

Quarry #190

TORONTO FIELD NATURALISTS' CLUB NEWSLETTER

NOVEMBER MEETING

MONDAY, NOVEMBER 5, 1962, AT 8:15 PM
at the
ROYAL ONTARIO MUSEUM

SPEAKER: MR. G. MARSHALL BARTMAN, Extension Secretary, Federation of Ontario Naturalists.
SUBJECT: OUR NATIVE WILD ORCHIDS

Mr. Bartman, one of the founding members of the Toronto Field Naturalists' Club, has had a lifelong interest in nature, and through intensive study and field work has become one of Ontario's outstanding authorities on our native wild orchids. Through his superb photographs, he shows us these beautiful and interesting flowers in their natural settings and in revealing close-up studies.

NOVEMBER OUTINGS

BOTANY - Saturday walks continue throughout the autumn until the snow flies, at 10:00 AM. For locations and travelling directions, please contact, Miss Llewella Mann, HUDSON 1-2008.

BIRDS - Sunday, November 4th, 9:30 AM - Toronto Waterfront

Woodbine Beach to Sunnyside and as far west as time and circumstances permit, at the leader's discretion. Meet at Woodbine Beach car park, south of Old Woodbine race track. Those using public transportation will take streetcar to Queen and Coxwell and walk south. As many cars as possible will be appreciated to accommodate those who do not drive. A packed lunch and coffee are suggested.
LEADER: - Mrs. Eve Cobb.

Saturday, November 17th, 10:00 AM - Boyd Conservation Area.

Take No. 7 Highway to Woodbridge, then proceed through the business section on the Woodbridge-Kleinburg road for about 1-1/2 miles. Entrance to Park is on the right hand side of the road. Morning only, but a lunch and coffee are suggested.
LEADER: - Miss Helen Lawrence.

BOTANY GROUP

The Botany Group will meet on Thursday, November 15th, at 8:00 PM in the Library of Hodgson Public School, just east of Mt. Pleasant Road. This is Members' Night when members will have an opportunity to show their colour slides. Mrs. Mary Ferguson (HUDSON 5-8450) will be convenor.

Secretary - Miss E. Lewis, HOWARD 5-3422

JUNIOR CLUB

The Junior Field Naturalists' Club will meet on Saturday, November 3rd, at 10:00 AM in the Museum Theatre. Children between 8 and 16 years will be enrolled - Fee \$1. for the season. Senior visitors are welcome to attend.

Director - Mr. R. MacLellan, HUDSON 8-9346

HAVE YOU PAID YOUR 1962-63 FEES YET? SINGLE \$4; FAMILY \$6; CORRESPONDING \$2.

PRESIDENT - Dr. David Hoeniger

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

Toronto Field Naturalists' Club.



Number 190

October 1962

A Miracle in a Quarry

Today as you ease your way across the scrub-dotted field, taking care that no twig snaps to proclaim your coming, you see the edge of the grey cliff fringed by cottonwood green and white birch. Should you arrive quietly at the edge you may see a wood duck mirrored in the verdant water or spy a green heron, even a great blue, poised on the bank, at the ready to snatch up some unwary frog or salamander. No creature moves perhaps; there is only the promise of hidden animal life. Your eyes move over the still, reflecting water to the lower end of the little pond where the cattails raise their sword-blade leaves skyward and picture themselves in the water whence they arise. Animal life, green life teems here today. This is a quarry pond.

Thirty years ago or thereabouts this was still a working quarry. Thousands of workbound Torontonians every morning pass by one of the city's most distinguished buildings without realizing that its grey, ivy-clad walls are made of sandstone quarried in this now-abandoned pit. In those days of a generation past, had you stood on the grey cliff you would have gazed on a scene of busy activity - men drilling, piles of cut stone ready for the cars that would carry it down the special track as coal is carried from a mine, cranes turning, the whole gamut of a prosperous, going concern. Then the good workable rock ran out. The quarry was abandoned. Gone were the men, the cranes, the railway and all the activity. Left behind was a mournful waste of bare grey rock, a deep pit, piles of refuse rock, a landscape of desolation.

Now, as you stand on the cliff and survey the quiet water that mirrors a world of green life, that plays host in its depths to a multitude of creatures you realize all at once that you are looking at a miracle. Where only a short thirty years ago was nought but bare, bald rock, stripped of all living cover, a land bereft, there stretches out before us now a scene of multitudinous creation. In one generation nature has taken hold of the stark devastation left by man, softened its harsh lines, clothed it in a panoply of green and brown and yellow and red, filled it with pulsating life. A miracle? Yes, but one conducted in nature's most orderly manner, with surprising effectiveness and expedition but according to all the rules and regulations. Nor is it yet finished, this miracle; we have arrived in the midst of the labor. Let us see.

