September 65 Vol. 22 No.1

THE VICTORIA NATURALIST

published by the VICTORIA NATURAL HISTORY SOCIETY

Victoria B.C

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COVER PICTURE

Many of us are, I'm afraid, inclined to classify naturalists as good, bad, keen or otherwise, experienced or inexperienced, and we further catalogue them by the facet of nature they are most attracted to -- plants, birds, rocks, insects, etc. However, one thing marks them all -- a love of nature.

But what of people, children especially, who, with minds untrammeled with any categorization, merely appreciate and gaze with silent, admiring wonder at nature's presentation? Perhaps they, with no analytical thoughts, are better off at times. Perhaps theirs is a purer love.

This month's cover picture, taken early one morning at Cultus Lake, is intended to portray the silent, lonely, uncritical enthralment of a child engrossed and captivated by the scene before her.

Photo by Bill Reith.

BOTANY GROUP WINTER MEETINGS

We will welcome any suggestions regarding the winter meetings of the Botany Group. If you have any ideas regarding the form or content of the meetings or would like to suggest a particular speaker, please do so. Write or phone Mr. W.H. Warren, City Hall, Victoria; or Joan Alston-Stewart, 4394 Lockside Drive, Victoria --Phone 477-1300.

J.E. A-S.

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NEW BOOK

A review of the British Columbia Provincial Museum Handbook No. 24, Guide to Common Mushrooms of British Columbia, is long overdue and the blame for the delay rests solely on the shoulders of your editor. In the following, York Edwards has given us an insight to the worth of this excellent little book.

W.D.R.

Review: Guide to Common Mushrooms of British Columbia by R.J. Bandoni and A.F. Szczawinski. B.C. Prov. Mus. Hdbk. No.24: 1-179. 1964.

I know very little about mushrooms, but maybe that is the way it should be. Books, especially guide books, are written for people who don't know much and who want to learn more. That describes me when it comes to mushrooms. So I should be the kind of person that this book was written for.

Before I picked it up, I knew this book would be good. In the first place it looked good with its colourful cover carefully printed. The colour printing of photographs can so easily be poorly done. Secondly, our Provincial Museum has a handbook series unmatched anywhere, as far as I know, and this new one on mushrooms was a good bet to deserve its outstanding company.

We have had many mushroom books lately. Both Europe and North America have produced a number in recent years for a growing army of salivating mushroom fans. Here is a local book at last, at a ridiculously low price, and with impressively high scholarship.

I have yet to use this book in the field, so can comment only generally. Looking through it I am reminded of an old bleat of mine that botanists in field guides have yet to match the trend in zoology to compare briefly and to condense descriptions to essentials. Peterson did it first for birds so I call this the "Peterson approach". In botany it would sometimes not be so easy, and at times it might not work well, but these are only difficulties. I remember as a boy struggling to match names with trees in an Ontario woodlot, but my pocket guides all went into general and confusing descriptions of bark and wood and branching habit and leaves and flowers. There was a whole page of rambling on the white pine. I can remember the joyous flash of understanding when I realized at last that all I had to know, forever, to identify white pine in Ontario was - "only native conifer with needles in fives". Anything else could be good and useful botany in big books to be left at home, but for field reference it only hid the important facts from someone trying to name a white pine in Ontario.

This neat little mushroom book has short descriptions. For this we can be grateful to the authors for the hard work that made this possible. A field key with clear sketches does a good job of dividing the whole into the distinctive groups that make the whole. Photographs throughout are a unique collection of portraits. Unfortunately the printer did not have the high standards of the photographers, for the pictures have a soft look which can only indicate loss of detail.

Here is another Provincial Museum Handbook that no naturalist can afford to miss. At fifty cents a copy, you would be wise to buy a half dozen or so. Then you can be generous to friends when the book goes out of print, as most of these handbooks soon do.

R.Y.E.

FREEMAN F. KING SCHOLARSHIP FUND

Just over a year ago, I had the great pleasure of announcing that the Freeman F. King Scholarship Fund had been instigated under the able chairmanship of Dr.John A. Chapman with Mrs. H.M.S. Bell as treasurer and myself as a committee member.

Through the generosity of many, we have reached the three-quarter mark of the \$5,000 required to establish the fund. This is a most gratifying response in just over one year.

Now, in our second year of effort, I have been asked by many members, who are on pension, or like many of us, have small incomes, if they may give another donation.

We will be delighted to receive donations from

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anyone, for any amount, and will be pleased if you will send your donations to Dr. John A. Chapman, c/o The Provincial Museum, Victoria, B. C.

