

# Toronto Field Naturalists' Club

May Meeting  
Monday, May 2, 1960, at 8.15 p.m.  
at the  
ROYAL ONTARIO MUSEUM

PROGRAMME: As a change from our usual custom, we are holding our annual Members' Night at our closing meeting for the season. Speakers will be as follows:

1. Miss Ethel Bunker, assisted by Mr. Alf. Bunker.  
Title - ELVIS OF HAPPY NOOK (illustrated).
2. Two guest speakers from our Junior Club:  
(a) Mary Lynn Farrell.  
Title - DIFFERENT WAYS THAT MAMMALS TRAVEL.  
(b) Janet Miles.  
Title - SPRING WILDFLOWERS (illustrated).
3. Miss Mary L. Williams, Librarian, Beaches Branch,  
Toronto Public Libraries.  
Title - NATURAL HISTORY BOOKS FOR PLEASANT READING.  
Miss Williams has kindly prepared an excellent book list which will be distributed to all attending the meeting.
4. Mr. G. Marshall Bartman, of the Botany Group.  
Title - ORCHIDS OF ONTARIO (illustrated).

This will also be our annual business meeting.

OUTINGS: Please consult your Spring Outings folder.

JUNIOR CLUB: A special invitation is extended to members of the T.F.N. to visit with the Juniors on Saturday, May 7th, at 10 a.m., in the Museum Theatre. Two outstanding films will be shown--"Journey Into Spring" and "Between the Tides", both the work of Mr. Paddy Carey.

SCREEN TOUR: The final lecture in this year's Audubon Screen Tours will be given at Eaton Auditorium at 8.15 p.m. on April 27th and 28th. "Designs for Survival" reveals the wisdom of Nature in equipping animals to survive in their particular environments. Tickets \$1.25.

F.O.N. CAMP: Mrs. Stewart's informative talk at our March meeting aroused great interest in attending this year's F.O.N. Camp at Billie Bear Lodge, Huntsville, from July 2nd to 16th. If you are considering enrolling for this ideal naturalist's holiday, please do not delay, as last year some late applicants had to be disappointed as the Camp was full. Applications or inquiries should be addressed to Mrs. J. B. Stewart, 21 Millwood Rd., HU 9-5052.

BIRD CHECKING LISTS: This is your last chance to obtain a supply of check lists for your spring and summer birding. Price 5¢ each, at the secretary's desk.

MOVING? If you change your address during the summer, please do not forget to notify the secretary.

President - Mr. A.A. Outram

Secretary - Mrs. H. Robson,  
49 Craighurst Ave.,  
HU 1-0260.



## NEWSLETTER

No. 172

April 1960

Plans for the first weekend of April called for a visit to Long Point Bay to look for swans. The date had been advanced a week after last year's fiasco with snow, with the expectation that the first days of April would assuredly find the roads clear and the bay open. Then came the longest cold spell of the winter, and a March that we will not long forget. The ice on the lakes and bays grew thicker instead of breaking up, the migration was halted completely. That is, it was until the last week of the month which turned springlike with a rush. Reports of geese and swans began to come in. By the final weekend of March swans were reported from Port Credit to Hamilton Bay, at Rondeau, and then at Presquile.. Surely they would be at Long Point. But no, the word from Port Rowan and Long Point on March 20 was "miles and miles and miles of ice," a report which was reiterated on March 27 and again on March 31. The bay was stubbornly refusing to come open, and the swans were being forced to find open water elsewhere. In these circumstances there appeared little reason for making our trip in that direction. And there was a very good reason for making it in another.

When Marshall Bartman returned from a week in Ottawa and Belleville on Wednesday (March 30) he rang up immediately to say that he had been at Presquile the day before with two members of the Belleville club, and that they had seen a great gray owl! What is more, they had discovered through inquiry that this bird had been around for six weeks at least! And no one in Toronto, or any other birders, I think, knew anything about it for if they had the news would have spread like wildfire, a fact which was amply demonstrated when I put the information on the grapevine that evening, for next day the parade began, and by the weekend was reaching field-day proportions, with birders from Brockville to Buffalo involved. One well-known ornithologist-photographer even contemplated coming from as far as Ithaca, New York, for a chance at some pictures of this extremely rare owl. Only twice in the past twenty years has it visited the Toronto region. Indeed, its appearances this far south are so sporadic and infrequent that very few of the local birders have ever seen one alive. With such a possibility in view it can be easily understood that our compass swung easily from ice-clogged Long Point Bay to Presquile.

