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Meadow mushrooms.

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AFIELD WITH THE MUSHROOMS

The autumn is the season of the year when the floral wealth of the countryside is crystalizing into seed and fruit. Among this throng of busy harvesters are the members of the fungus tribe to which the mushrooms belong, the spore-bearing parts of which are eagerly sought either by those who appreciate the edible qualities of some of them, or delight in studying the amazing variety of form and colour which they display. The knowledge that one or two species possess some of the most deadly poisons adds a spice of adventure and a respect for the lowly mushroom that might not otherwise exist.

The mycelia or underground threads that precede the formation of the cap or spore-bearing part of the mushroom, play an important part in the economy of nature. Not only do they help to reduce rotting wood and herbage into good humus, but they are sometimes essential to the best development of forest trees, in that the fungus mycelium and the fine root hairs of the trees are intimately entwined, to their mutual benefit, by the exchange of basic elements for growth.

A walk through a piece of varied country that provides open woods and grassy glades should yield an interesting variety of the larger species, depending upon the season. Ten days or so after a heavy rain preceded by warm weather affords the ideal conditions for an abundant display of mushrooms, provided the terrain has not been unduly damaged by man's many destructive agencies.

One of the commonest and also most destructive mushrooms is the Honey Agaric, Armillaria mellea; the translucent brown caps often occur in masses, especially at the base of oak and other trees. Its shoe-lace development of the mycelium enables it to spread from one tree to another by bridging barren spots.

The most poisonous mushroom to be found in our district is the Fly Agaric (Amanita muscaria) which usually has a pale brown to yellow cap, though typically scarlet, adorned with

a number of white scales; these with the white gills, pendulent ring and evidence of a cup at the base of the stem are quite distinctive of the species.

Perhaps one of the most delicious of the edible kinds is the Shaggy Mane (Coprinus comatus) whose upright closed-umbrella type of cap that later dissolves into an inky fluid at once distinguishes it. Only the young fresh specimens should be eaten.

In some seasons the most conspicuous mushrooms are the various kinds of Russulas; their large thick caps may then be seen dotting the open ground under coniferous trees in a variety of colours, from purple, to brown and tan, to crimson and white. Their flesh is dry and very brittle, and most of them afford a tasty morsel at meal time.

One of our largest species is the Grey Parasol (Lepiota rachodes) which often measures over eight inches across. It has a very soft velvety texture while the cap is ornamented with dark brown scales arranged in a pretty pattern of concentric rings. Occasionally it may be found forming fairy-rings; one ring to my knowledge was forty feet in diameter, and contained over three hundred individuals.

Among the smallest mushrooms are the tiny Elf-caps, of several kinds, belonging to the genera Mycena, Collybia and others. The daintiness of these little gems has to be seen to be believed. They will be found in mossy places on fallen trees and stumps and in shady parts of the woodlands.

Every type of habitat has its particular species, each affording a delightful study in adaptation and use. In the course of these rambles in search of nature's treasures, several kinds of mushroom types will be found, although not always conforming to the general structure of cap and gills.

Some have pores on the underside from which the spores fall when ripe. Members of this group include the Clod fungi, the bun-like caps of which are found in grassy places. Of these in the Victoria area, the Yellow Boletus, (Boletus subaureus) and the Painted Boletus, (Boletus pictus) should be seen.

Still others such as the Dryad's Saddle (Ganoderma applantum) form shelves on trees. The Pine Destroyer, (Fomes pinicola) permeates the wood of the tree and finally causes its death.

The Saddle fungi (Helvella) and the Morels (Morchella sp.)

afford yet another kind of structure, the former suggesting a tiny saddle atop the stem and the latter a sponge by reason of the small pits in the cap substance.

Quite different from the mushroom in shape is the rather rare Cauliflower Fungus, (Sparrassis crispa) which grows on the ground at the base of some coniferous tree and looks like a large cauliflower without the leaves.

Most graceful are the pendulant icicle-like spines of the Hedge-hog fungus (Hydnum cristata) and the Bears'-Head Hydnum (Hydnum caput-ursi) which may sometimes be seen depending from a knot hole in decaying oak, hemlock or balsam fir.

Oddest of all perhaps are the Earth-Stars (Geaster species) in which the spore-containing sac is alternately exposed or concealed by the star-like rays of the outer coat as it reacts to the humidity of the air.

Thus with sustained interest we could enumerate an almost endless succession of intriguing forms and habits of the mushroom family. It remains now for us to go and investigate for ourselves.

George A. Hardy.

REPORT OF THE SEPTEMBER GENERAL MEETING

The General Meeting of the Society was held in the Provincial Library on Tuesday, September 9th, at 8 p.m.

After welcoming the members the President, Professor J.A. Cunningham, called on the Secretary, Miss Margaret Kirby, to read the minutes of the last meeting held on April 8th, 1952. The President then introduced new members.

