

*The
Lady's-slipper*



Spring 1987
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THE LADY'S-SLIPPER

The Lady's-slipper is the official newsletter of the MacNamara Field Naturalists' Club, P.O. Box 94, Arnprior, Ontario, Canada K7S 3H2.

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PRESIDENT'S MESSAGE

by Michael W.P. Runtz

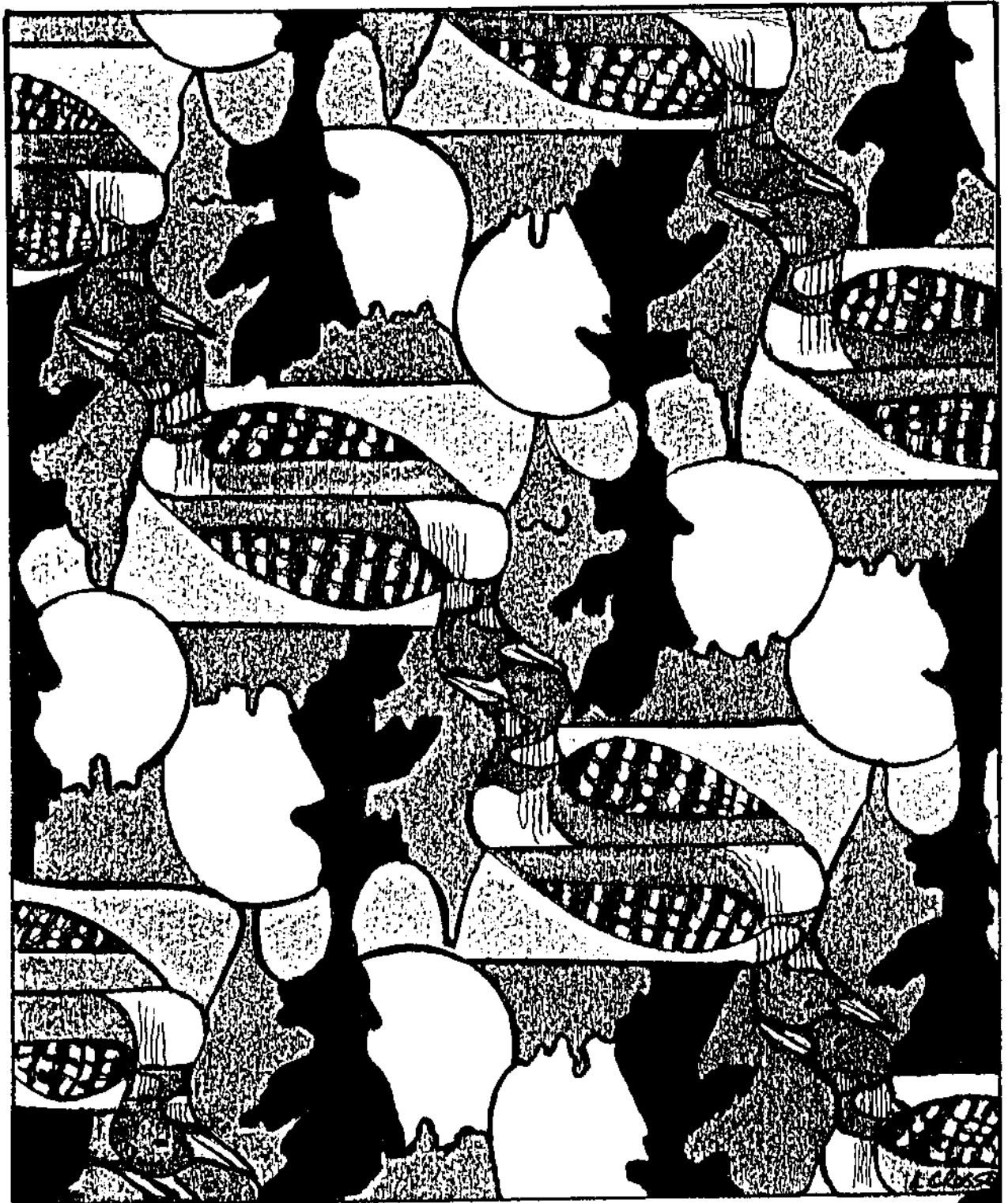
Welcome all to another new and exciting year. Field-naturalists like ourselves anticipate each year and its approaching seasons with an ever-fresh eagerness. We look forward to the return of 'old friends': the first Horned Larks adorning our country roads in February; the first Hepaticas blooming among the decaying remains of winter's snow; the first Mourning Cloak butterfly soaking up spring's warm rays. To each of us, the seasons bring back the familiar. But perhaps more importantly the seasons also bring a multitude of new experiences. Regardless of the aspect of natural history to which one is attracted, the elements of surprise and delight never vanish. The world around us is so complex that to learn 'it all', even in reference to one small aspect, is impossible. Any person who claims to be an 'expert' in any of the areas we study is only fooling him or herself. Perhaps the reason that we find natural history so fascinating is that throughout our lifetime we will never stop learning and enjoying. And the beauty of it all is that we never even have to leave our own area in order to do so--that is, as long as we ensure the preservation of our special haunts.