Greer Roberts, John Nettleton and I headed eastward on April Fool's Day morning with considerable assurance of finding our bird since Dr. Donald Gunn had been down the day before and had succeeded without much difficulty in taking a series of pictures of the owl. The exact directions to the spot where the pictures were taken were in my pocket, and, since the owl had been in the area for several weeks, how could we fail? At the worst, even if we saw no owl, we learned that there were thousands of ducks in the bay and a wave of spring birds on the land, a part of the migratory horde that moved into southern Ontario on March 30th, and with these we could seek compensation. But then, we weren't going to fail.

Thickening fog patches east of Port Hope gave us some uneasy moments, I must admit, but when we emerged from one such patch to see three tree swallows flitting above a farmer's yard our hopes soared. No April's Fool joke this, tree swallows on the first of April, but a striking proof of the incoming of spring, of the migrating wave. This impression was emphatically brought home when we stopped beside a ploughed field, half-ice, half-mud, on the road out to Presquile Point. Here the redwings were swarming over the furrows, meadow larks were singing from the fence lines, grackles were creaking--even a killdeer was pattering about on a sheet of ice! Soon the air was ringing with conk-a-rees, and not all the old ice and snow in the countryside could make us think it was not spring. When we came to the big marsh the feeling of spring was reinforced a hundred fold for all through the cat-tails the redwings were busily singing their claims, totally disregarding the icy base from which their perches rose.

We drove on to the main park office and checked on the map there the directions we already had. Then on again--to where the main road divides into three, take the middle road, past all the openings, patches of wood, past Jobe's Lane, a cross-lane, until the woods end and a scrubby old orchard appears on the right beyond which you will see a patch of cedars and elms. Yes, we had it all quite correct, and had made no mistakes. How did we know? Because as the clump of cedars and elms came into view so also did a car in the road right off the end of the grove. We were preceded by others--not strange since it was now noon. Oh well, maybe they would have the owl all lined up for us. Let's go and see.

Two ladies from the Port Credit Club, Mrs. Goldhammer and Mrs. Cuthbert, were sitting in the car, and they told us that Don Perks was in the wood trying to flush the owl out so they could see it. He had been away for some time. It didn't sound too good. Nothing to do but shift to rubber boots and head in along Perks' trail. We had just made the change when Don hove into view. As soon as he got close enough to see who we were he made signs of being half done in; the going was evidently pretty rough. When he arrived he told us that originally he had gone in behind the cedar-elm grove to where the owl had been the day before only to miss it entirely until suddenly there it was face to face with him down in a hawthorn where he wasn't looking for it at all. Alarmed, it burst into the air and made off into the swampy wood beyond. Since then he'd been trudging the swamp without effect, other than fatigue. What a let-down was this. Still, we hadn't come all this way not to make an effort ourselves. So, having gained pointers from Don we headed for the swamp.

The snow was deep alright, and often under the snow our feet went down into dark icy water. The trail of other footsteps in which to walk was wholly welcome. Soon Don was back with us, and we arrived at the wood together. Here we fanned out a bit to cover more territory. By picking the thickest evergreens it was possible to get along not too badly as the snow cover was thin under them but get

away from the trees and you were floundering. At last, when I was away off to one side, I heard Don calling. I knew he had found the owl again. Getting back as best I could I arrived just at the moment when a big dark shape took flight, and was gone. I had seen a "shape"; I knew I could "count" the bird, but how unsatisfactory. The hunt was on again, now in the swamp bottom. Here, if you picked the hollows where open water lay, and it was not too deep for your rubber boots, the going was relatively easy. A second time the owl was ousted from a low thicket only to glide away in a moment. On we struggled; a new help to progress proved to be the old, tramped deer trails where these animals had been travelling about. This swamp was their winter home. If we kept to these tracks it was possible to get along without plunging through, the only trouble being that the owl didn't necessarily use the same route as the deer. Again we were all separated. I stood and looked; I searched; I went round and round, and finally I gave up; it just seemed hopeless. The decision to turn back was made, and why, at the moment I was putting this decision into effect, I looked up into a giant hemlock tree I do not know. But I did and there was the much-sought owl looking down at me.

