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# THE OTTAWA NATURALIST

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# THE OTTAWA NATURALIST

VOL. XXIX.

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No. 7

## THE DANGERS OF OUR WILDS.

BY CHARLES MACNAMARA, Arnprior, Ont.

The French traveller, lately returned from Algeria, was frankly joking when he told an enquirer that the most dangerous animal in North Africa was not the lion, as generally supposed, but the gazelle. "The lion," he said, "it never molests you. But the gazelle, when you are riding across the plain, suddenly springs up at your horse's nose; your horse shies, and throws you off and you break your neck." While this was admittedly a pleasantry on the part of the traveller, a consideration of the dangers of our native woods leads to a conclusion almost as surprising.

In the first place, the only real menace to human life comes, not from the animals of our forests, but from the plants. Our woods and fields harbour a far larger number of poisonous plants than is commonly suspected. Everyone knows of poison ivy and the painful and annoying skin eruption it causes; but its effects, however unpleasant while they last, very rarely result in any serious or permanent injury. Much more grave are the consequences of the internal poisonings by plants which attract by their succulent roots or bright-coloured berries. To mention only a very few of the commonest of these, the sweet roots of the hemlocks, *Conium maculatum* and *Circuta maculata*, are most deadly, and the rash partaker seldom recovers. Another plant with a bad record is Indian tobacco, *Lobelia inflata*, which grows plentifully in dry fields. Although it has a strong and disagreeable taste, children, misled by the common name, sometimes chew this weed with fatal results. The bright red pulp enclosing the seeds of the yew, *Taxus bacata*, found all through our woods, is probably harmless enough in itself, but the seeds are very poisonous. The vivid colour of the "berries" makes them attractive to children, and a good many young lives have been sacrificed to them.

But the fungi of the genus *Amanita* have more deaths against them than all the rest of our flora put together. Never a season passes without one or more records of persons fatally

poisoned by these pleasant-tasted but deadly mushrooms. In this connection it may be worth while mentioning that the popular tests of the edibility of mushrooms, such as the blackening of silver during cooking, the change of colour of the flesh when broken, easy peeling of the skin, and a host of others, are all perfectly worthless, and the mushroom eater who relies on them is in mortal peril of his life.

When we turn to the animal life of our wilds we find no such deadly enemies as these. Although our fauna includes a number of large mammals and about a dozen species of snakes, it can be stated with the utmost confidence that, with the single exception mentioned later on, no animal of Eastern Canada ever makes an unprovoked attack on man, and very few of them indeed show any fight even when brought to bay.

Considering first some of the lower forms, it may be remarked that in many countries, insects are to be counted among the worst foes of mankind. The pestiferous mosquitoes of the tropics and sub-tropics, the tse-tse fly of Africa, and the flea that spreads the bubonic plague are best known examples. We have our share of biters and blood-suckers,—deer flies, black flies, sand flies and mosquitoes,—and it is hard to think of anything kind to say about them. They make life in the woods miserable during the finest season of the year; but annoying as their attacks are, at least we must admit that they do not inoculate us with yellow fever or malaria, sleeping sickness or the plague.

Our ophidia comprise about a dozen species. The only venomous one of these, the rattle snake, once common in Western Ontario, is now practically extinct there, and as far as I know, never lived in the Ottawa district at all. Without exception, the other species are perfectly harmless. Some of them, such as the milk snake, live almost exclusively on rats and mice. Others are largely insectivorous, and all of them serve a very useful purpose in helping to maintain that balance of wild life that man sometimes disturbs with such dire consequences to himself. One must then deplore the wanton cruelty and gross superstition that prompt so many people to kill these harmless and beautiful creatures at sight.

The catalogue of mammals of Eastern Canada recites such formidable names as the cougar, the wild cat, the lynx, the bear, the wolf. But it is not among these that our "dangerous" animals are to be found. The cougar, which reached the extreme northern limit of its range in Southern Ontario, has long been extinct in these regions, and while a powerful animal and very destructive of deer and domestic live stock, was never

known to attack man. The wild cat, *Lynx rufus*, is also extinct and was never more to be feared than the harmless necessary domestic variety. The lynx, *Lynx canadensis*, is still fairly common in our northern woods, and despite the blood-curdling stories of some of our nature fakirs, it is a most innocuous creature, living largely on hares and as averse to fighting as the Hon. W. J. Bryan. The bear, *Ursus americanus*, would doubtless defend itself if cornered, but when it meets a man its first impulse is instant flight. A she-bear with cubs generally waits to cover the retreat of her young, but I never heard of one taking the offensive.

