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# THE VICTORIA NATURALIST



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VICTORIA NATURAL HISTORY SOCIETY

Victoria B.C

## THE VICTORIA NATURALIST

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Vol.27: No.8

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## GARDEN ANTS AND APHIDS

All too often I come across popular accounts of comparisons between human societies and those of ants. Such accounts are usually based on fanciful evidence, and are, I feel, merely exercises in futility. It was Linnaeus who first referred to aphids, or plant lice, tended by ants as "ants' cows", and there has since grown the widespread belief that our garden ants (*Lasius spp.*) not only "milk" aphids and protect them but also drive them out to pasture like cows or carry them to their grazing grounds on trees, shrubs, or herbs.

Many of these claims are based on purely circumstantial evidence. Although it is true that garden ants may be seen transporting aphids at the same time that aphids appear on food plants, the connection between these two observations is not what one might suppose. Such misapprehensions usually date from before the time the complexity of aphid life-cycles was clearly understood. A careful observer would note that the aphids are not carried up the branch towards where the population is congregated but down towards the ants' nest. Furthermore, the aphids are usually dead or dying so it thus appears that these ants not only use the plant lice as a source of "milk" but also as a source of meat.

Many species of ants do, however, carry away aphids when disturbed and will lick and care for aphid eggs as they would the eggs of their own queen. Therefore, where there is an obligate relationship between ant and aphid, (that is where each is found only in association with the other) matters may be different.

In the garden ant the rich prize obtained from the aphid is the honeydew, a sweet, sugary solution excreted from the hindgut and which is essentially a concentration of the plant juices on which the aphid is feeding. These ants can pass among aphids without disturbing them or

stimulating their defensive behaviour (for reasons unknown). They collect the honeydew by stroking the hind end of the aphid repeatedly with their antennae until a droplet appears. (This piece of behaviour can be seen in the ants in the photograph on the front page). Instead of flicking away the honeydew droplet as unattended aphids usually do, the stimulated aphid is induced to retain the droplet on the tip of its abdomen. The ant devours the honeydew at once and goes off to find another aphid. Later the honeydew is regurgitated by the ant and passed on to other members of the colony.

Exactly what benefits accrue to the aphid in this mutualistic association are more difficult to determine. Perhaps the ants drive away or destroy insects that eat aphids. They also remove the honeydew which attracts predators such as hoverflies (*Syrphidae*), and which can form an excellent medium for fungal growth that may be harmful to the aphids or to the plants on which they are feeding.

Whatever the benefits are in this relationship they are certainly real ones, for both groups are, from a numerical standpoint, among the most successful of all insects.

Richard A. Ring  
Biology Department  
University of Victoria

Cover Picture by:  
Al Grass

## SOCIETY DUES

The Financial year of the Society for membership and payment of dues is from May 1st to April 30th of the following year.

Dues are therefore payable in May direct to the Treasurer (see back cover for address), or they will be accepted at the May Annual Meeting. At that time the Treasurer will be pleased to receive new memberships.

In order to avoid misunderstanding, it is pointed out that new members joining in say March or April will normally have their memberships commence May 1 unless they wish to specify otherwise.

E.E. Bridgen

## PLANTING TIME

At this time of year a great many of us turn our thoughts to growing things - it is time to plant that we may harvest, not only with our edible food crops but with our living forest as well.

When we want to try to improve our gardens, too many of us are inclined just to go down to the nursery and buy some exotic plant without thinking much about it. "Exotic" means something that is not "native". Why plant something that may not stand up to our winds and frost, when we know that our local trees and shrubs are already acclimatized and do not have to adapt. Take a look at our natives like the Oregon Grape, the Huckleberries and even the Salal. They will fit into your garden if you will give them a place to live, as will our beautiful native firs, hemlocks and pines.

It is tree planting time again in the logged off forests. How many of us know that several millions of seedlings are grown by the B.C. Forest Service to go out to areas that have been cut? Or that in most cases the logging company does the planting with their own crews in consultation with our government foresters?

There are several ways in which reforestation is carried out. One method is to scatter the seed by airplane, but this is rather a hit and miss method and the seeds have to be treated so that they will not be eaten by mice.

In some areas parent trees are left standing in the hope that natural reseedling will take place and eventually cover the area.

There are now two methods of planting seedlings which are first grown to three years of age in suitable containers. In the first method, the seedling with root encased in a plastic container is fired into the ground by means of an air or spring loaded tool. The tool splits the plastic so that the roots can grow. The old and tried method is by man power where a mattock is used and the roots carefully pressed down by foot. The plants are now spaced at eight-foot intervals, as the six-foot spacing formerly used caused too thick a growth for logging and the trees have a hard time competing for space and food.

Perhaps the best method of all is the practice of block or strip cutting to sustain our forest yield. Less bare ground is left open to erosion, slash burning is easier to control, and deciduous growth can get started to provide shade for the new conifers as they are planted.

For those who have never seen a tree nursery, there is one at Duncan, and there you could get the story of tree planting first hand.