As soon as it saw me gazing up the owl wagged its head vigorously, as if dismayed, and again took off, a gray shadow among the dark evergreens. It did not go far, however, so it was possible to guess about where it must be. Withdrawing, I got into contact with the others. Don went out to the road to get the ladies, and to bring in the balscope. While the other two were coming in from the swamp I eased over into the hemlock grove. In the tallest of the evergreens, about two-thirds of the way up, I located a gray head above a dark green mass of needles. As soon as I saw where it was I went back and waited for the others. The ladies and Don and the balscope came Indian file across the long, snowy field; we three waited in the wood. Finally we were all gathered.

Fifty or sixty feet from the hemlock Don set up his balscope. This time the owl which had led us such a chase did not move. Perhaps it felt safe in that thick mass of green. We looked and looked to our hearts' content. Sometimes the owl turned its head away, showing the beautiful gray mottling on the back, sometimes it gazed at us in mild appraisal, and then we could count all those black circles around its lemon eyes that made it look as though it had had too many long nights out. We could see the white "beard" bobbing beneath its chin. If before it had been disturbed, now it showed all the phlegmatic unwariness of man that is customary of the species, and unhappily very much to its undoing. A magnificent bird it is, both lovely to look at and dramatically large. One of the ladies wanted to see the long, loose-feathered tail, a feature that makes this owl look so different from any of its kind. We all walked up to the hemlock, gazing up from right underneath. All the owl did was turn and twist its head to see each one of us. Its curiosity was as great as ours. Then someone wanted to see it fly; but now the owl we couldn't catch up with before wouldn't move. Having decided, it seems, that we were harmless, and that its position was secure it wasn't going to change. It seemed a little too bad to make it go again but we decided to do so. And it was necessary this time to rap on the tree trunk with a stick before it would go!

When it did fly it went only a few yards to a leafless deciduous tree, there to perch in full view. What a marvelous sight now. Yes, but not only for us. Immediately, in swept a hawk, apparently a large Cooper's, which darted straight towards the owl. At once crows, which previously had paid not the slightest heed even when the owl flew, appeared as if by magic, beginning one of their usual

screaming assaults. All this was too much for the owl. It raised its great wings and took off, diving towards the inner recesses of the swamp once more with the black, shrieking mob after it. This is the first time I have ever seen a crow attack on an owl triggered by a hawk. Happily, the din soon died down; the owl, it would seem, had found another refuge, and in this we would leave it in peace.

Back across the field streamed the birdwatchers, elated now. We had found our owl, seen it to tremendous advantage, thanks to the cooperation of all concerned, and fatigue was quite forgotten. Indeed, so was lunch, and when this particular birdwatcher forgets lunch you can be sure it's a major event that's erasing the thought. But when in the life of any birder that I know is the sight of a great gray owl not a major event?

What could come after the triumphant and satisfying search for the owl could hardly be more than an anticlimax. So, in a sense, it was. Yet, what we saw during the rest of the afternoon would have made any ordinary birding day a wonderful experience in itself. We concentrated on the bay which was open to the head of the marsh. In the upper part, especially, the government dock being the center of massing, were crowded thousands of ducks. Core of the flock was some two thousand canvasbacks, with which were associated five hundred redheads and a mixture of hundreds of others, between three and four thousand in all. Contrary to the usual experience at Long Point or Niagara River these birds displayed astonishingly little fear so that it was possible to sit on the old gray benches in front of the hotel, a few yards from the water's edge, and watch the ducks only a few more yards off, as long as you wished. In the afternoon light the colors on the plumage stood out perfectly, but what was so endlessly fascinating was the ceaseless sound and activity. Every canvasback female seemed to have six males in attendance, each one vying with the other, all snapping heads, trying to ride each other under water, rushing and jabbing, and calling. What the canvasbacks were doing all the others were too. Whistles, beeps, toots, soft, mellow notes and harsh squeaks filled the air. One of the most unusual sounds was that of "clapping", and it took us some time to locate this in a bird. Then it turned out to be a part of the canvasback display, a male beating its wings so vigorously on the water as to produce this sharp, clapping effect. A little further looking showed this to be going on all over the bay. Three thousand ducks carrying on nuptial displays with the birdwatchers in an orchestra front seat, this is hardly an anti-climax, even to a great gray owl. We watched for two hours and came away feeling that this had been as fine an opening of spring trip as we had ever had. How fitting that the last sound we heard as we drove off the point was that of a myriad of redwinged blackbirds singing in the marsh, pealing out the annunciation of spring.

