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 May 1967

Visitors welcome!

APRIL MEETING

Take a friend to  
 hear Pettingill  
 April 11!

Monday, April 3rd, 1967, at 8.15 p.m.  
 at the  
 ROYAL ONTARIO MUSEUM

- MEMBERS' NIGHT: 1. Junior Club speakers (both illustrated):
- Miles Obradovitch - "The Care of Tropical Fish"
  - Betty Cook - "The Monarch--King of the Insect World"
2. Robert MacLellan - "Hawaii" (illustrated)
3. Peter Middleton - "Toronto's Outdoor Education (Ill.)"
4. Peter A. Peach - "Naturalist or Nut"

Spring Outings

We are grateful to Mr. Jack Gingrich and his committee, and to all those who have generously agreed to act as leaders, for the exciting array of trips listed in the enclosed booklet. Extra copies are available for friends and prospective members and will be mailed by the secretary on request.

PRESQU'ILE WEEKEND Application forms for accommodation on the Presqu'ile weekend (see outings booklet May 20-22) are provided on the next page.

BOTANY GROUP There will be no more meetings this season. Many botanical trips are listed in the outings booklet.

BIRD STUDY GROUP Meet on Monday, April 17th, at 8 p.m., at St. James Bond United Church, west side of Avenue Rd., two blocks north of Eglinton.  
 Secretary - Mr. Gerald McKeating (293-8643)

JUNIOR CLUB Meet on Saturday, April 1st, at 10.00 a.m. in the Museum theatre.  
 Director - Mr. Robt. MacLellan (488-9346)

"NEW ZEALAND SPRING" APRIL 11 The concluding film-lecture of the Audubon series will be presented by the world-renowned ornithologist-photographer, Olin S. Pettingill Jr. A full house is expected for this important event. Early ticket purchase is recommended. Eaton Auditorium box office opens April 1st. Tickets \$2.00.

ATTENTION SYMPHONY FANS As Audubon Wildlife Films will be held on Tuesdays again next season, those who subscribe to TSO concerts may wish to attend the Wednesday series in order to avoid conflict of dates.

IMPORTANT NOTICE Election of officers for the 1967-68 season will take place at the Annual General Meeting on May 1. The Nominating Committee has made the following recommendations: President - Dr. Peter A. Peach; Vice-President - Mr. John A. Gingrich; Executive Members - Miss Edith Cosens, Mr. Gerald McKeating. (All nominated for re-election.) Further nominations may be proposed in writing to the Secretary by any three members of the Club before April 10th provided that prior agreement of the nominee has been obtained. Such nominations will be published in the May issue of the Newsletter.

President - Dr. Peter A. Peach

Secretary - Mrs. H. Robson,  
 49 Craighurst Ave.,  
 Toronto 12 (481-0260)

APPLICATION FORMS FOR THE WEEKEND OUTING AT PRESQU'ILE

See the Spring Outings Folder for details of this outing. These application forms are only for those who want overnight accommodation arranged for them at Woodmere Lodge (or equivalent lodging elsewhere in Brighton) or for those who want meals only at the lodge. The cost is \$16.00 total for the two nights, meals included, or \$10.00 for meals only.

Applications must be mailed to Jack Gingrich, 225 Coldstream Ave., Toronto 12, before April 28. Applications will be dealt with in the order received. Accommodation (particularly single) is limited. Applicants will be phoned to confirm their applications.

APPLICATION FOR SINGLE ACCOMMODATION

Name .....

Address .....

Telephone number .....

If a single bed is not available, would you be willing to share a double bed with someone else? .....

Do you wish us to arrange transportation for you, at \$5.00 total? .....

If you intend to drive, how many passengers would you be willing to take, at \$5.00 each? .....

APPLICATION FOR DOUBLE ACCOMMODATION (2 persons in double bed)

Please give names, addresses and phone numbers of both persons:

Do you require privacy (e.g. husband & wife)? .....  
(Otherwise, bed may be one of two double beds in same room)

Do either of you require transportation, at \$5.00 each? .....

Does either of you intend to drive, and if so, how many passengers would you take, at \$5.00 each? .....

APPLICATION FOR MEALS ONLY AT THE LODGE

Name .....

Address .....

Phone number .....

If you have any questions regarding this outing, phone Jack Gingrich at 489-9953. Persons making their own arrangements, but willing to take further passengers, please phone Jack Gingrich before May 17.