As we stand here on the cliff, once the northerly edge of the quarry, we look around. Right at our feet we get our first hint of what has happened, of what is going on right now, for as we look down we see that we are not really placing our shoes on naked rock. Not at all. We are in fact standing on a graceful carpet of grey and black, one composed of a beautiful circular pattern, a series of black-centered circles with grey scalloped edges, a pattern not unlike that seen in many of the crocheted rugs made by our grandmothers and great-aunts in olden days. Then we realize that this is a living carpet on which we tread. No, it does not mind. Delicate, full of grace, beautiful it may be; at the same time it is composed of some of the toughest, most resilient and persistent of all living things. These are lichens, pioneer plants that take hold in the infinitesimal pits and pocks of bare rock, there to hold on, to grow and spread, crumbling bit by bit the surface of the hardest rock and so preparing the way for greater things to follow. The cold, grey exposed rock of the old quarry is not yet all covered over; the pioneering must go on. And it is going on. The lichen pioneers will not cease their activity for our treading any more than the rock beneath will be able to prevent their covering it up.

This is the first step in nature's process of redress. The second is immediately evident as we look only a few feet farther, for there the grey and black circles give way to a lush, thick pile of brown and green - luxuriant moss. Curious, we lean down and lift up a section of the moss. It's as we suspected, the moss is growing on top of lichens. What has happened here? This, it would seem. The lichens have spread, have crumbled the rock surface below a bit, have shed parts of themselves over the years, have served to catch dust and blowing dirt, and thus have provided a situation where moss spores can lodge and grow. Now the mosses are taking over, and they too are robust, enduring plants, able to withstand all kinds of weather and punishment, a second generation of pioneers. With their advent the conquering restoration advances yet another stage.

The thicker covering of moss is a more effective guardian of moisture, and in its rich pile much more humus and soil can accumulate. This means that seeds can lodge therein, and many of these can germinate successfully and produce plants. Thus we are not surprised as we glance across the green moss bed to see the cheery yellow blooms of St. John's-wort, the flat white caps of yarrow and Queen Anne's lace dotted here and there, sparsely near the cliffward border of the moss, more and more commonly as we follow from bloom to bloom towards the field. Indeed, we soon discover that this trip with our eyes has led us straight into the field. Manifestly, the odd plants we have noted in the moss near where we stand are advanced representatives of the main army of field plants that stand massed not many yards away. It's almost as if the army had sent out reconnaissance parties to find out if the country ahead was safe for further advance. We walk over to the edge of the field and find that in fact the advance is evidently under way for as the moss is growing atop the lichens so here the moss is vanishing beneath a mass of grasses and accompanying taller plants. Again has nature taken a step forward in the redecking of a barren land.

Nor is the march of the redecorating armies yet over for scattered across the field are shrubs and small trees. Like the reconnaissance plants in the moss these are advance guard trees from the woodland. The wood is invading the field as the field is marching across the mosses, as they are moving over the lichens and the last over the bare rock. If man does not interfere here again a forest will stand where the quarrymen left naked stone.

Not only on the stripped flat top of the cliff is this process of recovery going on. If we return to stand on the cliff we find that on the very front of the cliff itself where pieces of rock have split off and fallen down large pockets of soil have been washed in or blown in to fill up the gaps between the fallen rocks. In these pockets grow the sprightly cottonwoods, the white birches and the dark green arborvitae that we have to peer through to see the pond. And down at the base of the cliff near the water we spy the tall hairy stems and smoky pink flowers of the great willow herb, the white racemes of melilot, even a yellow plume of goldenrod. The reoccupancy of a cliff front by nature's green life is not as easily delineated a performance as the march upon the top but it is no less persistent and no less according to the regular rules. The cliff will be occupied by bits and pieces as the top is being covered by steady frontal advance.