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Two of the recent Nature Bulletins of the Forest Preserve District of Chicago are of particular interest to the botanically-minded. They are Numbers 596 and 597 on the carnivorous plants and the blue flag and the iris family. Here they are.

#### Carnivorous Plants

Plants, generally, are eaten by insects or furnish other food for them. But there are a few families of strange plants that, instead, "eat" insects and other small animals. About 500 species are distributed over the world, from the Arctic to the tropics. Most of them have peculiar leaves that not only attract insects

but are equipped to trap and kill their victims. Even more remarkable is the fact that some have glands which secrete a digestive juice that softens and decomposes the animal until it is absorbed by the plant in much the same way as your stomach digests food.

All of the carnivorous plants are small and, although occasionally a dragonfly or a tiny frog may be trapped, the victims are usually ants, flies, gnats, beetles, larvae, worms and small crustaceans. In North America most of them grow in tamarack bogs, cranberry bogs, muskeg bogs covered with sphagnum moss, and in swampy places, where the brown water is acid and deficient in nitrogen. Their feeble roots serve to supply them with water but most of their food seems to be obtained from the animal matter they absorb.

The Bladderworts, however, are aquatic plants with long sinuous stems and masses of fernlike leaves submerged in shallow ponds and swamps. Along the stems there are numerous oval "bladders" each having a small opening, surrounded by stiff bristles, with a delicate trap door inside. If a larva, pursued by a minnow, darts into a bladder he cannot get out. His body is absorbed by a great number of digestive cells that line the cavity. Several kinds of bladderworts are known to live in ponds of the Chicago region.

The Butterworts occur on wet rocks and gravelly places. These plants have rosettes of long narrow leaves, each peppered with tiny glands--about 25,000 per square centimeter--that pour out a sticky "butter" and digestive fluid when an insect alights upon them.

In the quaking tamarack bogs of northern Illinois and northern Indiana we find a species of the Pitcher Plants. It has a clump of hollow tubular leaves that look like pitchers with flaring mouths. They have red veins and are mottled with green and brownish purple. The flowers, on stout stalks, have five sepals, five petals, and are purplish red. The pitchers are usually full of rainwater and drowned insects that were attracted to a honey-like nectar secreted by glands on the lip. The inside of the leaf is thickly lined with slick sharp spines that point downward. An insect slides down into the water and cannot escape. His decomposed remains are absorbed by cells on the pitcher wall.

The Sundews are another family of carnivorous plants that live in bogs and there are two kinds found in the Chicago region. The sundew is a small plant with a whorl of tiny round or spoon-shaped leaves on long stalks that lie flat on the soil surface. The leaves have a glistening appearance because of the hundreds of hairs on its surface, each hair ending with a gland that exudes a sticky fluid. A gnat or a fly, attracted by this "nectar" is stuck there. The more he struggles, the more fluid is secreted by the glands. At the same time--and this is what Charles Darwin considered one of the most incredible and wonderful things in the plant kingdom--all of the other hairs on the leaf bend inward and surround the insect until he is suffocated. Then a digestive juice is secreted and his remains are absorbed.

Most remarkable is the Venus' Fly Trap, a sundew of the Carolinas, whose sensitive bristled leaves close like traps to catch and "eat" insects.

#### The Blue Flag and The Iris Family

In Greek mythology, when Zeus or Hera wanted to speak to mortal men they called up lovely Iris, goddess of the rainbow, who hurried heavenward and brought

their messages back to earthlings over her bridge of color. Quite naturally, a group of plants whose large spectacularly shaped flowers run the entire gamut of colors has been named after her and her rainbow. The *fleur-de-lis*, a formal design based on the Iris blossom, is best known as the insignia of the kings of France from the 12th century down to the time of Napoleon. Our language is rich in words using the Greek name for rainbow to express color.

