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# THE VICTORIA NATURALIST



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COVER PICTURE

Photo by Bill Reith

AERIAL GARBAGE

By R. Y. Edwards

Garbage is garbage, and is made no sweeter or cleaner by other names. Thick smoke pouring into our air can be vandalism of the worst sort, about as damaging to the landscape as pouring a steady stream of kitchen garbage into the streets with the hope that it will all blow away.

Smoke is dirty. Smoke is ugly. Smoke is smelly. Smoke can clog your lungs with black muck that may be severely or even fatally damaging. Smoke blocks sunlight, reducing its heat, its light, and the Vitamin D that you obtain from it. Smoke affects a wide variety of green plants so they will not grow at all.

Smooth talk about "That smell is the smell of money" never impresses me. Some money is too expensive, and when someone starts tampering with my air supply, dollars don't seem very important. You can't breathe dollars.

People don't have to put up with smoke from industry. All over North America smoky industries always threatened to move away if pressed to keep their aerial garbage to themselves. And all over America a firm answer of "Clean up or get out" has always resulted in a clean up if the business was sound and not planning to move anyway. Well run cities are cleaning up their air. Action does it, not talk.

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## ANNUAL FUNGUS FORAY

By M. C. Melburn

This "hunt" took place Saturday, November 5th, when 38 observers found well over 70 different kinds of fungi many of which were, of course, familiar old friends. However, some that were expected were not in evidence and this points up the fact that fruiting in a given species may not occur each year. Some require a longer period (up to ten years) to build up in the mycelium sufficient food material to bring out a crop of spore-bearing bodies.

Species of the Clavaria family were probably the most admired; the 4-inch club-shaped Clavaria truncata is of a beautiful shade of yellowish-tan and a group of these firm fruits seem to light up a dark area under the tall fir trees. By contrast the slim white tufts of Clavaria vermicularis are so fragile it is almost impossible to collect them entire. Other Clavarias observed were C. abietina, C. formosa and C. cinerea, all attractive members of this Coral fungus group. Smallest of all in that family was a species of the genus Mucronella which grows in rotted wood and directs downward the  $\frac{1}{2}$  inch white "fingers" of its fruit.

When a fungus plant is growing in dead wood or leaves, enzymes similar to those in our own digestive tract are released; they diffuse into the dead tissue and eventually break it down into the carbon, nitrogen, phosphorus, etc. of which it was composed in the first place. The fungus then consumes some of these materials but much is left over to return to the soil and help make it fertile for green plants.

Two well-known species of boletes were found, Boletus lakei and Boletus Zelleri, the latter, tall and handsome, with dark reddish-brown cap and red-streaked stem. Zeller's bolete is a prized edible species but Lake's is listed as "edible but rather coarse and tasteless".

What might be called "the powder-puff fungi" were represented by the common little puffball, Lycoperdon perlatum, bird's nest fungus, Crucibulum leve, and two kinds of "earth-stars", Geastrum triplex and Geastrum coronatum. The second of these earth-stars is a much

smaller species with a lead-grey coloured spore-case instead of a brown one and its case is attached to the basal structure by a short delicate stalk called a pedicle. According to some authors this earth-star should be called Geastrum quadrifidum. All these puff-ball types produce their spores within a closed body.

And at this point it might be noted that the fruit of fungus plants produce their spores on a variety of surface structures. In some cases the spores grow on a relatively smooth surface (Stereum and Clavaria); in others the surface may be wavy (Merulius); it may be full of deep or shallow pores (Polyporus, Fomes, Ganoderma and Boletus); others have a surface which bears projections called "teeth" as in Hydnum Hydnellum and Pseudohydnum; and of course the gills on the underside of a mushroom cap increase enormously the area for spore production. But all of these various modifications increase more or less the spore-producing area.

Interesting or beautiful or both were the following:-

Varnished bracket fungus (Ganoderma oregonensis) with its polished dark red cap 6" x 4"; the deep-amethyst-coloured Laccaria laccata amethystina; rabbit-ears (Otidea onotica) a yellowish member of the Cup Fungus group; Crested lepiota (Lepiota cristata) wearing a soft white collar on its darker stem and a series of concentric circles of reddish-tan scales on its white cap; two species of Lactarius, L. deliciosus and L. subducis, the former with orange-coloured milk and the latter with common white type; hedgehog mushroom (Hydnum repandum); little spathula (Spathularia clavata) with its head flattened down two sides of its stem; and a blue hydnum appropriately called Hydnellum caeruleum.