One major achievement of the past year was the purchase of a 20-acre cedar swamp near Stewartville. The money was donated by local residents, and the Federation of Ontario Naturalists (FON), with whom our club is affiliated, received the property and declared it an official Nature Reserve. Our club has the right to visit it on field trips at any time. Several trips for orchids have taken place in the past and, in particular, the Botany Group, led by Adolf Vogg, has used the property for botanical study. An article on this Reserve appeared in the Winter 1986 issue of Seasons, the FON publication.



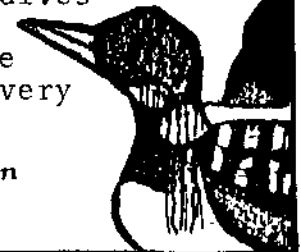
Over the past few years I have enjoyed the association with you, the club members, and look forward to another year together!

'Good naturalizing!'



"We see ... beautiful co-adaptations most plainly in the woodpecker and the mistletoe; and only a little less plainly in the humblest parasite which clings to the hairs of a quadruped or feathers of a bird; in the structure of the beetle which dives through the water; in the plumed seed which is wafted by the gentlest breeze; in short, we see beautiful adaptations everywhere and in every part of the organic world."

- Charles Darwin





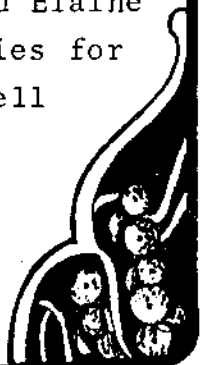
THE 1986 PAKENHAM-ARNPRIOR
CHRISTMAS BIRD COUNT —
DECEMBER 26

by Michael W.P. Runtz

The 1986 bird count can be deemed nothing but extraordinary. Foul weather conditions were forecast, but instead calm, mild conditions prevailed. Good visibility is essential for spotting birds while calm conditions are necessary for hearing them. With both of these factors being satisfied, and with 37 participants, it was not completely surprising that a record number of species were tallied. As the count area comprises a 15-mile diameter circle, the more observers out on the count means more complete coverage, and therefore more birds.

Most observers start off just before sunrise in order to hear owls calling. Generally, the best 'owling' occurs between 6:30am and 7:15am (for the Boxing Day period). However, I tried owling from midnight to 1:00am, and then from 4:00am to 7:15am. The result -- only one owl! Fortunately it was a Northern Saw-whet Owl, the first on our count since 1930 when one was located on the Arnprior Count. (The present count covers an area formerly covered by two separate counts, the Arnprior Count taken from 1913 to 1939, and the Pakenham Count taken from 1925 to 1969. The present count began in 1970.)