The Blue Flag, the only native Iris of the Chicago region, grows in circular clumps on the edges of sloughs, ponds and streams in many Cook County forest preserves. The plant appears to be pressed and flattened with two rows of slender leaves on a central flower stalk two or three feet tall. Both sides of each leaf are undersides, because it is folded length-wise with the two halves of the upper surface stuck together except at the base where they straddle the base of the leaf next above.

The large showy blue or violet flower appears in June. The three petals stand erect. The three equally colorful broad sepals droop, or "flag", making fine landing fields for honeybees, bumble bees and bee-like flies which follow bright guide lines leading to the nectar well. A special mechanism insures cross-pollination. A long petal-like branch of the pistil with a sticky flap on its tip wipes pollen from an in-coming bee's back. A little deeper into the flower, the bee brushes against an anther and gets a fresh load of pollen. As it backs out, the flap curls upward, thus protecting the Iris from its own pollen. The flower is followed by a pod which sheds D-shaped seeds covered with a corky layer that prevents rotting in water.

One other species, the Copper Iris, is found in southern Illinois but, farther south, in the lowlands of Louisiana, are a hundred native kinds. Clumps of two Old World irises, the Dwarf and the German, are sometimes found growing along roadsides in this region where they have escaped from home gardens and cemeteries. Iris fanciers cultivate over a thousand varieties and hybrids, drawn from many parts of the world, in a bewildering array of colors, sizes and fantastics shapes.

The delicate little Blue-eyed Grasses of our prairies, meadows and dry hillsides also belong to the Iris Family. Deep blue, light blue or white, their small six-pointed stars seem to arise from the edges of flattened blades of grass.

The Gladiolus (meaning Little Sword) is a member of the Iris family. Like the Iris, these are favorites of flower gardeners who grow thousands of different cultivated varieties. Either as a hobby, or as a business, the growers of Gladiolus and Iris have organized dozens of societies to promote their special interest.

Very few of the Iris family are of much economic importance. The roots of the Blue Flag are mildly poisonous to cattle and certain persons may get a skin rash from handling them. Some European irises are the source of orris root, which gives a pleasant violet odor to tooth powders, perfumes and sachets. A piece of the root, called an iris "finger", is chewed by teething babies. An early spring relative gets its name, Crocus, from the Greek word for saffron--its dried orange-colored pungent stigmas which are used to color and flavor food.

The Iris is the poor man's orchid.

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For those of the readers of the Newsletter who know the Massachusetts coast this excerpt from a recent birding letter will be of interest. It shows how different in some ways, how like in others to our own is winter birding in that region. This letter was written by Miss Virginia Albee of Cambridge, Mass., on March 6th, and comes to the Newsletter from Miss Patty M. Lainé, a member of the club.

"The winter birding has been interesting. Several Saturdays took us to Rockport, others to Newburyport and Plum Island. On one of these trips there was a couple from New Jersey, one from New Hampshire, and a 6 months' old girl and an 85 year old woman. To be sure most of our exercise is getting out and into the car, something of a feat with our bundled up figures. But only the baby and her mother stayed behind in the warmth of their car. The wind has been strong and to pick up a Barrow's Goldeneye in Gloucester Harbor is sometimes a weepy job. One mild Saturday in Rockport in February I had my first yellow-breasted chat, my first king eider, and my first pine grosbeak. A week ago my first orange-crowned warbler appeared on schedule at someone's peanut butter feeder.

"The trip I wanted to share with you was the South Shore trip at the end of January. We met the leader in Milton drove to Squantum to look for a short-eared owl, but found a meadowlark and a flock of redpolls. (Later I did see the owl there). Down to South Weymouth where a golden-crowned sparrow had been reported at someone's feeder and photographed by our leader, but that morning only pine siskins appeared. Then to Hingham where the leader knew he could find a great blue heron and some black-crowned night herons roosting.