## NEWSLETTER

Number 226

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March 1967

### Botanists Unite and other Sundry Thoughts

The Botany Group of the TFNC has always intrigued me. The Group is such a mystery to me--its members never write to me (well, hardly ever) and I never get to their meetings to find out about them (yes, never). Some day when my staying-at-home and their holding-a-meeting nights coincide I will go to a meeting and get first-hand information about their activities. Soon, I hope. Meanwhile my information retrieval system has provided me with some information about their past and future plans. (Thank you Miss Cosens, Miss Cochrane, and Dr. Peach!)

Since the lamented loss of Mr. Millman the Group has been under the chairmanship of Miss Edith Cosens. They hold five meetings during the season and numerous outings. I have attended two of these outings myself. Attendance at the first one was about 40; at the second, 4. Average attendance at the monthly meetings has been about 38 this season but the number would be doubled if every member of the Group came. The meetings are held in, from all accounts, "sumptuous splendour" at Hodgson School.

Apparently the Botany Group is doing some soul-searching, looking at its purpose in life and its future. One interesting question, asked at the panel discussion in January, indicates this: "Why should bird-watching be more popular than botany?"

Some answers given:

"Birds are more lively and entertaining in themselves than plants and trees."

"Bird-watching satisfies our instinct for hunting."

"To identify plants and trees, one has to master a difficult nomenclature. One must be willing to study classifications to really get any satisfaction out of botany."

That last answer, I believe, gets to the root of the matter. To identify plants you have to classify them (taxonomy); to classify, you have to learn a new language--and the language is difficult!

I can remember clearly my own struggles when, clear of eye and pure of heart, I set out to identify my first plant using a shiny new Gray's Manual of Botany. After three hours of hunting for pendulous ovules, feeling the glabrous (or was it hirsute?) stems, slipping on a hypogynous (or was it epigynous?) disc, I triumphantly and correctly answered, "This is a Greater Celandine, Chelidonium majus!) Most of that three hours was spent thumbing through the glossary and cursing the Romans and the Greeks.

There is an easier way--ask someone who knows. Next season you will be able to do just that. There are plans to organize a study group to teach all budding botanists the principles of nomenclature and classification. The objectives will be to enjoy and learn. You can't know too little to join, nor too much to teach.

To complement this course, a different type of nature hike may be introduced--the hike for the man (or woman) of leisure. Too often we hurry by our plants, intent on "getting" the next one without learning very much from the previous one. On these new "leisurely hikes" we hope to spend more time on our finds and learn more from them.

Perhaps we might even see a little more Nature as well.

The best lesson in botany I ever had was six hours spent in a meadow one hot August day. I twisted the Gramineae, got pricked on the Crataegus, gave up on the Salix, and conquered the Aster. And enjoyed it too!

Finally, if you want an early start on your botany course, plan this summer to make a herbarium--a collection of dried pressed plants. To study plants we must have plants to study.

You'll learn something and I bet you'll find it's fun!

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Last month all our TFNC members had a grand opportunity to help in a worthwhile cause. We asked you to volunteer your services in giving advice and help to local organizations in matters pertaining to natural history.

The response?--Terrible!!!! (Although we certainly appreciated hearing from those who did write in.)

I can only conclude from this that either you don't read the Newsletter, or you don't care, or you are afraid of not having the necessary qualifications. If the first two reasons, I am sorry; if the last reason, let me reassure you. You don't have to be a teacher or an acknowledged expert or anything. The very fact that you belong to a nature club, the TFNC, qualifies you.

One heartening instance occurred recently. The Dufferin Division of the Girl Guides were planning a leaders' weekend a short distance out of town, and wanted a naturalist to come for a few hours to show them what there was to be seen, and how to see it, so that they could in turn show their Guides and Brownies on their spring hikes. The Club secretary racked her brains, and fortunately hit upon the right answer. She telephoned Mrs. Dorothy Mathers, known her to be a knowledgeable and enthusiastic Club member and the mother of two girls whom she was teaching to enjoy the out-of-doors. Mrs. Mathers immediately agreed to help.....When the weekend was over the organizer phoned the Club secretary to say that Mrs. Mathers had done a fine job and to express the gratitude of the group.

Our thanks too to Mrs. Mathers for her willing co-operation.

But there have been other times when the secretary was asked for help from the Club, and was unable to find a person to fill the bill. Those who lead TFNC outings are already doing their share. There must be others in the Club who are willing to help. We want to know who you are!

It is almost a crime if we, the largest naturalists' club in Ontario, cannot or will not help our local organizations when they come to us on matters which we claim are dear to our hearts.