Mrs. Stevens reported on the progress of the scrap book and drew attention to the various articles, magazines and cuttings which may be borrowed.

The Treasurer had no formal report.

Specimens were brought to the desk for identification and were handed round. These included a specimen of the False Hellebore, several fossils and two kinds of clam, the Butter Clam and the Little Neck Clam. Professor Cunningham pointed out the holes in the clam shells bored by the Moon Shell.

He then introduced Mr. Charles Guiguet, the speaker of the evening. Mr. Guiguet is well known to those who frequent

the Museum and for his writing, lecturing and other activities.

He gave an interesting and stimulating address on "Our Waterfowl". He strongly recommended a book entitled "Ducks, Swans and Geese of North America", by F. H. Kortright.

Mr. Guiguet hoped that the audience could be drawn into a discussion on the ethics of the so-called "blood-sports", but no one seemed anxious to enter the fray on either side.

THE YELLOW SHAFTED FLICKER

While this flicker is not as well known to most residents of the province as is the red shafted flicker it is nevertheless quite probably the more numerous bird if the province is considered as a whole, as it inhabits all of northern British Columbia from the Peace River area east of the mountains northwestward to the great St.Elias range on our northern coast. Occasional individuals are seen in the Victoria area where they probably interbreed with the more common red shafted form. East of British Columbia it is the only flicker known to most Canadians as its range extends from the mountains right away to the Atlantic. It is probably the most numerous woodpecker in North America.

I knew them well in Alberta. A pair nested for years in the same grove of aspens near the house. About every second year they would excavate a new nesting hole in the trunk of a live aspen. Before many years had passed we found we had several pairs of bluebirds and tree swallows making use of the old flicker nests. It would seem from this that aside from being a very useful bird in its own right the flicker thus indirectly adds to the abundance of other species as well.

Aside from slightly different colouring there is very little different in the habits and calls of the yellow shafted flicker and those of the red shafted bird that is our common flicker here on the coast. Both feed extensively on ants, both have the same exaggerated noisy display during the spring months; but there is one real difference in habits too. Our bird is only slightly migratory; even in the interior it gives but grudgingly to the turn of the seasons and here on the coast it is with us throughout the winter. Not so the yellow-winged bird. When the leaves

turn colour it goes, clears out completely in a genuine migration and it is not seen again until next spring.

-- Frank L. Beebe.

PILEATED WOODPECKER

With the probable passing of the Ivory Billed Woodpecker into the oblivion of extinction the Pileated Woodpecker inherits the doubtful distinction of being the largest North American woodpecker. However being a bird of much wider distribution than the ivory bill and much less exacting in its requirements it is in no danger of joining that species in extinction. Even so it is not by any means as numerous as it once was or even as it should now be. A big, showy black and white bird with a red topknot is too often much too tempting a target for the irresponsible deer-hunter or the boy with a rifle and every year numbers of them are shot for no better reason than that they are a spectacular bird.

In the wilder parts of the country and in areas where the heavy old-growth timber has not been removed the pileated woodpecker is still a fairly common species. Its range is continental, from the swamp forests of the deep south to the boreal forests of the north, from sea-level to timber-line; it seems to have but one requirement and that is an abundance of old-growth timber. In logged areas and in second-growth forest it is absent or nearly so.

Over its whole vast range the species is non-migratory, each pair of birds inhabiting much the same territory in winter as it does in summer and this is true even in the cold subarctic forests of the north. With us on the Coast the bird is probably more numerous in un-logged sections than it is almost anywhere else. Our heavy evergreen forests are well suited to its requirements and it is one of the few areas where the birds live fairly close to human habitations and become relatively well-known. Elsewhere, if not exactly a rare bird, it is one that is seldom seen by the amateur.

-- Frank L. Beebe,

BOTANICAL FIELD TRIP

May 3rd, 1952.

The Botanical Group chose a very suitable day for their first field trip. This was on May 3rd when about 30 members gathered at Thetis Lake. The weather was ideal and there was a fine display of Spring flowers. Some of the rocky slopes were living pictures of loveliness with Shooting Stars, Easter Lilies, Trilliums, Indian Paint Brushes and Sea Blush. Altogether over fifty species were identified. Among the Monocotyledons the following Orchids were worthy of note: False Lady's Slipper, (Calypso bulbosa) and Striped Coral-root, (Corallorrhiza striata). This plant is entirely devoid of the green pigment, chlorophyll, of normal plants and gets its nourishment from dead plant remains in the soil with the help of a fungus in its coral-like roots.

In the Lily family were Trillium, (Trillium ovatum); Chocolate Lily, (Fritillaria lanceolata); Easter Lily, (Erythronium oregonum); Camas,(Camassia quamash); False Lily-of-the-Valley, (Maianthemum bifolium var.kamtschaticum); and Yellow Arum or Skunk Cabbage, (Lysichiton americanum).