Last Spring, we arranged two film shows and as a result of donations taken at the theatre door, we were able to award the first scholarship this year. The Scholarship Committee of the University of Victoria has informed us that Miss Gail Moyer was the first recipient. This particularly thrills us because Miss Moyer is one of Freeman King's original members of the Junior Group. She is now in her fourth year at university.

On behalf of the Committee, I thank you all for giving the fund such a wonderful start.

E.K.L.

SMALL SUNDROPS

By M.C. Melburn

On a recent botany field trip to Shawnigan Lake members of the Victoria Natural History Society added an interesting "stranger" to that day's list of wild plants observed. It was a little yellow-flowered plant (Evening Primrose Family) growing among grasses near the shore. It appeared to be an Oenothera but the species was new to me.

The chief taxonomic authority for this area is Vascular Plants of the Pacific Northwest but this plant had not been included by the authors. However, according to Grey's Manual and Rydberg's I was able to identify it as Oenothera perennis, Oenothera pumila, Kneiffia perennis or Kneiffia pumila. Also J.K Henry's long-out-of-date Flora of Southern British Columbia and Vancouver Island listed it as "introduced New Westminster" (good old J.K.H.!).

There was no record here in the Provincial Museum Herbarium so I sent a specimen to Dr. K.I. Beamish, University of British Columbia, who confirmed the identification and added this comment: "We have four specimens from New Westminster, three collected by A.J. Hill in 1895 and the fourth by J.K Henry (no date). I know of no other collections in British Columbia. Apparently it grows all down the East Coast from Nova Scotia, south". Further to the distribution of this species it might be added that Dr. H.J. Scoggan, National Museum of Canada, in his Flora of Manitoba gives its range as "(Subartic-) temperate eastern America: e. Man. to Nfld., s. to Mo., Ind., O. and Ga.".

Conundrum: If it took this plant 70 years to get to Shawnigan Lake from New Westminster how long did it take to cross the Continent?

STREAMSIDE SCENES

By G.A. Hardy

For a naturalist, autumn has charms unknown at other times of the year; denizens of unspoiled habitats welcome us, not with the traditional red carpet, but with the regal golden yellow of newly fallen maple leaves that cover sections of the trail with their cheerful pattern. Other leaves remaining on the trees reflect a glow of colour unknown in summer time.

Vegetation is preparing for the long winter rest; leaves of colts-foot are now three feet high and measure eithteen inches or more in breadth -- a contrast to early spring when the dense spikes of its flowers are the only sign of its existence. Dense thickets of wild roses, six feet high or more, are now dotted with bright red berries, in some places festooned with the wandering vines of tall vetch, the rich green of the broadly pinnate leaves standing out in pleasing contrast to those of the fading rose. The coppery purple of dogwood and yellow of the cascara combine with maple leaves to make a very colourful picture.

These are the days of spawning salmon on their annual trip to fresh water streams. At this time they attract people who otherwise are not especially interested in natural history. Salmon, therefore, are splendid agents for advertising the necessity for the conservation of our wildlife - or so we hope.

Several species of salmon are involved including the dog or chum, with a dark, blue-black back and broad suffused bars extending down the sides, and the coho with dark reddish sides. At first they congregate in masses in deeper pools, making dashes after mates which later seek the shallow gravelly places, there to vigorously dig out a hollow with much twisting and tail lashing, closely followed by the male who deposits his share of the lifegerms on the new laid eggs.

While we stood watching, a muskrat materialized from the bank beneath our feet, and floated on the surface of the water showing the full length of its back, including head, ears, eyes and nose, with its tail held straight out behind and just below the surface of the water, using it as a rudder. On sighting us it immediately "froze" beside a projecting branch of a sunken bough of which it seemed a part, just holding on by the front feet. After what seemed to us an interminable time it turned about, and, maintaining the same relative position, paddled out towards the centre of the stream, using the webbed hind feet as a source of power, their rapid action suggesting an outboard motor even to the rippling wake. Near the centre, an inquisitive salmon approached the muskrat, thereupon the latter suddenly dived to the bottom, returning towards us, but just about two inches above the gravel, with almost the speed of a fish. It came to the surface near where we were standing and busied itself splashing about at the edge of the water, not more than six feet away.

A little farther up the stream, where the water rippled over the shallows, was a dipper, that specialized bird of mountain stream, sitting on a piece of twig caught among the woodland debris about ten feet away from us and not in the least disturbed by our close presence. It was very much occupied in eating a small fish about two inches long, tossing and twisting it about in order to make it easier to swallow, during this process the mucous of the fish evidently gummed up its beak resulting in a fascinating series of contortions to get rid of it, dipping the bill into the water and rubbing on the twig over and over again until it was cleansed. All this time it maintained the same position of its feet on the branch, after which it settled down in a posture of repose, the white nictitating membrane flashing as if giving us a wink of confidence that our close presence meant no harm to it.