We hope to have TFNC members attend all future hikes arranged by Metro Parks and the Metro Toronto Conservation Authority. We want to help the Boy Scouts, Girl Guides, Youth Clubs or adult organizations who come to us to learn more about nature.

We have a great chance to publicize our Club and the cause of conservation and natural history. Let's not muff it!

Please volunteer now! It will not take much of your time and I'm sure you will enjoy it as well!

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Jack Gingrich, our Outings Committee chairman, is getting worried about your feet--too many of you are getting them wet! Please remember to wear waterproof footwear on all the Spring outings! Or else use a pair of shoes that are expendable. Or else--Ach-ooo!

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Your editor is planning a series of articles for the Newsletter on areas of interest to local naturalists. Please write or phone if you have some personal (preferably extended) experience with the natural history of any local areas such as High Park, Rattray's Marsh, Claireville Dam, the Conservation Areas, Whitby, Ajax, Chine Drive and the Bluffs, etc., etc.

Contract Elmer Talvila, 11 Hartfield Court, Islington (231-1064)

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There's good news about the Niagara Escarpment. Recent newspaper reports indicate that the Ontario Government intends to make an immediate study of the Escarpment with a view to preserving it as a Provincial Park. The FON will be invited to participate in the study. I hope actions follow intentions--soon!

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That last movie at the ROM on "The Whooping Crane" whetted my appetite for more, so I got hold of a recent publication of the Canadian Wildlife Service. It's called Whooping Crane Population Dynamics on the Nesting Grounds, Wood Buffalo National Park, N.W.T., Canada, by N. S. Novakowski (20 pp.) It's a bit technical but contains some interesting facts and pictures. You can get a copy from The Queen's Printer, Ottawa, for 50 cents.

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I was very happy to receive a letter from Mr. Howard Huggett about bats. Mr. Huggett, you remember, started bat-lovers fluttering with his little note in the January Newsletter. He writes:

"I was surprised and delighted with results of my note in the January edition of the Newsletter on bats. These little creatures have not been very popular with the human race and the news that they are edible will, I am sure, cause many people to look upon them with new interest and affection. Let us hope that the cold war between man and bat will soon be over. The following verses are dedicated to an early and warm reunion between the two species:

"Hi there, brown and busy bat,  
What fun to see you flutter,  
For in the fall, when you are fat,  
You'll browner be in butter.

"On pesky insects feast your fill,  
No need now to worry.  
When the autumn blasts blow chill  
We'll cook you in a curry.

"You do not have to hibernate  
When winter starts to storm;  
We'll ask you in to integrate  
Inside us, where it's warm.

"The above lines were written in the enthusiasm of a new idea, but the following epilogue results from sober reflection on previous encounters with bats:

"Long life to you, busy bat,  
Death-dealer to the nasty gnat,  
Never need you fry in fat;  
Although I bash with broom and bat  
And swing with everything I've got  
You're never on the spot I swat.  
This canny creature can't be caught,  
Methinks my thought was not so hot."

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To this I can only reply:

Long life to you, Mr. Huggett,  
Poet Laureate of the busy bat!  
Mehopes your pen is never still,  
But many a line of paper fill  
With witty mot and learned thought  
About our furry friend who's not  
Upon the spot we swatted at,  
That frisky frantic fellow,  
That ever-moving bat!

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Before we leave bats, here is an interesting note from Mr. A. A. Outram:

Bats at the Royal Ontario Museum

It may be of interest to know that our museum is internationally famous for, among other things, its bat collection. At present there are scientists collecting bats for our Department of Mammalogy in all continents except Antarctica and Australasia. It is expected that in the last-mentioned continent collectors will be

at work in a short time.

Of the very many kinds of bat in existence there are at least eight rare species, all foreign, of which our museum has more specimens than all other institutions put together, throughout the world. This is not mere accumulation of material, but modern, intensive research.

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Thank you, Mr. Outram. Bats will return!

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Have you ever wondered what it would be like to start bird-watching fresh in a strange part of the world? How would you begin? Where would you turn for help?

In the following article, Mr. Jack Cranmer-Byng tells about his birding experiences during his first year in Toronto after coming here from Hong Kong where he had lived for the previous seven years. The article is an excerpt from "Report on Birdwatching around Toronto during 1965," and is reprinted from The Hong Kong Bird Report 1965.