There was one grass of interest, Poa bulbosa, an invader from Europe. It has been able to spread quickly because of its viviparous character. Instead of producing seeds in the regular manner the flower buds in a spikelet give rise to bulblets which start to grow into new plants before they fall from the parent.

Outstanding among the dicotyledonous plants was Shooting Star, (Dodecatheon latifolium). This attractive plant in a number of instances had as many as eleven blossoms to a single flowering axis. Almost as conspicuous as the last named was Sea Blush, (Valerianella congesta). Among the waxy leaves of Stone-crop, (Sedum spathulifolium) with its yellow flowers, the blue flowers of the leafless parasite Cancer-root (Orobanche uniflora) were frequently found.

Other flowers which attracted attention were Buttercups, Lupines, Monkey Flowers, Holly-leaved Barberry, Oregon Grape, Alum-root, Small White Wood Anemone, Blue-eyed Mary, False Box, Balsam Root, Miners' Lettuce, Bearberry and Salal.

Ferns were plentiful in a number of places and the following were identified: the Holly Fern, (Polystichum Lonchitis); Rocky Mountain Woodsia, (Woodsia scopulinum);

Licorice-root Fern, (Polypodium vulgare var. occidentale) and Bracken or Brake Fern, (Pteris aquilina).

C.W.L.

GEOLOGY GROUP FIELD TRIP

Eighteen members of the Geology group under the leadership of Mr. J. H. Whitehouse, convener, made a trip to Portland, Black and Pier Islands from Randall's Landing, a few miles north of Sidney, on July 26th.

The object of the trip was to study the rocks of the Sicker series exposed on the west end of Portland Island and the much younger Nanaimo series, of Upper Cretaceous age, that overlie the Sicker series and are the only beds seen on Black and Pier Islands.

Good exposures of both formations were examined, and on the north shore of Pier Island Mrs. K.C. Drury had the good fortune to find fossils of several species of marine shellfish. Other members of the group were less fortunate - or perhaps less industrious!

No fossils have ever been reported from the Sicker sediments, so the exact age of that series has always been in doubt. The late Dr. C.H.Clapp, of the Geological Survey, who mapped the south end of Vancouver Island, placed it tentatively in the Triassic or Jurassic, but work since done by U.S. geologists on Gulf islands across the international boundary have thrown grave doubts on that classification. They claim to have found evidence that the Sicker series is pre-Devonian, which would make it older than the Leech river schists, considered by Dr. Clapp and other geologists to be the most ancient rocks exposed on southern Vancouver Island.

Sicker Series:

The Sicker series consists of slaty and quartzose schists of sedimentary origin, partly tuffaceous, and chlorite schists of volcanic origin. Interbedded with these sediments are flows of andesite, and the basal member of the group is a lava of andesite composition having a thickness of 2500 feet near Ladysmith. The lava is thought by Dr. H.C. Cooke to have been extruded on the floor of the sea.

Intrusive into the Sicker sediments, and well exposed on Portland Island, are irregular shaped masses of gabbro-diorite porphyrite. Some small quartz stringers were noted

in it on the north shore. Some alteration to epidote was noticed in the sediments.

The Sicker series conforms in strike to the Cordilleran trend - northwesterly. It has been closely folded and wrinkled into small contortions. It forms a belt 15 miles wide and is estimated to have a thickness of 5000 feet. It has been faulted extensively and large boundary faults bring it in contact with the Nanaimo series. One such fault is to be seen on the eastern side of Portland Island.

Nanaimo Series. Upper Cretaceous.

There was a long time interval between the deposition of the Sicker sediments and those of the Nanaimo series and many geological events of a major character intervened. Their proximity to each other in the area visited is due to profound changes induced by the wrinkling of the earth's crust.

The Nanaimo series was laid down on a sinking ocean floor between sixty and seventy million years ago, and the time involved in its deposition must be reckoned in millions of years, as it has a thickness of over 10,000 feet. It is composed of basal conglomerates, formed near ancient shore lines, and sandstones and shales, the materials for which were derived from the adjacent land mass that then constituted Vancouver Island.

It was involved in the orogenic disturbances that affected the southern end of Vancouver Island at the close of the Eocene period and it has been folded and faulted on a large scale. In the area visited, these Cretaceous rocks outcrop on the north end of Saanich Peninsula, again on the south shore of Saltspring Island, and are to be seen on all the islands between. The structure there has been interpreted as a northwesterly striking syncline partly overturned. On Pier Island the beds dip mainly to the north at from 45 to 75 degrees. At Black Island, only two miles to the northeast, they dip 7 degrees to the west. On Saanich Peninsula the dip is from 40 to 68 degrees to the north, and on Saltspring Island the formation dips 40 to 62 degrees to the north. The trough of the syncline lies below Satellite Channel.