"In Cohasset we aimed for the ocean near the Black Rock House on Jerusalem Road. In the blue, almost calm, water were scoters, a nearby loon, and on the rocks on an island offshore some purple sandpipers. On a pond nearer the center of Cohasset we found a lot of goldeneyes, a few buffleheads, a pintail duck, and of course the usual mallards and black ducks. Incidentally the Common is intact and very attractive. We stopped for lunch at the Harbor where despite the thirty degree temperature I ate my sandwich beside the water, admiring some shiny green mallards which were interested in the crusts as they moved about off and on the ice cakes at high tide.

"After lunch we followed Border Street toward North Scituate. In a new development we stopped at one house which had several feeders and where a Carolina wren had been reported, but saw only chickadees, juncos, and a white-throated sparrow. Overhead were goldfinches, and purple finches. The owners came out and chatted with the leader; they reported that their neighbors are getting interested in the feeders too.

"At North Scituate Beach the tide was still high, the light waves coming up to the seawall. We set up our scopes in front of the Cliff House and scanned. On Bar Rock there were dozens of purple sandpipers, little gray balls sunning themselves together with a few ruddy turnstones and a group of knots. In the middle was a sleeping eider. I could hardly stand it to think that all these years--so many at our summer home at North Scituate as a child--I had not known about such things. Farther out kittiwakes were flying, and near Smith Rocks (one had to use the scope to see them) were maybe fifty eiders in the water--well, it couldn't have been lovelier. I hated to leave, but the group went on, found a wintering robin, another meadowlark on our way to Scituate Harbor.

"Our next stop was Third Cliff where we looked down on an alcid. (I thought at first it was a black and white lobster pot!) The leader noticed that the bird was drifting, so we jumped into the cars again and found a breakwater wall where eventually the bird drifted by not fifty yards from us. The Pros decided it was a thick-billed murre (another one new to me), and we had excellent views of him. (I heard later that there had been several near Newburyport and that one birder had picked a murre up as it drifted by on a cake of ice).

"The sun was getting low when we stopped at a plowed field, mud alternating with weeds, and the whole field seemed to come alive as a large flock of redpolls were disturbed by us and flew into the trees at the edge where, incidentally, we could see them a lot better. Our last stop was in a salt marsh near North River where the young man stirred up a wintering seaside sparrow--it looked like a little mouse as it flew for more distant cover.

"Yes, I had difficulty keeping awake at the Boston Symphony that night. But it was a lot of fun. I must go down there some spring day before the summer people arrive."

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All birders will have encountered frequent queries or disputes over the pronunciation of certain birds' names. Because of this it seems worthwhile to give the information on four of those most frequently in question: goshawk, gyrfalcon or gerfalcon, pileated (woodpecker), prothonotary (warbler).

#### Goshawk

In both Oxford and Webster dictionaries there is only one pronunciation allowed, i.e., gos/hawk, with the accent equal on the syllables. An old form is given in Oxford, goss/hawk, which emphasizes the still proper usage. This name is derived from an Old English or Anglo-Saxon word which meant goosehawk, apparently referring to a supposed likeness between the two birds, in other words, a hawk like a goose. This probably indicates the large size of this particular Accipiter rather than any other resemblance. The scientific name of the goshawk is Accipiter gentilis.

#### Gyrfalcon

Both Oxford and Webster Dictionaries agree that the "g" is soft in this word. The preferred pronunciation is "jur-fol-kin", with the accent on the first syllable. An alternative is "jur-fo-kin" with the accent on the second syllable and with the "l" mute. The Oxford Dictionary prefers the spelling "gerfalcon", and lists the above spelling as antiquated. However, it is the one used most frequently in Canada, and will be found on the R.O.M.Z. checklist. This word comes from old French--gerfaucon--into English, though it derives originally from Germanic sources. The prefix "ger" originally meant "greedy". Why this particular falcon should be labelled greedy is puzzling. The scientific name if Falco rusticolus.

#### Pileated (woodpecker)

The Oxford Dictionary gives only the long sound for Pi, whereas Webster gives both the long and the short though it prefers the long. There is authority, therefore, for both "Pie-lee-ated," and "Pill-e-ated", with dictionary preference

going to the first. This name comes from Latin, and means "like a cap" or "capped". It refers to the bird's prominent crest. The woodpecker's scientific name is Dryocopus pileatus.