This year, each of the 17 parties seemed to have an exciting moment to relate at the compilation. Jim and Elaine Stewart located a tardy Great Blue Heron, a new species for the count. Verna McGiffin, Bill Ross, and Marty Russell spotted another new species, the rare Golden Eagle. Verna related to me that this was the most exciting moment she had experienced in any of the counts in which she has participated over the past 60 years!



Other exceptional birds included a Bald Eagle, two Short-Eared Owls (also a high count), a Northern Hawk-Owl, a Barred Owl, and a Ring-necked Pheasant. Record high counts for species included 18 Red-tailed Hawks, 917 Rock Doves, 103 Mourning Doves, 19 Pileated Woodpeckers, 14 Northern Shrikes, and 10 House Finches.

In total, 8,693 birds were tallied on Boxing Day. The following is a list of all the species reported:

| | |
|-------------------------|------|
| Great Blue Heron | 1 |
| Am. Black Duck | 1 |
| Com. Merganser | 2 |
| Bald Eagle (immature) | 1 |
| N. Goshawk | 3 |
| Red-tailed Hawk | 18 |
| Rough-legged Hawk | 12 |
| Golden Eagle (immature) | 1 |
| Am. Kestrel | 8 |
| Gray Partridge | 26 |
| Ring-necked Pheasant | 1 |
| Ruffed Grouse | 46 |
| Rock Dove | 917 |
| Mourning Dove | 103 |
| Great Horned Owl | 7 |
| Snowy Owl | 5 |
| N. Hawk-Owl | 1 |
| Barred Owl | 1 |
| Short-eared Owl | 2 |
| N. Saw-whet Owl | 1 |
| Downy Woodpecker | 75 |
| Hairy Woodpecker | 64 |
| Three-toed Woodpecker | 1 |
| Black-backed Woodpecker | 4 |
| Pileated Woodpecker | 19 |
| Horned Lark | 8 |
| Blue Jay | 200 |
| Am. Crow | 120 |
| Com. Raven | 8 |
| Black-capped Chickadee | 879 |
| Red-breasted Nuthatch | 25 |
| White-breasted Nuthatch | 69 |
| Brown Creeper | 10 |
| Golden-crowned Kinglet | 5 |
| Bohemian Waxwing | 298 |
| N. Shrike | 14 |
| N. Cardinal | 1 |
| Am. Tree Sparrow | 63 |
| Song Sparrow | 1 |
| Dark-eyed Junco | 13 |
| Snow Bunting | 1595 |
| Red-winged Blackbird | 4 |

Harvest Moon

Oh harvest moon to see thee rise
As a mammoth orange in the sky,
Your dancing moon-beams the river splash
Reflecting a golden, variant sash.
The silhouette of naked trees,
One distant star could be Pisces.
Now the moon is hiding from view
Under a cloud playing 'peek a boo'.
Humans are often far too busy
Autumn's charm slips by in a jiffy.
To planet earth, Luna, the moon, is near
The three latter months of the year.
Rising higher, with such brilliance aspire
Facial features so meaningful clear
Many admiring eyes must gaze
Upon your beauty in silent praise.

-by Ruth Charbonneau

cont'd

| | |
|-------------------|------|
| Com. Grackle | 1 |
| Pine Grosbeak | 145 |
| Purple Finch | 2 |
| House Finch | 10 |
| Red Crossbill | 6 |
| Com. Redpoll | 756 |
| Pine Siskin | 88 |
| Am. Goldfinch | 127 |
| Evening Grosbeak | 1648 |
| House Sparrow | 914 |
| | |
| Total Species | 53 |
| Total Individuals | 8693 |

Michael Runtz, President of the Club, has been the compiler of the Pakenham-Arnprior Christmas Bird Census for several years.

A Swallow Rendez-vous in Pembroke



Several thousand swallows converge on the City of Pembroke every summer from mid-July to late August. During this annual rendez-vous they can be seen performing spectacular aerobatic displays as they prepare to enter their traditional roost each evening near the Pembroke marina.