The group was fortunate in having Dr. A.O. Hayes along who patiently explained some of the riddles of the rocks, to whoever sought knowledge of them. His long experience as a university teacher makes him an ideal companion for field trips.

For those interested in plants Prof. Lowe was ready with much botanical lore.

Randall Matthews, who furnished the transportation in two boats, also acted as guide and called attention to an Indian kitchen midden on Black Island that some members would like to have started digging in had time allowed.

The geologists - professional and amateur - were favored with perfect weather and Mr. Whitehouse was gratified when all declared that it was one of the most instructive and enjoyable field trips the group has held.

George E. Winkler.

GEOLOGICAL MEETING June 11

It was rather a pity that more people could not have turned out to this meeting at the Provincial Mineral Museum. One doesn't get a personally conducted tour every day. However to those who came it was well worth while.

Mr. Winkler introduced Mr. Sheppard who showed the members the many and varied specimens of ore from different districts, which are now mounted in series to make a much better display. Mr. Sheppard also showed the various methods of using the Geiger Counter but left his audience with the feeling that the old prospector still had a job as it is necessary to find traces of the ore first before one can make the Geiger Counter work to any advantage. So nobody offered to buy one even on generous instalments!

Mr. Sheppard then demonstrated a sodium lamp, which proves the ore by refraction of light. After which he showed an assortment of ores and even some petrified wood under the so-called Black Light, all of which was very interesting. He was called upon to answer many questions and was very patient and helpful at all times.

Mr. Crabtree was then introduced. He, being at the time engaged in making a map of the Sheep Creek mining area, explained the process; it was somewhat of a revelation to learn the amount of work involved. First of all the field men's maps and notes are taken and made into one large-scale map. This is then improved upon and reduced to the actual size required. It is then printed separately in five dif-

ferent colours, to show the various items, streams, ore deposits, etc. to say nothing of the different signs for dips, faults, elevations and so forth. Truly a laborious and painstaking job, but what a triumph when finished for the use of the prospector or mining engineer. Incidentally, the map is printed on genuine Irish linen.

Thanks were extended to Messrs. Sheppard and Crabtree for a very pleasant and instructive afternoon, in spite of the rain and small attendance.

J.H. W.

ISLAND CONCORDS

The autumn scent of grapes pervades your home;
Your window frames their silver-misted spheres;
Though wreath and wine gave praise to the gods of Rome,
Their origin rests in the nebula of years.

Then West - the trail of history and the sun -
To blossom in the wry Pacific breeze,
Sheltering near this rocky bastion
With south incline, devoid of hindering trees.

In pockets faced with warm and fertile soil,
Food-source for shoot and pointed leaf and vine,
With cedar trellis-fan where tendrils coil,
Grapes still are votive at the household shrine;

Symbols of beauty in a world in flame,
With Island Concord for their perfect name.

M.Eugenie Perry.

JUNIOR PAGE

Editor: Bruce Colvin. Phone: Beacon 4380.

What is that leaf? I do not know! We had better join - the N. H. S.

This month we have half a page because next month we shall have a page and a half.

We have lost our editor George Merrick. He wrote a card from Portland where he is living at 5336 N. E. Wygant Street, Portland, Oregon, U.S.A. He says "Say hello to the members of the club for me."

Bruce Colvin, formerly assistant editor, is now editor and will be assisted by Alex Peden, who can type. Now, Junior Members, give them some stories for this page. We all want to read them. Mrs. Woodward, the editor of this magazine, will want the nature stories Bruce Colvin collects from you not later than the second Saturday of each month.

Stories should not be longer than half a page. If they are not used on this page we shall enjoy hearing you read yours at a meeting.

NOTICE OF MEETINGS

1952

Saturday October 4: FUNGUS FORAY: Meet at Mrs. James Hobson's residence, 1970 Argyle Street, at two p.m. (Mount Tolmie Bus). Mr. George A. Hardy, Botanist at the Provincial Museum, will take charge.

Tuesday October 14th: GENERAL MEETING: Reading Room of the Provincial Library at 8:00 p.m. Prof. L. J. Clark, Department of Chemistry, Victoria College.
Subject: "Alpine Flowers of Vancouver Island". Illustrated.

Advance Notice of Audubon Screen Tours:

The 1952-53 programme of Audubon Screen Tours for Victoria is as follows:

Friday, November 14: Fran William Hall - "The Four Corners".
Friday, December 12: Robert C. Hermes - "Bonaventure Diary".
Friday, February 20: Howard Cleaves - "Animals Unaware".
Friday, March 20: Allan D. Cruickshank - "Santa Lucia Sea Cliffs".
Friday, May 8: Walter H. Shackleton - "Oddities in Nature".

The Tours will be presented in the Crystal Garden Auditorium at 8 p.m.

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To