A short distance away, where a dense stand of bush bordered the stream, we were attracted by a rapidly repeated chit - chit - chit and up into the branches of a small tree flew a hermit thrush, the conspicuously spotted breast, and rufus tail in a constant upward flicking motion, was conveniently demonstrated by alternately facing and turning its back on us, thus proclaiming identity in a most convenient manner. Not taking any chances for its safety, it soon disappeared into a tangle of rose and salmonberry bushes.

On the willow leaves a belated caterpillar or two, of a carpet moth were found, simulating with perfection the green midrib on the underside of the leaf, where it lies at full length when at rest. Also seen was an odd caterpillar of the isabella tiger moth, seeking higher land for hibernating quarters; it is about two inches long, thickly covered with long hairs, black, the central third orange-brown.

As we retraced our steps over the golden carpet we heard the machine-gun rattle of a kingfisher as it hurtled along the stream, while in contrast the creaking voice of a heron as it winged its way over-head majestically in slowly measured flaps of its ample wings; a fitting close to a most delightful hour in commune with the native inhabitants of our streamside; long may their home remain to them.

JUNIOR NATURALIST'S CAMP

By Linda Gregg

This year the camp was again held in Goldstream Park with 42 attending. Skip King was of course leader and naturalist. Mrs. Osborne was camp matron and looked after the business end of things (including canteen).

Linda Gregg and Maureen Kinney, who came from the Cowichan Natural History Assn. were Skip's field assistants. Chief pancake-maker was Mrs. Chapman, camp cook, with able assistants; Mrs. E. Whitby and Mrs. C. Storey.

As a camp project, the Juniors gravelled the path leading down to the Meeting Place and the Campfire Circle, 8

where Freeman King, Park Naturalist at Goldstream Park, gives his evening talks.

The groups surveyed the south side of the north bank of Goldstream River this year. Group leaders were Ross Storey, Bob Fleischer, Barbara Chapman and Jane Moyer. The projects were an ecological survey of each of the four areas; making a complete report of mosses, lichens, liverworts, fungi, plants, mammals, fish, amphibians, insects and the relationships between them. The Juniors are to be congratulated for their effort put into the projects and for the excellent results which were obtained.

We made two hikes from camp, one to the Goldstream flats where the groups compared the difference in plants and animals between this area and the one they had been surveying. The second hike was up to Humpback Dam, Victoria's water reservoir. Behind the dam, land higher than water level forms islands which dot the reservoir. We were lucky enough to see a doe and two fawns crossing from one island to another. The dam was constructed in 1913 and has served the Victoria area for 97 years.

To all those on the staff and others who helped, we, the campers, offer our sincere thanks for a most worthwhile camp.

JULY BUSHTIT 'ARMY'

By G.M. Bell

Dawn is early, but not too early for creatures of nature to be up and about their business. A strong breeze stirs the trees and for small birds roosting on their twigs it is nigh impossible to stay asleep longer. Anyway, what young thing sleeps when a fresh day beckons and its stomach is empty?

Swaying trees - weeping birch, Japanese plum, lime tree, mountain ash, apple tree, weeping willow, cherry tree, garden shrub and other plant life seen from my window -- hold the 'army' of tinkling Bushtits. Beware to the luring insect in its way, for this army is after breakfast; it needs protein for energy building sustenance. It is trained and moves quickly.

In five minutes, perhaps less, it has gone -- a few laggards are left, one is preening, a centre parting shows in the thick breast feathering as the dressing proceeds. Now, off again to join in the purpose of existence -- work to be done, something to accomplish.

This mass of winged life, so small, so elusive and passing to the eye might seem unimpressive as collective security for humanity. But the tiny insects they devour must be legion -- pests invisible over foliage, limb and twig, garden plant and all manner of shrub. Then how thankful we can be when this 'army' comes along as one means of control over what might otherwise become harmful to the general plan. July and the bushtits, God bless 'em, are collecting in flocks; this morning I counted between 45 - 50 individuals and still more came.

LAZY GARDENER

Those of you who have been disappointed in trying to acquire reprints of York Edwards interesting, down to earth article "Confessions of a Lazy Gardener" will be pleased to know you will find it as a story in the August issue of Western Homes and Living.

