there is no doubt about their nesting here.

Megaceryle alcyon, BELTED KINGFISHER.—Not numerous, but found nesting along the rivers and creeks.

Colaptes auratus, YELLOW-SHAFTED FLICKER.—Common and nesting everywhere throughout the district.

Ceophloeus pileatus, PILEATED WOODPECKER.—This large woodpecker is still fairly common in this district but frequent fires and advancing settlement are rapidly depriving it of suitable

nesting trees.

Sphyrapicus varius, YELLOW-BELLIED SAP-SUCKER.—Common and breeding throughout the district.

Dryobates villosus, HAIRY WOODPECKER.—Common everywhere and resident throughout the year.

Dryobates pubescens, DOWNY WOODPECKER.—Not as plentiful as the preceding species and is partially migratory, since it is less plentiful in winter than in the breeding season.

Picoides arcticus, ARCTIC THREE-TOED WOODPECKER.—Fairly common in the muskegs and coniferous woods.

Picoides tridactylus, AMERICAN THREE-TOED WOODPECKER.—Rather more plentiful than the last named.

Tyrannus tyrannus, EASTERN KINGBIRD.—Common. In this district the nest is almost invariably placed on a stump, usually about five feet from the ground.

Sayornis phoebe, EASTERN PHOEBE.—Common and nesting in suitable places throughout the district.

Sayornis saya, SAY'S PHOEBE.—A few pairs remain with us to nest. An old, isolated building is the usual nesting place.

Empidonax flaviventris, YELLOW-BELLIED FLYCATCHER.—Our rarest flycatcher. Breeding pairs are few and far between.

Empidonax traillii, TRAILL'S FLYCATCHER.—Plentiful wherever areas of short willow brush are found. Does not nest until July.

Empidonax minimus, LEA'S FLYCATCHER.—Very common.

Myiochanes richardsoni, WESTERN WOOD PEWEE.—Common and breeding wherever found.

Nuttallornis mesoleucus, OLIVE-SIDED FLYCATCHER.—Common. Wherever a clump of large spruce grows, there will a pair of Olive-sided Flycatchers be found.

Otocoris alpestris, HORNED LARK.—So far no Horned Larks have been found nesting but the species is a common migrant.

Iridoprocne bicolor, TREE SWALLOW.—Common and usually associated with the Purple Martin but usually occupying lower holes in the dead stubs.

Riparia riparia, BANK SWALLOW.—One or two small colonies of Sand Martins nest in the district.

Petrochelidon albifrons, CLIFF SWALLOW.—A few small colonies are located within the district, the nests in each case being built under the eaves of farm buildings.

Progne subis, PURPLE MARTIN.—Fairly common in the burned-over areas, where the bare poles

afford them nesting sites. The nest is always high up.

Perisoreus canadensis, CANADA JAY.—Common, especially in the muskeg regions.

Cyanocitta cristata, BLUE JAY.—Fairly numerous in the vicinity of small towns but not often seen in the remoter parts of the district.

Pica pica, AMERICAN MAGPIE.—A bird that comes to us from the south to spend the winter. Only one or two pairs remain here to breed.

Corvus brachyrhynchos, AMERICAN CROW.—Only too common everywhere.

Penthestes atricapillus, BLACK-CAPPED CHICKADEE.—Abundant in many places. The nest is almost invariably in a hole in a dead birch tree.

Penthestes hudsonicus, BROWN-HEADED CHICKADEE.—Quite common on the muskegs and spruce woods. The nest is almost invariably in a hollow spruce stump.

Sitta canadensis, RED-BREASTED NUTHATCH.—Fairly common. A nest found in 1931 was forty-five feet from the ground in a live poplar.

Troglodytes aedon, HOUSE WREN.—Quite common. Usually nesting in hollow stumps in the woods, sometimes in farm buildings.

Nannus hiemalis, WINTER WREN.—On May 12th, 1932, I found a Winter Wren in a grove of spruce on the edge of a large muskeg. This bird was seen and heard at various times throughout the summer. Another bird was found on the edge of a muskeg about three miles from the first. Although in each case I failed to discover a female or nest, it is most probable that the birds were nesting.

Telmatodytes palustris, LONG-BILLED MARSH WREN.—Not common. A few pairs nest in the tules around the edges of the larger lakes.

Dumetella carolinensis, CATBIRD.—In 1931, I found a nest containing young in the northern part of the district.

Turdus migratorius, AMERICAN ROBIN.—Abundant everywhere.

Hylocichla guttata, HERMIT THRUSH.—Rather more plentiful than the Olive-backed. A bird of the high, dry woods.

Hylocichla ustulata, OLIVE-BACKED THRUSH.—A fairly common species in the muskeg areas.