And what of the ravening wolves that,—in newspaper stories,—hunt in fierce packs, and devour hapless hunters and trappers? There are certainly plenty of wolves in the back woods, and they destroy large numbers of deer and in some districts kill the young cattle of the settlers. But the cold truth, well known to every woodsman, is that the Canadian timber wolf, large and powerful animal as it is, never attacks anyone. The ordinary farm dog is a far more formidable animal. The wolf is exceedingly wary and has an overwhelming distrust and fear of man and all his works. Anything that man has touched or handled inspires dread in the wolf. Consequently it is very hard to trap or poison him, and even harder to get a shot at him. Although always apparently half famished, he will prowl for days around a dead horse before he dares to feed on it, his exceedingly keen scent warning him that his dread enemy, man, has had something to do with it. Every hunter knows that it is quite safe to leave the carcass of a deer hung from a low branch anywhere in the woods. If there is snow on the ground, the tracks of wolves will be seen all around the suspended game, but not one of them will venture to touch the meat tainted for them by the contact of man. Much less likely are they to attack man himself, and all the stories of their treeing or devouring woodsmen should be categorized with the German statements as to the causes of the war.

The moose is not at all pugnacious, but it is much more respected in the wilds than the wolf. It is not a particularly timid animal, and impelled by curiosity, it sometimes approaches the woods traveller quite fearlessly, its imposing bulk making it appear decidedly formidable. As far as I know, there is no record of anyone ever having been hurt by a moose, but occasionally its threatening attitude causes an unarmed man, perhaps unduly alarmed, to take to a tree. A friend told me recently of a curious display of woodcraft in connection with an obstinate moose. My friend, who was without a weapon of any kind, was crossing a portage in the Kipawa district last summer



with his Indian carrying the canoe on his head as usual, when they suddenly came on a large moose standing in the narrow pathway. The animal showed a determined front and apparently intended to dispute the right of way. It was hard to see how he could be driven off without running the risk of a savage kick, but the Indian, wise in forest lore, knew a safe and easy way. He slipped one end of the canoe to the ground and still supporting the other end on his head, drew his pipe and a match from his pocket. Quickly lighting the pipe, he blew a cloud of tobacco smoke down the wind towards the moose. One whiff of the "tabac canadien" was enough for the King of the Forest and he dashed off into the woods.

Then if our snakes, bears and wolves are all perfectly harmless, what are our "dangerous" animals? Well, as already stated, none of our fauna ever really menace human life; but there are two denizens of the Canadian woods that, though they do not ordinarily command any respect, I am inclined to treat with considerable circumspection. These are the skunk and the horned owl.

The skunk when undisturbed is really a well-disposed and unoffensive little animal. It is never the aggressor as far as mankind is concerned; but it has justifiably great confidence in its peculiar means of defence, and so it stands firmly on its rights and is very loath to make way for anyone. When it thinks it is being imposed on, it takes the literal offensive in a most effective manner, and an incautious approach always results in the loss of a suit of clothes to say nothing of one's dignity.

The horned owl is a much more dangerous enemy than this. It is, indeed, the only creature in our woods that ever makes an unprovoked attack on man. True, it has nothing against man personally, and its assaults are always the results of a misapprehension, but nevertheless it sometimes inflicts painful wounds. Like all its race, it is nocturnal in its habits, and its usual mode of attack is to swoop down in the dusk on the head of the passerby, its long claws causing severe lacerations. It is evident that the bird from its elevated outlook sees the moving figure of the man beneath it very much foreshortened, and mistaking a shock of hair or a fur cap for one of the small animals on which it usually preys, it pounces on its victim. In his most interesting book "Sport and Life on the North Shore" Napoleon Comeau records a number of instances of such onslaughts by the horned owl. I know a man who bears a large scar on his forehead as a consequence of such an encounter, and there are many well authenticated stories of shantymen having been attacked. At one camp it is said that the owls were so plenti-



ful and aggressive that the teamsters had to wear half a pork barrel over their heads when going out to the stables in the dark, but I do not vouch for the terminological exactitude of that story!