Walk around the pond and we see the same story being repeated at every step, in each nook and corner, on every pile of rocks. The pond itself, thanks to springs in the old quarry pit and to runoff from above, has replaced the emptiness of the quarry. Algae has grown in the water, and each year has become denser and denser until now much of the water surface is clogged green with its growth. Moreover, as among the rocks on the cliff front and on the top, soil has built up in the pond, blown in by the wind, washed in during the spring freshets. Since only a tiny brook runs out of the pond most of the silt has become deposited at the lower end of the pond. It is this that has provided the base for the tall cattails, the many-branched water plantains and the willows. With the establishment of such a group of marsh plants the invasion of the pond has begun. Little by little with the further growth of the mud delta, helped now by the deposit of leaves each year from the established plants, the pond water will be more and more restricted. Too deep probably ever to be completely replaced the pond in time will become a small deep pool wholly surrounded by green.

As we walk around the edge of the water we know we are crossing over the tops of piles of refuse rock. If we look across to the east side of the pond where the higher piles still show slopes of tumbled grey stones, we have no trouble understanding this. But if we try to see this on the western side where we walk, we find ourselves pushing through a tangle of pin cherries, grapevines, deadly night-shade, mullein and all manner of lusty, prosperous plants. With a little hunting we can see under the vines or through the bushes to yet unclothed rocks, but on this side we do have to hunt for them. Doubtless this is because the piles being lower and more flat-topped on this side, it has been easier for the process of soil collection and plant invasion to take place. It won't be long now before the western side of the pond will be a rough bit of woodland indistinguishable from a dozen other similar spots in the neighborhood.

We cross the little brook and there we are amazed to see that the soil through which it cuts, a mass of earth and tangled roots, is from one to three feet thick. No wonder the pond has become stagnant; no wonder the mud delta at its lower end grows larger every year for this mass acts as a dam to slow outflow to next to nothing during most months of the year. All this is the contribution from the acres above the cliff, brought down with the melting snow water each spring. Along this rich deposit has developed a natural garden where the green-grey willow leaves these late summer days flutter above vivid clusters of gold and purple asters and spikes of deep yellow goldenrod. Soon the asters and goldenrods will be gone, the willows will have turned to lemon yellow. Then they will seem from above a flowing stream of yellow set amongst grey rocks where the pin cherry sends up its autumnal flames like flares upon the hills.

Across the brook we come to what once must have been a little cove in the then larger pond. Now wholly filled in, probably for the most part by silt washed down from above, it has become the residence of a colony of the delicately graceful narrow-leaved cattail. How elegantly refined and aristocratic seem the slender brown-topped shafts of seeds rising amidst their long rapier-like leaves. These are nobles wielding the weapons of nobility as compared to the bludgeons and broad swords of their commoner relatives of the present pond. Here rests the colony set down among high-rearing grey piles of rock, as if it had taken refuge in a feudal castle. And yet, of course, this is really another one of the units of nature's guard taking possession, one more step in the reconquest of bare rock.

We climb the fallen rockpiles. These certainly, along with the head of the cliff are the least reclaimed area, the most difficult indeed for nature to cope with. Nonetheless even here in the midst of tons of loose rocks we see that recovery goes on. A third at least of the rocks have the gray lichen circles ornamenting their surfaces. Spots of moss have found a foothold here and there. In some holes earth has accumulated, and here tall stalks rise from the soft grey rosettes of mullein. Catnip hangs its fragrant leaves above the rock, and red osier finds a chance to raise its white-berried, red-stemmed beauty. Here and there even a tree has managed to grow, a birch, a cottonwood. Do not ask me how they found sufficient sustenance there to start with. I do not know for their trunks disappear among the rocks into darkness. But now around them other plants have discovered a home and a haven. From islands such as these the advance upon the last bare rocks is being made. Yet not only from there for we can see the plants creeping up from the bottom, from the rich base along the brook, from the edge of the pond, from the adjoining fields and wood. The assault is on, and the grapevines wandering merrily over many of the rocks, hanging their blue harvest and yellow leaves over the gray sandstone fragments are heralds of the victory to come - nature triumphant in green.

We descend the rockpiles, noting in our descent that creatures as well as plants are playing their part in this natural drama for here in the midst of rocks some ants have found the means to erect a mound. And this anthill, like the collection of soil around each rockpile tree, is serving not only the ants but as another island of occupation by plants. On a job like this nature does not work with only one lot of forces but with all that can be mustered.

So we finish our walk and come back to the cliff where we first stood. On our return it was noticeable that at the point where in the spring the snow water pours over in a cascade the moss is thickest, most luxuriant and inviting. Soon some new occupants will answer that invitation, and the green fronds of ferns will arch over the re clothed rock.