Sialia corrucoides, MOUNTAIN BLUEBIRD.—Found in fair numbers throughout the district in both muskeg and dry woods.

Corthylio calendula, RUBY-CROWNED KINGLET.—Common in the muskegs. Its beautifully constructed nest is not easy to find as it is usually well hidden amid the lichen-coated spruce boughs.

Anthus spraguei, SPRAGUE'S PIPIT.—A few pairs nest on open, grassy areas of muskeg in the northern part of the district.

Bombycilla garrula, BOHEMIAN WAXWING.—This elusive bird nests in the district every year but always in a different spot. Usually several pairs nest in the same small patch of muskeg.

Bombycilla cedrorum, CEDAR WAXWING.—One of our commonest birds. Nesting in July, they often colonize to such an extent that from twelve to twenty nests may be found on a quarter section.

Vireo solitarius, SOLITARY VIREO.—Like the Warbling Vireo this species is quite rare in this district.

Vireo olivaceus, RED-EYED VIREO.—Common in the birch woods throughout the district.

Vireo philadelphicus, PHILADELPHIA VIREO.—Fairly numerous. All the nests discovered by me have been in fairly tall alder trees, about eighteen feet from the ground.

Vireo gilvus, WARBLING VIREO.—A few pairs nest in the southern part of the district.

Mniotilta varia, BLACK AND WHITE WARBLER.—Fairly common in the wetter parts of the bush.

Vermivora peregrina, TENNESSEE WARBLER.—Quite common throughout the district, except in the muskegs.

Vermivora celata, ORANGE-CROWNED WARBLER.—Like the Black and White Warbler, this bird prefers the damp places.

Dendroica aestiva, YELLOW WARBLER.—Common everywhere.

Dendroica coronata, MYRTLE WARBLER.—Common. A warbler of the muskeg areas.

Dendroica striata, BLACK-POLL WARBLER.—Several pairs of this species were observed throughout the breeding season of 1932 and a male was collected on June 25th. I failed to find a nest but on July 15th young birds were seen still taking food from the parents.

Dendroica pinus, PINE WARBLER.—In 1928, I found several pairs of this warbler near the eastern part of the district. They were found in isolated clumps of large spruce and were undoubtedly nesting. Dr. Oberholser, who was staying with me for a few days, confirmed my identification of the birds.

Dendroica palmarum, PALM WARBLER.—Not common, but nesting pairs may be encountered at widely separated points in the muskegs.

Seiurus aurocapillus, OVENBIRD.—A few pairs nest in the poplar woods in the southern part of the district.

Seiurus noveboracensis, NORTHERN WATER-THRUSH.—In May, a large number of Water-thrushes migrate through the district, and a few remain to nest.

Oporornis agilis, CONNECTICUT WARBLER.—I know of half a dozen places in the district where this rare warbler may be found in the nesting season.

Oporornis philadelphia, MOURNING WARBLER.—Fairly common in poplar woods where the undergrowth and wind-falls are densest.

Geothlypis trichas, YELLOW-THROAT.—Quite common throughout the district.

Setophaga ruticilla, AMERICAN REDSTART.—Common, nesting in the willow thickets throughout the district.

Passer domesticus, ENGLISH SPARROW.—Common in town and country alike.

Sturnella neglecta, WESTERN MEADOWLARK.—A bird that is extending its range as the land comes under cultivation. Fairly common.

Xanthocephalus xanthocephalus, YELLOW-HEADED BLACKBIRD.—A few pairs nest on the lakes having beds of reeds.

Agelaius phoeniceus, RED-WINGED BLACKBIRD.—Common on almost every lake and tule-fringed pond.

Icterus galbula, BALTIMORE ORIOLE.—Athabasca must be near the northern limit of range of this species. A few pairs are found scattered throughout the district.

Euphagus carolinus, RUSTY BLACKBIRD.—Common, breeding in colonies on the muskeg.

Euphagus cyanocephalus, BREWER'S BLACKBIRD.—Common, nesting almost invariably on the ground.

Quiscalus quiscula, BRONZED GRACKLE.—Not as common as the two preceding species. Usually found nesting in the tules in company with Redwings whose nests it systematically robs of eggs.

Molothrus ater, COWBIRD.—Common everywhere.

Piranga ludoviciana, WESTERN TANAGER.—Quite common. Usually found associated with the Olive-sided Flycatcher.

Hedymeles ludovicianus, ROSE-BREASTED GROSBEAK.—Fairly common. A bird of the birch woods.

Hesperiphona vespertina, EVENING GROSBEAK.—Fairly common in winter and a few pairs remain with us in spring, undoubtedly to breed.

Carpodacus purpureus, PURPLE FINCH.—Common. Nest usually placed in extreme tip of spruce tree.