But after all, such adventures are very rare, and it may safely be said that the benighted traveller can lay his head anywhere in the woods of Eastern Canada in perfect security from venomous reptile or predacious beast; and with the exception of annoying insects at certain seasons of the year, he need "fear no enemy but winter and rough weather."

#### BIRD NOTES FROM MULVERHILL, MAN.

THE BLUEBIRD, *Sialia sialis*. In this district, during last summer, I did not meet a single one until fall. One day in the autumn, a flock of some twenty birds (mostly young ones) appeared near my home. They remained about half a day and then disappeared. I came to the conclusion that they had been breeding further north, and were on their way south.

CANADA JAY, *Perisoreus canadensis*. During last summer several pairs stayed with us all the summer. This season I have not seen a single one.

NORTHERN PILEATED WOODPECKER, *Phaeotomus pileatus pileatus*. During last summer at least two pairs stayed in our poplar bush all the season. This summer not a single one has been seen.

GREATER YELLOW LEGS, *Totanus melanoleucus*, and LESSER YELLOW LEGS, *Totanus flavipes*. Contrary to the general rule of both, these sister waders have been here in large flocks all this spring. Saw several of them on June 9. Last year I did not see a single one of either variety until late in the fall, when the migrants came down in flocks from the north. I found the nest of a Yellow Legs on June 24, less than a mile from my house.

CANADA GOOSE, *Branta canadensis*. Last year they all passed by both spring and fall; this year at least two pairs are staying in the big marsh in the middle of Birch Lake, evidently breeding.

ERNEST NORMAN.

August, 1915.

## MIMICRY—SOME OF NATURE'S STRATEGEMS.

BY B. C. TILLET, HAMILTON, ONT.

Nature teems with instances of what are called mimetic resemblances, instances of organisms closely imitating their neighbours for the sake of some advantage to be gained thereby. Thus is instituted a sort of system of false pretences, an elaborate series of confidence tricks which in their most interesting examples have the merit at least of being defensive rather than aggressive. It is rather curious that while protective colouration in the general sense has certainly been elaborated, not only for defence but for attack also, that manifestation of it, technically termed mimicry, seems to have been developed solely for the purposes of defence and escape.

The gradation between ordinary protective colouration and the most highly specialised form of mimicry is practically complete. Our green caterpillars, our butterflies with brown undersides to their wings, the colouring of certain birds, and the markings of certain birds' eggs, are all instances of ordinary coloured organisms. They do not resemble anything in particular. Their colours are such that in most of their daily circumstances they harmonise in a general sense with their surroundings, thus ceasing to be specially noticeable, at any rate so long as they are at rest. A further step is illustrated by the caterpillars of those geometers usually called stick-caterpillars. These caterpillars are of such form and colouring that when stretched out stiffly, they have a strong resemblance to short dead twigs, sometimes even with buds and leaf-scars complete; while, to render the illusion quite perfect, they have also acquired the habit of resting in just the very poses that twigs might themselves take up. No better example of this can be found than the caterpillar of *Eunomos magnarius*, which when poised by the hind feet on a twig, with the body thrown backwards into space, may well escape detection by all except the keenest observer. Perhaps one of the most remarkable examples of special protective resemblance is seen in the leafbutterfly of Malay, *Kallima paralecta*. The wings of this insect so exactly resemble a leaf when closed, that it may pass altogether unnoticed. We find an elaboration here again of the protective instinct. These insects have a rapid flight, but they will drop suddenly and closing their wings as they alight, take on all the appearance of a leaf. Thus, they seem to completely vanish. The protective instinct may be observed in many insects. A butterfly which has been captured, fearing destruc-

tion, will lie prone on its side; moths, too, will mimic death by lying on their backs. Beetles will feign death in the same way.