In the past few years approximately 27,000 swallows were at the roost in July, with the numbers peaking at about 150,000 in early August.



The aerial show, unparalleled anywhere else in North America, attracts crowds of people every year and inspired the Pembroke and Area Bird Club to sponsor the annual Festival of Swallows. Activities at the festival have included bird watching expeditions, boat tours to Oiseau Rock, a fishing derby, a wildlife art show, a photo contest, sunset boat cruises, and a tour of the Ottawa Valley bluebird trail.



Pembroke's swallow roost gained national attention -- in particular from the Canadian Wildlife Federation -- in 1983 after local birdwatchers began publicizing its location. The roost is considered one of the largest single swallow roosts on the continent. The best times to view the birds in July and August are at dawn (about 5:25am) and at dusk (about 7:30pm).



DYES FROM THE NATURAL WORLD

YELLOW DYES:

BIRCH/ Mordant Alum 3/4 cup
Cream of tartar 1/4 cup
Water 2 gallons

Dissolve the alum and cream of tartar in the water, and bring to a boil. Add the wet wool, and boil gently for 45 minutes. Hang up to dry.

Dye Bath Birch leaves, dry (any species 1 gallon
Water

Crush the leaves, cover with water, and soak overnight. The next day boil for 20 minutes. Strain and discard the leaves. Add cold water to the liquid to make 2 gallons. Bring to a boil and add the dampened, mordanted wool. Boil gently for 30 minutes. Rinse and dry.

RED DYES:

CARDINAL FLOWER/
Mordant Alum 1 cup
Water 2 gallons

Dissolve the alum in the water, and bring to a boil. Add the wet wool and boil gently for 1 1/2 hours. Let the wool cool in the water, and then hang up to dry.

Dye Bath Cardinal flowers, fresh 2 to 3 quarts
Water

Cover the flowers with water, and boil for 20 minutes. Strain and discard the flowers. Add cold water to the liquid to make 2 gallons. Bring to a boil, and add the dampened, mordanted wool. Boil gently for 45 minutes. Rinse and dry.

Source: The Complete Illustrated Book of Dyes from Natural Sources. Arnold and Connie Krochmal. (New York: Doubleday & Company). 1974.



POISONOUS MUSHROOMS

by John F. Morgan-Jones ©

Fall is the season for collecting mushrooms; and since mushroom-hunters are generally mushroom-eaters, their hobby has its dangers. For scarcely a year passes without someone falling a victim to mushroom poisoning, the most recent case having been reported by the Ottawa Citizen on Aug. 26, 1986. In this connection, I quote the following warning by Dr. Scott Redhead, a mushroom specialist with Agriculture Canada: "There are probably about 1500 species of mushrooms found in the Ottawa area.... (Of these) about 15 per cent are toxic, and one to two per cent are lethal." Obviously, in a brief article such as this, it would be impossible to review all poisonous species; so I propose to limit myself to the one mentioned by the Citizen -- the so-called "Destroying Angel" or "Angel of Death", *Amanita virosa*. And my species

Amanita virosa related, the known

remarks also apply to a second mentioned in the news item -- *bisporigera*. This is because *Amanita* and *Amanita bisporigera* are closely very similar in appearance, contain same deadly toxins, and are both as the "Destroying Angel".

To begin with, there is no 'rule-of-thumb' by which a poisonous mushroom may be recognized. For example, one 'old wives' tale' assures us that "the mushroom is edible if the cap can be peeled." Nothing could be further from the truth! The only way to determine whether or not a mushroom is edible is to have it identified by an expert. Yet even then there may be problems, since edible species have been known to produce unpleasant allergic reactions in many people. But if all 'rules-of-thumb' must be rejected as