As we stand once again on the cliff we realize that we have seen a dramatic example of how nature can take man's devastation and turn it to the service of life. We have seen how it is possible for bare rock by natural processes to become the basis for a world of living things - plants, insects, birds and other animals. We have seen more too. We have discovered that nature never stands still but is always on the move, and because of this all her creations and creatures are also. No situation is allowed to stand still, fixed, for long. Even bare rock must give way, and even man for all his power cannot in reality halt the process. We live in a universe where change is universal. What we have looked at is a vignette of the change and flow of life in the natural world of which we are a part, in which we live.

AN ORNITHOLOGICAL HOAX*

One of my good birding friends has often suggested with a wry twist of humor that someone might create quite a commotion in the local birdwatching community by importing and loosing exotic birds. He has even thought up ingenious methods for accomplishing this nefarious feat. However, it has always been just a sort of joke with not the slightest intention of implementation. How it could mess up the records, he says, and how would anyone ever find out, especially if the birds were all properly collected and recorded?

Surely no one with any pretence to scientific or just plain honesty would ever play a joke like that on his fellows. That is what we thought until we read one day of the shocking Piltdown man hoax which had passed muster as scientific truth for so many years. We were reminded then that this was not the first of hoaxes in science, and unhappily it was not likely to be the last. Then came news of a hoax last summer that struck right into the middle of the birdwatching world, not in this country to be sure but in Great Britain. Yet what had happened there could happen here.

"Six Birds Struck Off British List as Frauds," reads the article heading in London Times on August 10th. We are told that after eight years of meticulous research two of Britain's leading ornithologists, Mr. E. M. Nicholson, Director-General of the Nature Conservancy, and Mr. I. J. Ferguson-Lees had come to the "painful and shocking" conclusion that the official records were false and would have to be rectified.

Analysis of a remarkable number of rare bird records originating in the Hastings area beginning about sixty years ago and increasing till 1916 then falling off suddenly caused them to reach this conclusion. Of 49 birds added to the official British list between 1903 and 1916 no less than 32 came from Hastings. These became known as the "Hastings Rarities." But since 1919 only two new birds have been added from the same area. The two distinguished ornithologists were puzzled by this abrupt decline in the appearance of rarities at Hastings. The possibility of a hoax entered their minds. They said to themselves, "Can it have been that in crediting this part of the world only with the Piltdown deception, we have hitherto missed recognizing an imposture of even greater magnitude?"

So began the careful eight-year long enquiry, a real piece of scientific detective work, the result of which will mean that British museums will be forced to revise their collections and exhibits, and that British ornithological texts and guides will have to be rewritten.

The birds stricken from the list and no longer recognized as British birds are the slender-billed curlew, the grey-rumped sandpiper, the black lark, Ruppell's warbler, the masked shrike and the snow finch. All are birds of the Mediterranean and eastern European regions. Another ten would have had to go had they not been subsequently recorded in a reliable fashion elsewhere in the country. In addition more than a dozen sub-species will be removed from the records.

*Adapted from a news article in The London Daily Times, August 10, 1962.

The report on the Hastings Rarities fills hundred page issue of British Birds. It is accompanied by a thorough statistical analysis of 1360 birds of 168 forms reported from Hastings during the height of the discovery of rarities. A comparison of these records with those for the same area since 1924, and with adjoining areas both at the same time and since caused the analyst to conclude that "the pattern of the Hastings Rarities was unique and inexplicable." This historical analysis the authors of the report state "fully confirms their conclusion that they (the rarities) cannot be other than false."

It is pointed out that during the same period that these rarities were being found and recorded a brisk trade in unauthenticated and unrecorded rarities was going on by which a wealthy and gullible collector was supplied, the same man who also bought a good number of the Hastings birds that were accepted as authentic. Specimens of rare birds bring as much as ten to twenty-five pounds each.

One of the most mysterious aspects of this history is that no one seems to be able to trace the identity of the collector of these rare specimens. "The market gardener at Westfield," reads the report, "who was sufficiently keen and skilful to obtain two Ruppell's warblers and a Cetti's within a couple of years remains a nameless and forgotten man." The discoveries were listed with such noncommittal entries as "were shot", "were brought in," "was picked up". As many as six dusky thrushes were brought in from "certain clumps of hawthorn" near Hastings over a period of nearly six weeks without, it seems, any local ornithologist going to have a look or to check on them.

This is not the first time that a suspicion of these curious records has been raised since Mr. N. F. Witherby when he was editor of British Birds in 1915 wrote that, "It seems to me most fishy," but the war and other circumstances prevented a full investigation.