Battle within battle must, Darwin says, throughout nature, be continually recurring with varying success. The weak suffer at the hands of the stronger, and they, having no other means of protection against a stronger enemy, have recourse to various strategies. If the caterpillar does not exhibit the protective resemblance, it may be it is unnecessary, that there are other means of protection existing. There are, for instance, many caterpillars that may be said to be quite conspicuous by their brilliant colouring. But no bird will touch them. Their safeguard, no doubt, is that they taste nasty, and their bright colours thus serve to protect them. Other forms of insect life escape elimination through the development of offensive weapons, such as the sting of wasps and bees. Animals which prey upon these forms learn to avoid them, and thus it becomes an advantage to other insects not possessing such means of protection to mimic them. And so we have that venomous-looking insect the great *Sirex gigas*, and the clear-wing hornet moth, *Sphecia apiformis*, with its abdomen arrayed in the bright colours of the hornet, and its sting-like projection and ovipositor. Yet this is a quite inoffensive and harmless insect.

As in the case of protective resemblance, so too, in its aggressive correlative, the resemblance may be general or special, or may reach the climax of mimicry. Hence, what may serve as a protective resemblance, may also enable the prey to steal upon its enemy. The cuckoo bee *Psithyrus rupestris*, an idle queen, who collects no pollen, and has no pollen baskets, steals into the nest of the bumble bee and there lays her eggs. So great is the resemblance here, that not only is the mother bee able to enter the nest unchallenged, but the young bees when hatched are by the same means enabled to escape. Our various bumble bees, no doubt, find great advantage in so closely resembling one another. Many other insects, too, find equally great advantage in so closely resembling the bumble bees. Many common flies mimic them, and each colour type of bumble bee has its appropriate mimic. Certain bees, called Apathi, are parasitic in the nests of the bumble bees. They are indeed very much like real bumble bees, from which they may be distinguished by the thinness of their fur and the consequent shining appearance of their bodies. These very large bees have precisely the colouring of the true bumble bees. Some are parasitic in the nests of those bees which they resemble in colour, and it may be that this resemblance assists them in entering the nests. Hence, it would seem that the mimicry is not so much an aid to the imposition upon the bumble bees, as a means of protecting the Apathi from the general

enemy. The honey bee has, of course, many mimics, of which the common drone fly is a familiar instance.

Nor is protective resemblance confined to invertebrates. We find it in animals, birds, fish and various reptiles. The wild rabbit is a common example of it. Not so common, but a more striking instance of it, may be found in the zebra. Travellers in Africa have found themselves at night in the presence of zebras, and only been aware of the fact by their breathing. Had the zebras been black, or had they been white, they would have been easily visible, but in the starlight night, the combination of black and white stripes blend exactly with the twilight, and so render them invisible.

Some animals, moreover, possess a variable protective resemblance. We have an example of this in the chameleon, which adapts its colours according to its surroundings, an adaptation which is brought about by the expansion and contraction of certain pigment cells. The same phenomena may be observed in the Arctic hare, and the Arctic fox, animals which change their colour according to the season, brown in summer, and snowy white in winter. Among birds numerous instances of protective resemblance may be noticed; and so too with the eggs of many of our wild birds, which so closely resemble the shingle in which they are laid as to be unnoticeable.

Thus we find that there are two kinds of mimicry. In the one the mimic is really weak and defenceless, but by assuming the appearance of some better armed and perhaps savage species, acquires also the latter's evil reputation. This is called Batesian mimicry. In the other we have the real hard cases, creatures which are as well protected by unamiable qualities as they well can be; and which imitate equally disagreeable beings merely for the sake of the additional free advertisement of their ill qualities which the latter afford. This is called Mullerian mimicry.

Mimicry depends for its effective expression upon the power that all the higher animals have of memorizing their experiences. The puppy which captures the bee and is stung learns to avoid such dangerous playthings. In this way the death of one or two individuals frees the whole species from danger of attack by that particular puppy. Moreover, any other kinds of bees, or of other insects resembling in appearance the first one, would also be looked upon with suspicion and avoided. So that the deaths of these one or two individuals would have the effect of protecting every kind of insect that resembled them in appearance.



## BOOK NOTICE.

The Dominion Parks Branch of the Department of Interior, Ottawa, has recently issued three publications which are noteworthy on account of the attractive form in which they are printed, and the interesting matter they contain. They are: "Classified Guide to Fish and Their Habitat, Rocky Mountains Park"; "The Nakimu Caves"; and "Glaciers of the Rockies and Selkirks."