downright misleading, how may the deadly "Destroying Angel" be reconized and avoided? Furthermore, why should it be singles out for attention when other mushrooms of different genera are now known to contain the same deadly toxins? The answer is simple: the "Destroying Angel" is conspicuous; its chalk-white hue and often graceful form tend to catch the collector's eye. But before describing it in detail, let me cite some facts about mushrooms in general, for these fleshy natural objects that seem to spring so mysteriously from the ground are only part of a complex life-cycle. Next time you find one of them, carefully remove any surrounding plant debris and then you may see, extending out from the base of the stalk, a network of delicate cobweb-like strands. This "spawn" or *mycelium* is actually an aggregation of living, probing microscopic filaments that live perennially in the soil. Given favourable conditions of temperature and moisture, some of these filaments grow into a compact mass or "button", and from this develops the mature mushroom whose sole function is to produce the spores that will give rise to the next generation. Take, for example, the "supermarket mushroom", *Agaricus brunescens*: Examine one of these commercial specimens and you'll see that the stalk or *stipe* is surmounted by a cap or *pileus*, on the undersurface of which are spore-bearing folds of tissue called gills or *lamellae*. In very young specimens, these gills are hidden by a delicate veil of tissue, the *velum*, which extends from the edge of the cap to the upper part of the stalk. As the whole mushroom expands, the velum ruptures; however, its remnants often persist on the stalk as a delicate ring, the *annulus*. Now take a magnifying glass and look at the gills that radiate out from the centrally located stalk to the edge of the cap. If you were to examine one of these gills with the microscope, you'd find that its surfaces are lined with specialized cells called *basidia*. Each basidium extrudes typically four spores at its tip and fires them off like tiny bullets. Now, if you detach the stipe and place the cap, gill-side down, on a piece of glazed, white paper, cover it with a cup and leave it overnight, you'll find that the ►

discharged spores falling on the paper have formed a pattern of the gills. This pattern we call a spore-print, and its colour is an important factor in mushroom identification. Thus, in the case of *Agaricus brunescens*, the colour of the pattern is chocolate brown, indicating to the expert that this particular species belongs in the Family Agaricaceae. And, depending upon the the particular mushroom family involved, the colour of the spore-print may be pink, rusty brown, white, and so forth -- which brings us full circle to *Amanita virosa*, whose spore-print (as in all the Amanitas) is white.

The "Destroying Angel" is a forest mushroom, occurring in association with hardwoods such as birch and aspen. Actually, it is performing an important biological function, for the probing threads of its mycelium penetrate the roots of certain trees to form a mycorrhizal condition -- a symbiotic relationship from which tree and fungus derive mutual benefit. But, assuming you found a specimen of *Amanita virosa*, how would you recognize it (aside from noting its snow-white appearance)? First, excavate it carefully by digging up the soil around the stalk. Next, having freed the complete specimen, gently remove any remaining soil particles and (in the case of *Amanita virosa*) you'll find that the bulbous base is surrounded by a delicate, membranous sac -- the *volva*. This feature, coupled with the annulus (that fragile frill of tissue surrounding the stalk just below the cap) are warning signs that the mushroom should be rejected as potentially deadly! Unfortunately, the annulus may not always be evident. Therefore, the volva must be the crucial feature -- and for a very good reason. You see, *Amanita virosa* has an innocent look-alike, *Leucoagaricus naucina*. This mushroom is also white, leaves a whitish spore-print, and has a bulbous base. However, it lacks a volva and possesses additional features by which the trained collector can recognize it. For the inexperienced mushroom-hunter, however, Mother Nature has prepared a diabolical trap. The volva of *Amanita virosa* is not always easy to discern, so that the unfortunate novice has been

known to eat the "Destroying Angel" thinking it to be *Leucoagaricus naucina*. Nor is this relatively innocuous species the only one to have caused problems for the casual collector. Remember my mentioning that those threads of mushroom "spawn" in the soil may form a "button" stage from which the mature mushroom develops? Well, the "button" of *Amanita virosa* can be mistaken for a young "puff-ball", and naive collectors have been known to have eaten it as such. Nevertheless, the cautious collector can avoid this trap by cutting the "button" into two equal halves with a sharp knife or razor blade. If the specimen is a "Destroying Angel" in embryo, an outline of the cap and stalk will be apparent in the cut surfaces. On the other hand, the cut surfaces of a puff-ball will each appear as a compact mass of undifferentiated tissue.