We arrived in Toronto early in September 1964, and my first pleasant surprise was to find that one of my colleagues in the Department of History at Toronto University, Dr. R. M. Saunders, was a leading birdwatcher in this area and editor of the regular Newsletter issued by the Toronto Field Naturalists' Club. Under his guidance it did not take me long to get organized for birding and to begin to recognize some of the 322 species on the checklist issued by the Royal Ontario Museum in Toronto and recorded within a 30 mile radius of the Museum. The first step was to buy A Field Guide to the Birds (all N. American species east of the Rockies) by Roger Peterson, set out in exactly the same format as the Field Guide to the Birds of Britain and Europe. The next step was to borrow and read a copy of Dr. Saunders' own book Flashing Wings (published 1947), which is based on his own journals kept since 1938, and is organized on a monthly basis so that one can soon get an idea of the kind of birds one is likely to see in, for example, March and also the likely places for seeing them. Also his book contains a migration chart based on records kept over a 13 year period and this helps me to know when to expect the various migrants in the spring and autumn. The next step was to buy really warm clothing so that I could go birding in the coldest days of the winter. When we arrived in Toronto the temperature was in the eighties but by January it was sometimes down to zero. Having bought a large padded windbreaker jacket made of nylon, and a pair of padded trousers, thermal underwear, a pair of hunter's lace-up rubber boots with insulated soles, not to mention gloves and leather mittens and a woolen toque (hat) to pull over the head and ears I felt ready for anything. Meanwhile I joined the Toronto Field Naturalists' Club so that I could take part in their bird outings and profit from the knowledge of experienced members. At the same time I subscribed to the newly founded Toronto Birdfinding Bulletin, stencilled, and mailed to subscribers every week between October and May by a very keen member of the Club. This is a most useful publication since from it one can quickly find out what birds have been seen during the previous week-end and the exact locations. Subscribers phone their sightings of the week-end to the editor on Monday and receive the bulletin on Thursday or Friday, in time to plan their week-end outings. This is all the more useful in a place like Toronto which has a population of c. 1,800,000 and is a rapidly expanding city so that the good birdwatching places are constantly being encroached upon, and one cannot just set out and walk for a day. Most of the birdwatching near Toronto has to be done by driving from one spot to another and walking for an hour and then driving on. It takes about 30-40 minutes to get clear of the city by car.

My first serious day's birdwatching was on New Year's Day 1965 when Dr. Saunders took me out to an area east of the city and along the shore of Lake Ontario. Here there is some farming land, some woods and a number of marshes, besides the low cliffs and the beaches of the lake. One of our objectives was to find a Snowy Owl. Every few years there is an eruption of these owls from the north, and then a number pass the winter months around Toronto. We stopped by a small lake near a new housing estate and scanned the scene. There appeared to be nothing moving and nothing living within sight. Just as we were about to leave, however, we made one last sweep with the glasses and what looked like a mound of snow on a low post on the edge of the lake took on the shape of an owl, and we had seen our first Snowy. By now our feet and hands were cold and we were glad to climb into the warm car. This time we drove down a farm track to the cliffs above Lake Ontario and began to walk through a field of rough grass. Suddenly Dr. Saunders pointed to a headland of the cliffs and we got our glasses focussed. Just as I got a Snowy Owl into focus it flew up and towards us. Almost immediately a second owl appeared from over the shoulder of the cliff and started a mock attack on the first one. Both birds flew majestically towards us and as they swept past I was able to compare them. One was almost entirely white, while the other, possibly a female, was heavily barred with a mass of dark brown. These owls are large, 20-26", and are fearless day-flying birds--lords of the open fields and lakesides. Having seen these beauties we then drove to a wood where Dr. Saunders hoped to find a Long-eared Owl. Almost as soon as we entered the wood we found droppings and casts under the trees. Suddenly we both found ourselves looking up at a very large and fierce owl on a branch of a nearby tree. This was no Long-eared but a Great Horned Owl (20-23") with its ear-tufts raised and its yellow eyes glaring wickedly at us. For a moment I felt fear--it almost seemed that it might attack us, then off it flew through the wood. Back in the car we were driving along a lane when we saw a large flock of gulls, their white and grey plumage gleaming in the weak sunlight. We stopped and got out. They appeared to be Herring Gulls but when they all suddenly flew up and wheeled round Dr. Saunders pointed out one Iceland Gull, and as they landed again he showed me a single larger gull, very pale without dark wing-tips--a Glaucous Gull (26-32"). During the rest of the day we continued to see interesting birds including 2 Marsh Hawks (Hen Harriers), 2 Rough-legged Hawks (Buzzards), 3 Northern Shrike (like the Great Grey Shrike), a Red-tailed Hawk, a Brown Tree Creeper, and a Nuthatch. By the lakeside we saw some Golden-eye Duck, 1 Common Merganser and some Black Duck and Old Squaw Duck. These last are quite common; the males have long pointed tails, and their plumage has a black and white pattern. Altogether we saw 30 different species--a very enjoyable day's outing.