The Fish Guide is written for the sportsman and naturalist rather than the scientist. It is a compilation of first-hand information for anglers by one who has fished in all the principal waters of the park. It takes up each locality, describes the best means of reaching it, the different varieties of fish which can be secured, and the best bait to use. The game fish of the Rockies include five species of trout, one of which—the Lake Minnowanka trout—has been known to run as high as 50 pounds. The Grayling, the Dolly Varden, and the Cut Throat trout are found in many of the lakes and streams of the park, and a fish hatchery has recently been established at Banff for the purpose of restocking those which have become depleted.

The second pamphlet gives an interesting account of the formation, character and discovery of the famous Nakimu Caves near Glacier, B.C. These interesting natural curiosities are supposed to be about 40,000 years old, and consist of a series of underground chambers, some of them fifty feet high and more than two hundred feet long, hollowed out partly by erosion and partly by volcanic action, and opening into each other at different levels. The walls of the caves are covered with strange fluorescent limestone formation, and they reverberate to the roar of underground torrents. The different chambers have been given names suggestive of their character: "The Pit," "The Marble Way," "The Ballroom," "The Art Gallery," "The Judgment Hall," "The White Grotto," "The Bridal Chamber," etc., and when they are lit with electricity, and proper guards and handrails have been placed on the stairs and platforms, they should be among the most interesting sights in the Rockies for tourists.

"Glaciers of the Rockies and Selkirks" is by Dr. A. P. Coleman, Professor of Geology in the University of Toronto, and bears on the cover an attractive reproduction in color of a sketch of Mt. Ball, one of the picturesque peaks near the Divide. Dr. Coleman is a scientist with the imagination of a poet, and he has written the story of the formation and work of the Canadian glaciers with all his well known literary charm. The pamphlet

should prove not only a great help to the student of glacial phenomena who visits the parks, but it should inspire many Canadians with a desire to see the wonderful mountain scenery of their own country for themselves, "to put on," as Dr. Coleman says, "warm, strong clothes and hob-nailed shoes, and to fill one's lungs with mountain air in a scramble up to the snow fields to see how the glacial machinery works."

The pamphlets may be obtained free on application to the Dominion Parks Branch, Ottawa.

### A HYBRID ROSE.

*ROSA GYMNOCARPA* NUTT. X *R. NUTKANA* PRESL.

Stems rather slender, 1.3—2 m. high; prickles below densely soft-prickly, slightly retrorse, above slender but stiff; leaflets simply serrate, 1—2.7 cm., broad, oval, rounded at both ends, glabrous beneath; stipules broad; flowers mostly in clusters of 2—4 or solitary, bright pink with pink stigmas 4—4.5 cm. broad; calyx more or less glandular, persistent, the appendages 5—15 mm. long; receptacle at flowering 3—6 mm. in diameter; pollen scanty and abortive; fruit mostly not developing, the few seen 7—8 mm. in diameter, producing few nutlets.

Several clumps of this rose occur near Crescent Beach, B.C., at the base of a bluff facing Boundary Bay. The bushes, with their rather slender flourishing stems, rising somewhat above the surrounding *R. nutkana*, look much like *R. pisocarpa*, especially as the flowers are mostly in small clusters, and smaller than those of *R. nutkana*. *R. pisocarpa*, however, does not occur in the immediate vicinity, and does not flower till late in June. The plant just described flowers with *R. nutkana* and *R. gymnocarpa*, all three being in full bloom May 20, 1915.

The clustered flowers, the prickles and the glabrous leaflets, suggest *R. gymnocarpa*; the large leaves and the glandular persistent sepals, *R. nutkana*. With its long, rather slender, very floriferous stems and bright flowers, this is a most attractive rose. It is readily, even at some distance, distinguished from *R. nutkana*, by which it is surrounded, by the brighter pink petals.

J. K. HENRY.

### NOTE.

In Mr. P. A. Taverner's article, "Geological Survey Museum Work on Point Pelee, Ont.," published in the November, 1914, issue of THE OTTAWA NATURALIST, the year in which the observations recorded therein were made is not mentioned. This was 1913. Ornithologists please note.

PARTIAL LIST OF LITERATURE IN THE LIBRARY OF  
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