The report points out that it was to a certain taxidermist and gunmaker at St. Leonard's-on-sea who died some twenty years ago that the Hastings Rarities were first brought. It was "by him that they were usually first shown to various local ornithologists who were to place them on record in British Birds or by exhibition at the British Ornithologists' Club". In some way this man "was able to produce in his day a greater number of first-class rarities than all the other taxidermists in England put together." He was, however, "determined to conceal the source of his specimens, and was allowed to do so." He never took any of the opportunities offered to him to resolve "doubts which he knew to be grave and reasonably held."

The only way left of checking at the time was "critical examination in the flesh to determine whether or not the birds had been freshly killed." The authors of the report, therefore raise the question whether in those early days of refrigeration it would have been practicable to import dead specimens of birds, for example, from Black Sea and Mediterranean ports, and then to pass them off as British killed. It appears that the taxidermist in question once stated that he had received for mounting four albatrosses and other birds caught on a ship of the Natal Line and placed, he said, "in the refrigerator." An enquiry with the Low Temperature Research experts at Cambridge brought the response that refrigeration of this sort would have produced "no special appearances in the birds" which could have been detected by examining ornithologists. Whether or not this taxidermist was himself guilty of the frauds or was the victim of someone else the authors of the report refuse to state.

They say that they are not in the "whodunit" business and are not trying to pin guilt on anyone but are only concerned "to get the birds right." It remains, nonetheless, a superb example of scientific detection.

A hint as to what might have happened is supplied by the Curator of the local Hastings Museum who told the London Times reporter that when he came to this museum in 1935 he was warned by the curator of the Hull museums that many of the rare birds on display in the Hastings museum were to be considered "doubtful". The curator from Hull "told me that my predecessor at Hastings . . . had reported many rare immigrant birds," and when asked "how he came by these specimens" he replied that "he had advertised and, after a while, a number of birds arrived at Hastings Museum." The Hull curator said that he too then advertised "for rare birds arriving in Yorkshire, and in due course he, too, received a number of specimens. After about half a dozen had arrived, however, he prosecuted the man who was supplying them, as he admitted that he had been importing the birds and they had not been taken in this country." The man also admitted that he had played the same trick on the curator at Hastings. "Since then we have regarded all our rare birds at Hastings Museum as being in doubt, except those which are authenticated by some authority of repute."

Such is the sad and yet exciting story of a scientific hoax of almost sixty years' standing. It is a tribute to the present ornithological detectives that they should have worked so long and so assiduously to bring out the truth. It is also a warning to all that the utmost care must be taken in the establishment of any ornithological records if they are to have any value at all.

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WILKET CREEK

by Dr. Fletcher Sharp

This new conservation area in the heart of Metropolitan Toronto at the corner of Leslie and Eglinton Avenue is an excellent place to go botanizing. Follow the east branch of Wilket Creek and you will be delighted by a variety of plants not surpassed anywhere within twenty miles of Toronto.

Three varieties of horsetails, northern, field and hairy. Two broad leaf sedges that remain green all winter and produce a flowering spike in May. Rushes, cattails and liverworts. More beautiful asters than you can name. A variety of goldenrods to keep you guessing. Blue berries hanging on bleached dead stalks (blue cohosh). A row of blue berries in twos on a single stem (Solomon's-seal). A bunch of blue berries on a herbaceous vine (carrion-flower). Beggars'-ticks and -lice with hound's-tongue to stick to your legs, also nice little stickers of enchanter's nightshade and tick-trefoil. Black swallowwort and hog peanuts creeping in all directions just waiting to trip you. Sensitive and ostrich ferns dying, but leaving their fertile fronds to mark the place of their demise and rebirth. Dark green Christmas ferns, that remain green all winter. Oak fern and maidenhair. Patches of wild ginger and hepaticas with their enlarged buds all ready for next spring. Up the bank there are doll's-eyes and Indian cucumber with a squirt of purple juice on the upper deck of leaves. Patches of large colt'sfoot leaves where there were only yellow flowers last May. The great stalks of great angelica and cow parsnip

that stood six feet high a month ago. These are the plants you will see and many more on an autumn walk up the Wilket Creek, in the heart of Metropolitan Toronto.

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A GOOD GIFT We bring to the attention of Club members the delicately lovely mobile of ring-billed gulls created by Miss Sylvia Hahn, well-known staff artist at the Royal Ontario Museum and also a member of this Club. Issued by the Margaret Nice Ornithological Club and on sale at the Royal Ontario Museum for \$1.25, this beautiful mobile could make an ideal gift for a naturalist friend.

R. M. Saunders,

Editor.