

The

This is Young Naturalist Year: 1966-67
Do you have a Young Naturalists Club in your school?

Young Naturalist



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The Fearless Weasels

Nowadays, chickens and eggs for the table are produced by thousands in what unkind people have seen fit to refer to as "chicken factories". It has been a useful form of mechanization and what used to be seasonal luxuries are now among the cheapest foods.

In times past, chickens used to be allowed to feed in the open by day and retreat to the chicken coop by night, if they did not actually roost in trees. Every once in a while a farmer would go out in the morning and find a number of his flock lying dead, with heads or necks partly eaten. It was easy to recognize the work of what was called simply, "the weasel."

The predator involved was (and still is) the *Long-tailed Weasel*, which lives in the temperate parts of North America. In southern Ontario

it may, or may not, turn white in winter. On the prairies, where there is an especially large and long-tailed variety, it always turns white. Northern weasels share with one of the lemmings, the Snowshoe Hare, Arctic Fox, and the prairie Jack Rabbit, the characteristic of having a white winter coat. The ptarmigan, a bird in the grouse family, also turns white. In summer weasels are brown above and creamy-white below. At all times they have a black tip to the tail, except for the tiniest species of all, the Least Weasel.

The normal food of the Long-tailed Weasel is mice, unless he is in "gopher" (ground squirrel) country. Here in Ontario you can lie down and squeak like a mouse and any of our weasels will come to you, provided the squeak is convincing. I have

had the beady little eyes, with their glint of red, looking straight into mine from less than two feet away.

A weasel will attack any identifiable throat, regardless of size. A rabbit might get away from a small weasel, but once the weasel gets a hold, the rabbit is in trouble. Likewise, a weasel will fight back at any foe, regardless of size. For this reason they were greatly admired by the Indians, and weasel skins and mummified weasels — dried-out bodies — were regularly carried in medicine bags or attached to medicine bundles, coup sticks, and even to headdress.

The commonest weasel in Canada is the *Ermine*, or *Short-tailed Weasel*, found all over the country. A true northerner, he rarely ever bothered

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Ermine winter pelage Paul Gensley

THE YOUNG EXPERIMENTER

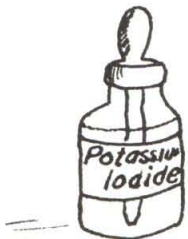
DISSOLVED CHLORINE IN WATER

TOWN AND CITY WATER SUPPLIES OFTEN CONTAIN SMALL AMOUNTS OF CHLORINE IN SOLUTION.



THE CHLORINE KILLS HARMFUL BACTERIA, ALTHOUGH HARMLESS FOR HUMANS (WHO DRINK IT) IT CAN KILL PET FISH. (WHO BREATHE IT). AT CONCENTRATIONS AS LOW AS ONE PART PER MILLION IT CAN BE DETECTED IN WATER BY THE HUMAN NOSE.

A CHEMICAL TEST FOR CHLORINE

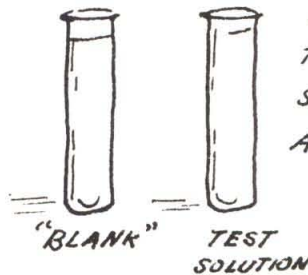


ADD TWO PINCHES OF POTASSIUM IODIDE CRYSTALS TO AN OUNCE OF WATER, DISSOLVE, AND POUR THE SOLUTION INTO A DROPPING BOTTLE.



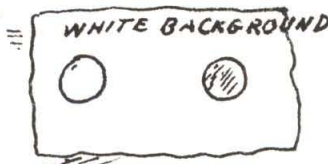
PREPARE AN OUNCE OF STARCH INDICATOR BY BOILING A FEW GRAMS OF STARCH IN WATER.

TO CARRY OUT THE TEST TAKE TWO TEST TUBES OF IDENTICAL (AS MUCH AS POSSIBLE) SIZE AND APPEARANCE AND FILL BOTH TO THE SAME LEVEL WITH THE WATER TO BE TESTED.