During the rest of the winter--say until about mid-March when there are some signs of spring--I went out irregularly, depending on the weather, and saw, among other birds, the following: Ruffed Grouse, a bird of the brushy woodlands; four Long-eared Owls in one group of conifers; Red-breasted Nuthatch--rarer than the common White-breasted Nuthatch, and having a black line through the eye and pinky-buff flanks; Arctic Three-toed Woodpecker; Ladder-back Three-toed Woodpecker (see European Field Guide, p. 190). These Woodpeckers are normally not seen so far south, and were formerly listed as rare winter visitors but in the past few winters they have been fairly common in the Toronto area. The reason is that the Dutch elm disease has hit the elm trees badly in this part, and these Woodpeckers are specially fond of stripping the bark of the diseased elms and getting their supply of grubs in that way. Another bird, now widespread and resident in the Toronto area, which has only quite recently changed its status, is the Cardinal. This is a handsome bird, especially the male which is bright crimson all over except for a black face, and it has a very definite crest. The female is brownish with a red beak (a thick seed-cracking kind) and a red crest. Their range formerly did not extend as far north as Toronto but in the past 20 years they have become acclimatized and now survive the winter here, and breed here very happily. . . . .

By late March there is evidence of spring on the way and the first of the migrants are passing through. April, May and early June form the crown of the bird-watching year here. The Toronto Field Naturalists' Club puts on a regular series of outings for its members at this time and even charters a motor coach to take us to the more distant places. However, the most memorable day's birding that I experienced in 1965 was on Toronto Island. In fact this is a series of connected islands lying out in the lake opposite the centre of Toronto. You drive to the Island Ferry Terminal, park your car, and board a ferry boat. It is all very reminiscent of Hong Kong, except that it only takes fifteen minutes to cross to the Island. This is now kept as a municipal park, though it contains a miniature air field for civil flying in small trainer planes, several yacht clubs, and an area of thicket and one island which is reserved as a wildlife sanctuary. The spring outing to Toronto Island this year was on May 8th. We took the first ferry over, and it was still cool and very misty when we arrived. We walked to a spot where there is a large area of formal gardens with low clipped hedges and many paths among the flower beds, and higher hedges on either side. For some reason, either because of the very limited visibility, or because of seeds or insects in the hedges and gardens, the whole area was alive with birds. The first thing I saw was a male Rose-breasted Grosbeak--with a black head and back, some white on the wings and rump, a vivid rose-red breast and white underparts and a heavy horn-coloured beak. There were several of these birds about together with the brown mottled females. Then I started to see the Warblers in their spring plumage. It would be impossible to describe all the combinations of colours in the various species which I saw all within about thirty minutes. These Warblers in the Spring are to Toronto what the Flycatchers are to Hong Kong for colour and variety. Here is a bare list of the Warblers I saw that morning:

Cape May; Yellow; Palm; Black-throated Green; Black-throated Blue; Nashville;  
Blackburnian, Myrtle; Pine; Yellow-throated; Black-and-White; Chestnut-sided.

A total of 12. But I only recognized them because experts all round me kept calling out the names. . . . .

My own list of birds identified in the Toronto area so far amounts to 176 species out of a possible total of 322. But I hasten to say that a good many of these birds were recognized with the help of experienced birdwatchers who told me what they were. I certainly could not be sure of recognizing that number yet on my own. So I still have plenty of work to do in order to recognize the majority of the birds on the Checklist. . . . .

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Here is another article from that excellent Christian Science Monitor series, "Call of the Vanishing Wild". It is written by the famous Dr. Roger Tory Peterson and is entitled,

Earth's Wrecking Crew at Work

Man, the anthropoid who picked up a rock more than a million years ago, has become the most dangerous, the most lethal animal upon the face of the earth.

However, he has an expanding intelligence where conscience stirs. Many of the international conferences in the last few years have been concerned not so much with the world's political problems as with its ecological mess.

The rise in recent years of the International Union for the Conservation of Nature and Natural Resources and the emergence of the World Wildlife Fund are not accidental.

They are part of a new and hopeful philosophy that assumes that our planet will not blow itself up, that it is worth saving. The goal is the renaturalization of the world.