Prothonotary (warbler)

Oxford Dictionary prefers the spelling, "protonotary", and regards the above as old-fashioned, but once more the usage here favors the "th" spelling. Webster gives preference in pronunciation to "pro-thon-o-tary" with the accent on the second syllable, but it permits "pro-tho-nó-ta-ry", with the accent on the third syllable. It also gives second place to the "protonotary" spelling. Oxford Dictionary prefers the second pronunciation. This term comes from Latin, protonotaria, and refers to the chief papal notary who wears a yellow hood. This bird has a brilliant orange-yellow and silver coloring. Its scientific name is Protonotaria citrea.

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We once again have the privilege, as in several years past, of extending to the members of the T.F.N.C. the opportunity of sharing in the continental cooperative migration study which is being conducted from the Patuxent Research Refuge in Laurel, Maryland, as a center. The success of this scientific investigation depends upon the widespread cooperation of observers throughout North America. We, therefore, again print the return form and instructions for the current spring migration, and we urge all who feel able to make their observations available to send in the filled return to the research center.

Cooperative Migration Study - Spring 1960

Thank you for your migration reports of past season. The present list contains the same species as in the spring of 1959. We do not expect anyone to provide arrival and departure dates for all species on the list. Dates and counts (or careful numerical estimates) for even one species will be appreciated. In the "Peak" columns please include any dates when migratory movement was detected. The "Last Noted" column is for the last day on which migrating individuals were seen or heard.

Observations submitted on this form will be put on punch cards and a machine listing will be sent you for verification.

We should like to have spring records by July 10th. Late reports, as well as records from prior years (1953-59) can still be used, but they may not be processed as promptly as those received by this date.

We shall appreciate your cooperation in soliciting reports from other active observers. Additional forms will be sent on request, either to you or to lists of people you send us.

Please mail your report to Chandler S. Robbins, Patuxent Research Refuge, Laurel, Maryland.

U. S. DEPARTMENT OF THE INTERIOR, BUREAU OF SPORT FISHERIES AND WILDLIFE  
 PATUXENT WILDLIFE RESEARCH CENTER, LAUREL, MARYLAND

COOPERATIVE MIGRATION STUDY - SPRING OF 1960

Please read covering letter before filling out this form.

STATE: \_\_\_\_\_ COUNTY: \_\_\_\_\_ LOCALITY: \_\_\_\_\_ LAT: \_\_\_\_\_ LONG: \_\_\_\_\_

OBSERVER:

Species	Code	First Migrant		Peak		Peak		Peak		Last Noted	
		No.	Date	No.	Date	No.	Date	No.	Date	No.	
Whistling Swan	180	60									
Canada Goose	172	60									
Mallard	132	60									
Pintail	143	60									
Marsh Hawk	331	60									
Killdeer	273	60									
Common Snipe	230	60									
Mourning Dove	316	60									
Common Nighthawk	420	60									
Chimney Swift	423	60									
Ruby-t. Hummingbd	428	60									
Yel-shaft Flicker	412	60									
Eastern Kingbird	444	60									
Gt.Crest Flycatcher	452	60									
Eastern Phoebe	456	60									
E. Wood Pewee	461	60									
Barn Swallow	613	60									
Purple Martin	611	60									
Common Crow	488	60									
House Wren	721	60									
Catbird	704	60									
Brown Thrasher	705	60									
Wood Thrush	755	60									
E.Bluebird (male)	7664	60									
E.Bluebird (female)	7665	60									
Red-eyed Vireo	624	60									
Black-&-whit Warb.	636	60									
Tennessee Warbler	647	60									
Yellow Warbler	652	60									
Myrtle Warbler	655	60									
Blackpoll Warbler	661	60									
Ovenbird	674	60									
American Redstart	687	60									
Bobolink	494	60									
Redwinged Blackbd	498	60									
Baltimore Oriole	507	60									
Scarlet Tanager	608	60									
Rose-br. Grosbeak	595	60									
Indigo Bunting	598	60									
Am. Goldfinch	529	60									
Slate-col. Junco	567	60									
Chipping Sparrow	560	60									
White-crowned Sp.	554	60									
White-throated Sp.	558	60									

Please send reports either direct to Chandler S. Robbins, Patuxent Wildlife Research Center, Laurel, Md., or through your Audubon Field Notes Regional Editor.

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