The largest specimen found was the velvet-top polypore (Polyporus schweinitzii) which can reach a diameter of 12 inches in its single year of growth. The presence of this polypore means that the tree or trees near it are victims of "brown cubical butt rot" - it is a deadly enemy of Douglas fir, pines and spruces.

At the other end of the size scale were several minute white species of Marasmius and one of Pleurotus (oyster fungus). These are all very delicate and quickly shrivel when removed out of their environment. Their beauty belongs where they grow and a trip to the woods is well worth while even on a dull day. All these 70 were found

in less than two hours.

Quoting from a recent publication "Mycologists have thus far identified more than 100,000 different species of fungi and this is only the beginning; each year additional ones are found. It is generally believed that 250,000 species exist."

Why spend so much time and treasure exploring outer space when our own planet still holds so many fascinating secrets?

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#### MORE ON OAKS

It seems that the idea of an oak nursery is one that the oaks may object to. According to Mr. Herb Warren, mastermind of our beautiful Victoria parks, our Garry oak is difficult to transplant, and it is best to put your acorns in the very places where you want oak trees. It is also possible to sow acorns in the fall, then transplant the little oaks in the spring, or at least before they are a year old. Put the acorns about two inches deep in containers with about six inches of compost and sand mixed half and half. This gives them a good start on the way from acorns to mighty oaks.

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#### BACK ISSUES NEEDED

The following back issues of the Victoria Naturalist are required to fill a request from the British Museum, London:

1960 October and December  
1961 January and September

If anyone has these issues and would not mind parting with them for a good cause, please mail them to:

Mr. E. E. Bridgen,  
2159 Central Avenue,  
Victoria, B. C.

#### BIRDS FOR THE RECORD

Marbled godwit (1) - Clover Point -	October 20 -
Eleanore Davidson - Gordon Hooper	
Hood Lane Sewer - Ralph Fryer	
Willet (1) - Radcliffe Lane - Hood Lane	October 20 -
	Ralph Fryer
Kittiwake (1) - Radcliffe Lane - Hood Lane	October 20 -
	Ralph Fryer
Rhinoceros auklet (5) - Clover Point -	October 20 -
	Allen Poynter
Knot (3) - Cattle Point -	October 23 -
	Mr. & Mrs. A. Davidson
Snow goose (1) - Beacon Hill Park -	Oct. 24-26-27
	Mmes. Ross & Fox, Texas
Dowitcher (13) - Bowker Beach -	October 25 -
	Tuesday Group
Redlegged kittiwake (1) - Clover Point -	October 27 -
	Ralph Fryer
Harris sparrow (1) - Esquimalt Lagoon -	October 30 -
	Mr. & Mrs. T. Briggs
European widgeon (1) - Esquimalt Lagoon -	October 30 -
	Mr. & Mrs. Briggs and Mr. & Mrs. Raymond
Trumpeter swan (1) - Oak Bay -	October 30 -
	Betty Wise and Allen Poynter
Sandhill crane (1) - Plumper Bay -	November 3 -
	Mr. & Mrs. Palmer, Ralph Fryer and others
Cackling goose (2) - Esquimalt Lagoon -	November 5 -
	Allen Poynter
Whitethroated sparrow (1) - Penrhyn St. -	November 5 -
	Mr. Mackenzie-Grieve

Snow bunting (1) - Clover Point - November 6 -  
Allen Poynter

Snowy owl (2) - Oak Bay Golf Course - November 7 -  
Mr. Todd, Miss Lemon & Mr. Matheson

Snowy owl (1) - Cedar Hill Cross Road - November 10-  
Mr. & Mrs. Poynter

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#### PHOTO DISPLAY

A show of black and white pictures will be held at the January general meeting, taking the place of the usual speaker program. The show will be open to all members whether professional or amateur. Pictures should be of natural history subjects or people being naturalists. Prints of any size will be accepted but the number will be limited to six per person. So dig out your pictures both old and new and send them to David Stirling or R. Y. Edwards, Parks Branch, Department of Recreation and Conservation, Parliament Buildings, Victoria, B. C., -- Phone EV2-6111, local 2498, about the first week of January. Don't forget to include: WHAT is it, WHERE it was taken and WHO took it.

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#### JUNIOR JOTTINGS

By Freeman King

During the past month or two, the Junior Branch has been active and busy. A field trip was made to Mount Douglas to survey the area burned by this year's bush fire and see what plants have started to make a "come back".

Another field trip took the Group to the plantation at Beaver Lake, where they were pleased to note that the trees, especially the lodgepole pines, were making more

than satisfactory progress.