Fundamentally, the root of the problem is too many people. Only of late is the world seriously tackling the problem of birth control. Perhaps it is already too late for preventive measures to save an afflicted world; perhaps we can prescribe now only in terms of palliatives. We can only pick up the pieces.

Organizations such as the World Wildlife Fund and the National Audubon Society which are dedicated to this end merit our support.

Rich men often leave their millions to art museums and other edifices raised to the glory of man. It would be more appropriate if some of the men on whom fortune has smiled would set up foundations for conservation. They would do well to commit their wealth or part of it to restoring the good earth which nurtured them.

What more enduring monument could there be than the saving of a species, the end product of millions of years of evolution? Far more important than the purchase of a statue or a painting, surely. . . . .

Nearly 80 full species of birds have become extinct in the world--in less than three centuries--since the dodo. More than 90 per cent of them lived on islands. The majority have been hastened on their way by the activities of man.

Islands are like continents in microcosm. Man, the great disturber, the great competitor, quickly alters an island. And when his numbers burgeon, as they are now doing throughout the world, even continents cannot withstand the pressure.

Europe has been settled much longer than North America and yet it has been pointed out, during the last 1,000 years not one native European land bird has become extinct (the great auk was a seabird) and only one land mammal, the aurochs. Actually, a number of species have held on by the narrowest of margins.

To know why many forms of Eurasian wildlife survived until modern times we must remember that the principal centers of urban civilization lie on the periphery of the land mass and along the large navigable rivers. There were always wilderness spaces in the heartland, places where even the most hard-pressed species could survive.

Furthermore, the nobility had always preserved some of the forest and its game for their own pleasure. And thus, a modest amount of "natural capital" has been retained to the present.....

Two new factors now are rapidly changing this:

The first is biological--the accelerated increase in human population which places great pressure on the remaining "virgin lands."

Immigration to North America and other continents can no longer be a mechanism for easing the pressure. Most Eurasians of the future will have to remain home and find space on their own continent. North America is becoming overcrowded, too.

The second new factor is mechanical and chemical. Bulldozers can change the landscape more thoroughly in 10 years than our ancestors could in a thousand.

Each year the consolidation of farmland into bigger units, the mechanization, and the tendency toward single crops does away with hedges, thickets, and ponds that are the last refuges of wildlife in farming country. The end is monoculture and a uniform landscape. Furthermore, man tends to exterminate those wild creatures that come into competition with him.

In the United States, wildlife has been under the white man's pressure for well over 300 years--ever since 1630 when the Massachusetts Bay Colony authorized a bounty of one penny per wolf.

North America has lost more species through extinction in the last 100 years than Europe has lost in a thousand.

In addition to the great auk, we have lost the passenger pigeon, perhaps the most numerous bird the world has ever known; the Carolina parakeet; the heath hen; and the Labrador duck.

The ivory-billed woodpecker and Eskimo curlew are almost extinct, if indeed they still survive (there have been recent reports of the latter). The whooping crane numbers scarcely more than 40 and has had a slight increase. The California condor also numbers about 40 and is in slow decline.

As for the mammals: The giant sea mink is gone--and so are some races of the grizzly bear and sub-specific populations of several other mammals.

A number of freshwater fish have recently become extinct or else have become so rare that their future is in jeopardy.

Even some reptiles and amphibians are in trouble. One, the Las Vegas frog, has not been seen since 1942. It is presumed lost. Indeed, Las Vegas itself is lost; Las Vegas is the antithesis of all that is natural.

This precipitous destruction brought on by the too-rapid settlement of a continent has also had its corrective reactions. The United States was the first country to have a national park--Yellowstone. Today Americans can boast the best wildlife laws of any country in the world, the greatest number of well-run federal refuges, and the most graduate students in wildlife management and conservation. All this has been absolutely urgent to slow down the rape of a continent.

Since 1850, when efficient breech-loading shotguns came into wide use, we have had modern hunting. During that century man's increase in numbers, skill, affluence, and leisure has put him in a new relationship with wild game. He became the great predator. As James Fisher, the distinguished British conservationist, points out:

"Educated and wealthy though Western man has been through the century of the sophisticated shotgun, he has often lacked judgment. He has been stupid, greedy, and unforeseeing; egocentric, proud, and masterful; he has banged his way around marsh and woodland as if he owned the earth.

"Man does not own the earth, or any part of it, save his home and tools; of nature he is but the inheritor, the central node of a transient web, alone capable of knowing what he is doing."

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Elmer Talvila,

Editor