AQUATIC ENTOMOLOGY

By A.D. Atkins

The Plecoptera or stoneflies comprise a relatively small order of insects containing only about twelve hundred known species. All stoneflies are aquatic in the immature stages and respire by means of gills; the adults are terrestrial and tracheate. Unlike the dragonflies and damselflies (Vol.21, No.4), adult stoneflies are not often found very far from water and the nymphs are rarely found in lakes or ponds, because they require well-aerated, running water for development. The best place to find stonefly nymphs is in streams or rivers with a gravel or stony bottom. In some species both the nymphs and

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adults are vegetarians, whereas others are carnivores in the nymphal stages, and do not feed as adults. A few of the vegetarian species are injurious to the tender buds of fruit trees, but the Plecoptera are best known as a major source of food for fish, particularly trout.

The adults are easily recognized by their large wings (the hind pair are particularly broad), long slender antennae, chewing mouthparts, and prominent ocelli. Their external morphology can only be considered as primitive. The prothorax consists of all the basic sclerites well delineated by sutures. A study of the differences in the three thoracic segments of an adult stonefly provides an excellent demonstration of the progressive development and fusion of the sclerites that would otherwise require the study of three distinct insect groups.

The nymphs may be slender or somewhat robust. They always have two slender, many-segmented anal cerci, long many-segmented antennae and prominent wing-pads on the dorsal surface of the meso and meta-thorax. During development they pass through twenty or more instars over a period of one to three years.

The Megaloptera, also aquatic in the immature stages, are among the most primitive insects with complete metamorphosis. They are divided into two main families, the Sialidae (alderflies) and the Corydalidae (dobsonflies and fishflies).

Adult alderflies are smoky to black insects, ranging in length from 10 to 15 mm. They lack ocelli, have soft mouthparts and bi-lobed fourth tarsal segments. They are clumsy fliers and are usually found along the edge of streams about mid-day. Their soft mouthparts suggest that they feed little or not at all. Alderfly larvae are pale coloured and have five-segmented lateral gills on the first seven abdominal segments. The terminal segment of the abdomen is prolonged into a slender lance. They are usually found in well-aerated standing or running water where they are predaceous members of the aquatic environment. When the larvae complete their development they climb out on the shore and pupate in cells that they dig in the soil. Adult dobsonflies and fishflies are larger than the alderflies with some species attaining a wing-span of six inches. They can be distinguished from the alderflies by their three ocelli and cylindrical fourth tarsal segments. They are weak fliers, usually crepuscular, and often try to avoid capture by running rather than flying. The larvae, known as "hellgramites" and prized as fish bait, have long lateral projections from the sides of the first eight abdominal segments. The terminal segment is not prolonged, but bears a pair of lateral hooks. They are fiercely predaceous and cannibalistic. When fully grown, the larvae leave their hiding place among the rocks of the stream bottom to pupate in the soil of a rotten log along the shore.

Plecoptera, sialids and corydalids are all found around Victoria, but the latter groups require more diligent hunting than most aquatic insects.

<u>NESTING BUSHTITS</u> By Walter Redford

I do not know whether or not it is a common occurrence for bushtits to nest in Oak Bay, but this year and the year before, a pair nested in my neighbour's garden on Sylvan Lane.

The first nest was secured to a creeper entwined to vertical wire stretched from the ground to the eaves. The nest was about six feet from the ground, about twelve feet from a door and quite in the open.

This year, the nest was hanging from the slender branches of a laburnum, about ten feet from the ground and hidden in foliage.

As far as I know, in both instances the birds were successful in rearing their broods.

Dec. 15/64.

MEETINGS AND FIELD TRIPS

| EXECUTIVE | MEETING: | Dr. Carl's office, Provincial I | Museum |
|-----------|----------|---------------------------------|--------|
| September | 7 | at 8:00 P.M. | |

GENERAL MEETING: September 14 Douglas Building cafeteria, Elliot St. Speaker: Mrs. J. M. Woollett. Subject: "Mountain Holiday".

BIRD FIELD TRIP: September 18 Meet at Monterey Parking Lot, Douglas and Hillside, 9:30 A.M. or at Goldstream Park Picnic Site at 10 A.M. Bring lunch. Leader: Murray Matheson.

AUDUBON WILDLIFE FILM: Sept.24/ Sept. 25

Oak Bay Junior High School, 8:00 P.M. Speaker: Mr. Eben McMillan. Subject: "Land That I Love".

BOTANY GROUP MEETING:

September 28

Provincial Museum, 8:00 P.M. Speaker: Mr. Spring Harrison Subject: "Wildflowers of Vancouver Island."

JUNIOR GROUP:

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

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