A survey and plotting "bee" was conducted at Francis Park in preparation for a tree planting project that will begin in the spring.

Other field trips took the Group to the Panhandle, Goldstream Creek, Goat Hill and several other interesting areas.

Once again, members of the Junior Group are helping with ushering during the Audubon Wildlife Films.

Juniors are also collecting specimens for the University of Victoria.

I want to convey my personal thanks to the boys and girls who did such a fine job of gathering all the valuable information about the Dogwood Trail area in Goldstream Park. The section leaders are particularly to be commended for the way they conducted the project, and Nancy Chapman for her work in helping compile the report.

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#### THE PILL IS FOR THE BIRDS

From The Manitoba Free Press

Many devices have been used to get rid of pigeons in large cities: noise, hawks, sticky substances on ledges and guns, but the pigeons continue to thrive.

Man's ingenuity marches on with science. The answer to the pigeon problem may at last have been found. According to the United States Society for the Prevention of Cruelty to Animals, experiments have been in progress to reduce Manhattan's pigeon population by feeding the birds "the pill" or the ornithological equivalent.

Pigeons have been fed corn treated with chemical that makes the birds sterile for up to six months, but does not harm them. The results, the Society says, are promising.

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EDITOR CHANGE

I am sure the readers of this magazine will welcome Bill Reith back as editor, and will continue to provide the necessary articles to make a good magazine.

There were times when I wondered what I could use to fill an issue, but you writers never failed to produce and I think you most heartily for your excellent support.

D. B. Sparling.

Thank you, Dr. Sparling. We are most grateful for your help during the past year. When you replaced me, I had to give up because the combination of my work load and ill health was just too much to cope with. The work load does not seem to have changed much, but my health is back under control. So, with a degree of apprehension, I've re-accepted the job of editor. Do, by all means, make my fears groundless and shower me with material for publication. I'll be tickled pink!!

Bill Reith.

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LET'S COLLECT A SPECIMEN FOR EXHIBIT

By C. J. Guiguet

In collecting specimens of birds and mammals for museum purposes, two main objectives are to be filled. One, specimens for scientific study; two, specimens for exhibit purposes.

In collecting for scientific study the collector must take a large sample at random, that is, without bias. For example, supposing a series of forty insular white-footed mice are required as an adequate sample numerically. Traps are set and the first forty adult mice taken are measured, labelled and prepared as scientific study specimens. These are then returned to the laboratory, skulls are cleaned, prepared, measured and the raw data are now ready for processing by statistical analyses. Significant differences are evaluated by comparison

with samples from adjacent populations, and on the basis of similarities and differences perhaps naming a new species a subspecies is indicated. Should the collector, in proceeding with further trapping on other species of small mammals, encounter more specimens of white-footed mice that exhibit, say for example, the maximum tail length observed in the sample of forty (where perhaps it occurred only once or twice) he must ignore them. Should he include these extra long-tailed specimens in his series, he introduces bias, and of course the results of his work are meaningless. This principle of random sampling applies to all scientific collecting of living things. Prior to the realization that a large new museum was to become a reality, this is the kind of collecting that we were engaged in at the Provincial Museum. Collecting for exhibit purposes was at a minimum and involved mainly birds.

Today we are faced with the additional problem of large-scale collecting for exhibit purposes. Should we collect at random? Select only trophy-sized mammals? Take only birds in full spring plumage? Fall plumage? In moult? Should mammals be exhibited in summer pelage? Winter pelage? Should adult male, adult female and young be shown? These and a host of other questions confront the exhibit collector. Space very seldom allows that all can be exhibited at one time. Some species are better suited for exhibit at one time of the year than they are at another. In some the adult male does not consort with females and immature once the annual breeding period is over. Hence showing them together at any other season would convey an untruth.

Technical problems must also be considered. Many taxidermists, good ones, too, hesitate at specimens of antlered game taken in the velvet. Not only does the velvet pose a problem, but very often the animal is in poor coat and of scrawny appearance at that time. The argument, of course, is that this is what they really look like, so why not show them scraggly, moulted or whatever? The consequence of all this is that a lot of very careful planning has to be done before the collecting expedition takes to the field.

First of all the curator of exhibits in conference with various directors, architects and the curators in

the fields to be exhibited comes up with a plan for allocation of space for each field. The curators, then, in conference with the director, again resolve the problem of what theme the exhibits are to take. In natural history we have come up with an ecological approach with a good part of the available space divided into large sections, each interpreting one of the Province's major biotic areas. In each, climate, soils, flora, animals, land form and so on will be depicted.