ADD 4 OR 5 DROPS OF THE POTASSIUM IODIDE SOLUTION TO THE TEST SOLUTION, AND SHAKE TUBE.

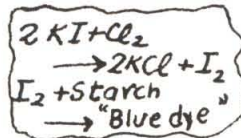
ADD THE SAME AMOUNT OF STARCH INDICATOR AND SHAKE TUBE AGAIN.



HOLD THE TWO TEST TUBES SIDE BY SIDE LOOKING DOWN THROUGH THE TOPS OF THE TUBES.

THE SHADE OF BLUE INDICATES THE LEVEL OF CONCENTRATION OF CHLORINE.

ASK YOUR TEACHER WHAT THE CHEMICAL REACTIONS ARE.



IF YOUR TAPWATER APPEARS TO HAVE NO DISSOLVED CHLORINE

COAX YOUR MOTHER TO CHLORINATE A GALLON BY ADDING TWO DROPS OF HER CONCENTRATED LAUNDRY BLEACH. THE WATER NOW SHOULD HAVE ABOUT ONE PART PER MILLION FREE CHLORINE. TEST AGAIN.

PLAN AND CARRY OUT AN EXPERIMENT TO FIND OUT HOW LONG CHLORINATED WATER MUST BE LET STAND BEFORE IT IS SAFE FOR FISH. FIND OUT THE EFFECTS OF FILTERING THROUGH CHARCOAL.

Club News



The Macoun Field Club of Ottawa is one of the oldest junior clubs in the province, and probably one of the most active. Founded nineteen years ago, it is sponsored jointly by the National Museum of Canada and the Ottawa Field Naturalists' Club. This month, Kathy Fairbarns tells us of some of its recent activities:

"The Macoun Field Club met for the first time this year in early September, and is off to a good start. This year we plan to have more debates and discussions, as well as having members make speeches more often than last year.

"The Executive this year are as follows:

President: Derek Munro

Vice-President: Don Lafontaine

Secretary: Kathy Fairbarns

Roll Call: Cathy Kilshaw.

"A few weeks ago we participated in an experiment conducted by Dr. Brodo, our leader. This was one of the best meetings we have had.

"We have been on one main field trip so far this year, to the Lusk Caves in Gatineau Park, near Ottawa. This was a terrific field trip; we observed stalactites, caught fish in a stream running through the caves, and generally had a great time wandering around the caves.

"This year we are putting out a monthly newsletter, with a schedule of meetings, speakers, scientific data and write-ups of field trips."

BARBARA WILKINS

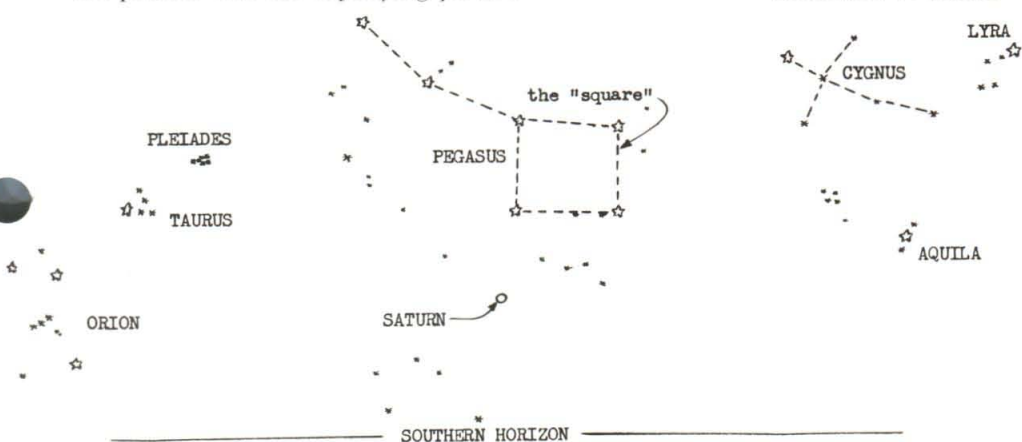
Observing the Motion of a Planet

The word "planet" means "wanderer" and these objects, of which five were known before the invention of the telescope, were so named because they appear to wander or move among the stars. The planets, including the Earth, all move in orbits about the Sun and require from three months to many years to complete one orbit. The stars are also moving but, because they are so very far away, one must wait hundreds or even thousands of years before any change in position in the sky is noticed for even the nearest of them.