Acanthis linaria, COMMON REDPOLL.—A few pairs of Redpolls undoubtedly nest in the district. In 1931 a farmer, living near Baptiste Lake, accurately described a pair that had a nest in a willow bush on his farm.

Spinus tristis, AMERICAN GOLDFINCH.—Common.

Nests in July, invariably placing its nest in the fork of an alder stem.

Passerculus sandwichensis, SAVANNA SPARROW.—Not plentiful, but present on all fairly large expanses of grass-land.

Passerherbulus caudacutus, LECONTE'S SPARROW.—Plentiful alike in muskeg and lake marsh.

Poocetes gramineus, VESPER SPARROW.—Common. Prefers the road-sides for nesting.

Junco hyemalis, SLATE-COLORED JUNCO.—Very common. Nests in the muskegs or on the higher land alike.

Spizella passerina, CHIPPING SPARROW.—Common in all muskeg areas.

Spizella pallida, CLAY-COLORED SPARROW.—Plentiful throughout the district.

Zonotrichia albicollis, WHITE-THROATED SPAR-

row.—Very common. Nests in all parts of the district.

Passerella iliaca, FOX SPARROW.—A few pairs nest in suitable spots throughout the district. I have found young birds on two occasions.

Melospiza lincolni, LINCOLN'S SPARROW.—Plentiful in the muskeg areas.

Melospiza georgiana, SWAMP SPARROW.—A sparrow of the swampy, grassy coulees. The nest is always raised from the ground, sometimes as much as two feet.

Melospiza melodia, SONG SPARROW.—Very common. While the nest is usually placed on the ground, another favourite site is the branches of a fallen spruce.

* This list was written in April, 1932 since when two species, Winter Wren and Black-poll Warbler have been added.

A STUDY OF THE HOME LIFE OF THE NORTHERN YELLOW-THROAT (*Geothlypis trichas brachidactyla*)¹

By HENRY MOUSLEY

IN THIS, my eighteenth intensive study of the home life of birds—principally Warblers—I feel somewhat like the man accused of murder in the second degree, for I could very easily have prevented the happenings—presently to be related—had I been so minded, instead of allowing nature to take its own course, perhaps, after all, the wisest thing to do, as a rule, instead of meddling in affairs, the ultimate results of which in most cases we can neither foresee, nor correctly estimate.

Some insight to the foregoing remarks may be gathered from Volume II, page 422, of the *Birds of Massachusetts*, by the late E. H. Forbush, wherein he says, "The saddest part of the life history of the Cowbird is that the introduction of its egg or eggs into the nests of smaller birds usually dooms the eggs or young of their foster-parents", as was the case in the present study, for the nest of the Northern Yellow-throat—a very common host—contained a Cowbird's egg, which I, knowing full well the probable consequences, yet allowed to hatch out, in the hope of obtaining a series of pictures representing the daily development of a young Cowbird (*Molothrus ater ater*) which I was most anxious to secure—to augment those already figured in Friedman's splendid *Monograph of the Cowbird*,² as well as to make a study of the home life of the host, the Northern Yellow-throat (*Geothlypis trichas brachidactyla*) to compare with

that made by Miss Shaver at Lake Okobogi, Iowa, in 1917.³

The present nest was found near Snowden, a suburb of Montreal, on June 11th of the past year (1931), and at that date contained two eggs of the owner and one of the Cowbird, apparently about 3 or 4 days incubated, the flushing of the sitting female leading to its discovery. It was situated at the foot of two small willow bushes near the outskirts of a large cat-tail bed, being well concealed amongst the rank herbage, the foundation being composed of dried leaves, coarse shreds of cat-tail and grass stems, while the lining consisted of fine grasses only. The dimensions were as follows, viz.: Outside diameter $3\frac{1}{4}$ ", inside $1\frac{3}{4}$ ", outside depth $3\frac{1}{4}$ ", inside $1\frac{1}{2}$ ". It was not until early on the 19th that the Cowbird's egg hatched out, together with one of the owner's, the other later on proving to be infertile. Pictures of very young birds are usually disappointing and not very pleasant to look at, but I took a few on this date, not repeating the procedure again until the 22nd, after which they were taken regularly each day until the 28th, the date upon which the young Cowbird left the nest, it being then nine days old.

On arrival at the site at 9 a.m. on the 19th, the female was brooding, but slipped off mouse-like from the nest when preparations were commenced for photographing the young, both of which were blind and nearly naked, except for a tuft of mouse-

¹ Read before the Province of Quebec Society for the Protection of Birds, Montreal, October 19, 1931 (illustrated.)

² Friedman, Herbert, 1929. The Cowbirds, a Study in the Biology of Social Parasitism.

³ Shaver, Nelle E. A Nest Study of the Maryland Yellow-throat, University of Iowa Studies, 1st series No. 23, Dec. 1918.



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