And why is *Amanita virosa* so deadly? Because it contains toxins called amanitins, which actually destroy the cells of the liver, kidneys, and other organs. Moreover, the amanitins are insidious, since their effect does not become apparent for some hours after the mushroom has been ingested. In fact, a period of from six to 24 hours may elapse before the victim is siezed with excruciating abdominal cramps, accompanied by persistent vomiting and dysentery. This stage may be followed by a period of remission when the victim seems to be recovering. But then the symptoms return, and the sufferer gradually lapses into a coma ending in death.

How may the confirmed mushroom-eater avoid such an unpleasant fate? Alas, this is not an easy question to answer, since the occurrence of amanitins in the mushroom population is by no means confined to species of *Amanita*. Moreover, there are other mushrooms which, though not deadly in the sense that the "Destroying Angel" is, may nevertheless be life-threatening. Still others, though not actually lethal, can make the luckless consumer violently sick. And so one arrives at the melancholy conclusion that, while mushroom poisoning of some kind will always remain a possibility, its probability can be minimized by observing the following rules: ▶

- 1) If you know by experience that a certain wild mushroom is edible, stick to it. Only the adventurous soul falls victim to mushroom poisoning.
- 2) If you are tempted to eat an unfamiliar mushroom, first have it identified by an expert. If he/she claims it is edible, ask the person to eat it. Then wait.
- 3) Remember that even a mushroom pronounced 'edible' may cause an allergic response in certain individuals. *Leucoagaricus naucina*, for example, has no effect on some people, while in others it can cause a severe gastro-intestinal upset.
- 4) Never give mushrooms of any kind to very young children!

Finally, how do you cope with the gracious hostess who offers you a fragrant stew of freshly picked wild mushrooms? Remember Nancy Reagan and just say "no."

You may feel like a boor, but you'll go home with a healthy liver.

ANNUAL MUSHROOM FIELD TRIP, SEPT. 6

by Jack Gill

THE ANNUAL MUSHROOM FIELD TRIP WAS HELD SEPT. 6 IN VERY COOL, WINDY, BUT FAVOURABLE WEATHER. DR. JOHN MORGAN-JONES WAS ABLE TO IDENTIFY AT LEAST 35 SPECIES FOR THE 10 PERSONS PRESENT. WORTHY OF SPECIAL NOTE WERE THE DEADLY AMANITA VIROSA AND ITS DANGEROUS COUSIN, THE HALLUCINOGENIC AMANITA MUSCARIA. MANY MUSHROOMS MUST REMAIN UNCLASSIFIED AS TO POISONOUS OR NON-POISONOUS, BUT WERE VERY ATTRACTIVE, SUCH AS THE EXQUISITE ORANGE-RED HYGROPHOROUS, THE SPECTACULAR GANODERMA APPLANATUM (ARTIST'S CONCH), THE COLOURFUL RUSSULAS, AND THE BRIGHT ORANGE SLIME MOULD IN CREVICES OF ROTTING LOGS.

MEMBERSHIP SURVEY 1987

NAME: _____

ADDRESS: _____

TELEPHONE #: _____

Fields of Interest:

(Please indicate by checking the boxes)

Birds

Botany (wild flowers, orchids, ferns, trees, shrubs, etc.)

Mushrooms

Insects (butterflies, etc.)

Geology (minerals, fossils, etc.)

Mammals

Reptiles and amphibians

Nature photography

Other (please specify) _____

If you are knowledgeable in one or more of these areas, would you be prepared to contribute to the club by being a guest speaker or by leading a field trip? Yes No

Would you like to see the club arrange other types of activities or embark on other projects? If so, please comment: _____

(Please send your comments to the M.F.N.C. or hand them in to a member of the executive at an upcoming monthly meeting.)