During the coming winter months Saturn will be visible every night from sunset on and this provides us with the opportunity to observe the motion of the planet. The accompanying picture

shows the appearance of the southern sky at the present time with Saturn situated just below the stars of the constellation Pegasus (the 'Flying Horse'). It is suggested that at least once every two weeks you find Saturn in the sky and draw a picture, similar to the one shown here, showing Saturn and the "square" in Pegasus. You should do this each time without referring to your previous drawings. Remember to write the date on each drawing. If this is done regularly and carefully, within a few months you will see that Saturn is indeed moving and changing its position in the sky. Those who are really ambitious will want to compare their first drawing this year with one made next year at the same time.

DOUGLAS P. HUBE



WEASELS — from Page 1

chickens. Ermines run from nine to twelve inches or more in length, Long-tailed Weasels from eleven to seventeen inches. In each case the small ones are females and the large are males. Where Long-tailed Weasels may retain a touch of brown, all ermines turn white, but the white usually has a yellowish cast which the furrier has to bleach out.

There isn't much demand for ermine skins now because they are used principally for robes of state worn at coronations. Weasels are easy to catch but because they bring so little money they are not normally sought by trappers. When they do get caught, being small, they are killed humanely in any kind of trap.

Most of the weasels in our fur trade are ermines caught around camp by Indian children, especially the teen-age girls who do not go out on the trapline. Now weasels, like many other animals in the north, vary enormously in numbers from year to year. After a summer when the mice have been very numerous there are likely to be many weasels around, and the Indian children make lots of pocket money. After King George VI died, some Indian trappers went into the bush without anyone having told them about the forthcoming coronation (you know whose?). They found lots and lots of weasels but did not bother to catch any. When they came out, they found the price had gone sky-high, and the weasels that the girls had caught were worth more than the beavers their fathers worked so hard to get.

There is a third kind of weasel in Canada, the *Least Weasel*, or *Mouse Weasel*. Like the others, it is creamy-white below and brown above in summer, has a snaky body with very short legs, and turns white in winter. As we have already noted, unlike the other two kinds, the tip of its tail is not black, and, for a predator, it is oh! such a tiny beast! The females at seven inches are only a little longer than the field mice on which they prey, and males are only eight inches long. Few people ever see them.

C. A. D. CLARKE

WOODLORE FOR THE NATURALIST

— John Macfie —

A Good Cone Year

Evergreen trees produce good seed crops only in occasional years. Conditions evidently were right in 1967 for most "conifers" are now heavily laden with cones. This is best demonstrated by White Pines whose topmost branches are drooping under the burden of thickly hung six-inch cones.

A cone is a capsule of many winged seeds sandwiched between protective scales attached to a central column. When the cone opens, seeds "wind-mill" to the ground, spreading for some distance down wind.

Cones of the different species vary in a number of ways and are a reliable aid to tree identification. One of the surest ways to distinguish between Black Spruce and White Spruce is by cone size and shape (Black Spruce cones are about half as large as White

Spruce), Balsam cones shed their scales while still on the tree; other trees drop their emptied cones intact. White Pine cones take two years to mature.

The Jackpine of Northern Ontario possesses a unique characteristic. Under normal conditions the hard, tight cones of this tree may remain unopened for years. When subjected to the heat of a forest fire however, a vast accumulation of cones pops open and in no time the burned tract is thoroughly re-seeded. The implication is that fire (until man's appearance on the scene all fires were lightning-caused) is a normal event in the northern forest, since nature has provided a tree that stands ever ready to reclaim the denuded landscape.



Photographs by John Macfie



A pure Jackpine stand such as this could only occur as the result of a forest fire, the heat of which opens the cones, and releases the seeds. Note the heavy White Pine crop. The pine cones are about six inches long.

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