In conference again, it is decided that in each major division a large scale diorama would eventually be installed. These dioramas are to depict an actual place within each biotic area, showing plant and animal life and the environment. In further conference with the director and curators, a dioramist is contracted and the area within the biotic area from which the actual material is to be selected is decided upon. This is necessary and requires a good deal of thought and planning because all biotic areas are complex and contain variable situations. In deciding which season to depict, the condition of the flora and of the fauna in relation to the story to be told must be carefully considered. Having resolved this, the first expedition, site selection, is ready to take to the field. This selection expedition requires a number of specialists. The curator of botany must be there, curator of exhibits, curator of birds and mammals, the dioramist and a number of technicians for casting rock formations and the like, for collecting and handling botanical material, for taking series of colour slides and so on. Having selected the site by covering a good deal of country and after a good deal of discussion ensuring that it is botanically, artistically and zoologically correct, the actual work of collecting begins. The dioramist makes preliminary sketches and paintings to scale. He studies the changing light over a period of several days, selects a period of the day and reproduces the background scene on canvas in oils. This "to scale" painting is transferred to the large wall in the full-scale diorama when the time comes.

Having decided which large mammals are to be shown, how many and what age and sex classes are required, a collecting expedition is planned and launched. The field party goes to an area that harbours a large population of the desired species. The most easily

accessible area is chosen to minimize cost and to expedite the arrival of the collected specimens at the taxidermy studio. Where possible the specimens are delivered to the studio in the round. We have done this with deer, cougar and mountain sheep. The larger specimens like Osborn caribou and moose, are handled in the field by the taxidermist who is to do the mounts. In this case, the hides, skeletons and measurements only are taken, field processed and rushed to the taxidermy studio.

We now return to the matter of actually selecting the specimens. Large world record specimens are not desired - nor are specimens from the other end of the size scale. One selects good average adult males, females and calves if all are to be shown as mounted specimens. The big problem in the field strangely enough, is to decide just which "critter" fills the bill. There is a good deal of individual variation in all mammals. Osborn caribou for example are extremely variable in size, antler formation and in colour. In collecting the caribou we selected two large mature bulls, one exhibiting a great deal of white flank and mane, the other notably darker in this respect. This will tell the viewer of the completed diorama that these mammals have different coloured coats at the same time of the year. One bull has a large complex rack of antlers, the other has a smaller set and is slightly smaller in body size. This tells the viewer that all adult Osborn bull caribou are not of the same size and have variable antlers. With the adult cows this variability is less apparent. We selected one which we judged as average, antler and body-wise. Adult cows were identified from immature animals by the presence of a calf. Calves were quite variable; again with some difficulty, we selected one that was considered average.

In scientific field collecting one must be completely objective. Exhibit specimen collecting is the opposite, very subjective. The preceding account may seem complicated to the reader but believe me, it is over-simplified. I have omitted many side issues and other problems that arise. However, perhaps I have imparted the fact that exhibit collecting entails more than the process of simply shooting an animal.

MEETINGS AND FIELD TRIPS

EXECUTIVE MEETING:  
December 6

Dr. Carl's Office, 8 P.M.  
Provincial Museum.

GENERAL MEETING:  
December 13

Douglas Building Cafeteria,  
Elliot Street at 8 P.M.  
Speaker: Mr. C. P. Lyons  
Subject: "Mexican Adventure"

CHRISTMAS BIRD COUNT:  
Date to be announced  
at December meeting.

Details from D. Stirling 385-4223  
and M. Matheson 384-9595  
(No Bird Field Trip this month)

JUNIOR GROUP:

Meet every Saturday at --  
Monterey Parking Lot, Douglas  
at Hillside, 1:30 P.M. for  
field trips.  
Leader: Mr. Freeman King,  
Phone 479-2966.

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N O T E

As of this month, the compilation of "Birds for the Record" will be handled by Mr. and Mrs. Gordon Hooper, of 2411 Alpine Crescent, phone 477-1152 (evenings).

We wish to express our thanks to Mrs. H.M.S. Bell, our previous compiler, for the many hours of her time which she spent in organizing this feature of our magazine.

May we remind our contributors that the purpose of this feature is to record rare or unusual birds in our area in as concise a form as possible. Unfortunately there is not sufficient space to record the normal seasonal changes in our bird population.

Please note: Mr. and Mrs. Hooper are not available during the day. Your observations should be sent to them either on a postcard or by phone in the evening.

M. M.

To everyone, MERRY CHRISTMAS AND BEST WISHES FOR 1967.  
Ed.



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