Freeman King

One of these days soon, Freeman may issue a call for volunteers to help in a tree planting day. It would sound like a pretty good way of celebrating the British Columbia Centennial.

Ed.

#### FLORAL COMMUNITIES AT CLO-OOSE

I wish to correct several taxonomic errors and omissions made in my article, "Floral Communities at Clo-oose" in the March number of the *Victoria Naturalist*. I am grateful to Miss M.C. Melburn and to Dr. A.F. Szczawinski for their generous assistance.

*Erythronium smithii* is correctly *E. revolutum*; Single Delight is better known as One-flowered Winter-green; Foam Flower is more accurately known as False Mitrewort; for *Claytonia sibirica*, *Montia sibirica* is now preferred; Wild Lily-of-the-Valley should be False Lily-of-the-Valley and its Latin name is *Maianthemum dilatatum* (the Clo-oose form appears to be the var. *kamtschaticum*;) for *Lonicera nutkensis* insert *L. involu-crata*; the designate Nootka Rose (*Rosa nutkana*) is mis-applied to the Wild Rose (*R. pisocarpa*); the *Selaginella* referred to is not tropical; Twinflowers are formerly known as *Linnaea borealis* var. *Americana*; in British Columbia *Arctostaphylos uva-ursi* (note hyphen) is commonly Kinnikinnick; *Veronicas* should be *Veronica* sp.; the Deer Fern is *Blechnum spicant*; Sword Fern (Western) is *Polystichum munitum*; the Lady Fern is *Athyrium filix-femina*; The Licorice Fern referred to is the Leathery Polybody, *Polypodium scouleri*; *Glehnia lieocarpa* is misspelled: *G. leiocarpa* is correct; *Tanacetum vulgare* is properly *T. vulgare*; *Gabronia latifolia* is emended

*Abronia* l.; the "heather" seen growing on the dune is Knot-weed, *Polygonum paronychia*; the "Mace-headed Sedge" has yet to be identified; Bearberry is another common name for Kinnikinnick; for *Lathyrus maritimus* insert *L. japonicus*; the Wild Strawberry (*Fragaria glauca*) is the Chilean Beach Strawberry (*F. chilensis*); *Castilleja miniata* can be confused with *C. dixonii* as no satisfactory criteria have been found for distinguishing between them; the Latin name for Douglas Aster is *Aster douglasii*; the local species of Sea Rocket is *Cakile edentula*.

James W. Hamilton

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#### THE FEBRUARY BIRD OUTING

The outing was held on February 20th, in seasonable weather, the sun shining enough to give us heart.

Approximately fifty members turned out to enjoy the ample bird life provided by Beaver and Elk Lakes at this time of year. The bird life ranged from winter wrens to the mighty pair of bald eagles at Elk Lake. Water birds were the most prominent, and consisted of large flocks of showy American mergansers, ruddy ducks, hooded mergansers and their counterpart in the duck world - buffle heads. Coots, widgeon, mute swans, mallards, scaup, horned grebes and even western grebes, pied billed grebes, gadwall ducks, and double crested cormorants added to our count. As usual the resident flock of Canada geese added their voices to those of the ravens who were busy teasing an unidentified owl in the dense stand of Douglas Firs.

Above our heads were chickadees, kinglets, bushtits, brown creepers, red breasted nuthatches and even a noisy belted kingfisher. A downy woodpecker showed up to complete that picture. Other woodland birds identified were song sparrows, crows, bewick wrens, fox sparrows, juncos, starlings, pine siskins, varied thrush, robins, band tailed pigeons, and that harbinger of spring the red winged blackbird. True to form the red tailed hawk turned up.

The highlight of the day was an Audubon warbler that showed up at the south end of Elk Lake. Some members carried on to Martindale, but others, foot-weary and cold, returned to their hot baths and fireplaces.

Cy Morehen

PARKS BRANCH PAMPHLETS  
(for the vacationing naturalist)

Every Canadian province has its equivalent of a Parks Branch, staffed by professional biologists, botanists, zoologists and others devoted to the care and conservation of that part of the world that is dear to naturalists. We are prone to be critical, but usually the proper target of our barbs should be ourselves or elected representatives to whom we delegate our responsibilities. How often do we stop for a moment and think of the fine job of work that is being done quietly and sometimes unnoticed by the men and women who have chosen nature as their vocation?

Here in British Columbia, the Parks Branch comes under the Department of Recreation and Conservation, headed at present by the Honourable W.K. Kiernan; and we in the Victoria Natural History Society have ample reason to know and appreciate the efforts of a number of our members who work for that Branch. To list their names might be to embarrass them or to leave out a few names in error. But look about you - the list is a long one and includes the most active members of our Society - the ones who introduce speakers at meetings, give informal talks, lead the nature trips, write the interesting articles for our magazine. In giving credit where credit is due we are not attempting to belittle the efforts of others.

However, all the above is a preamble to a list of Parks Branch pamphlets which are available for the asking, and which would be of tremendous interest to anyone visiting in our Provincial Parks. Titles and authors names only are given.

Coho and Chum Salmon	J.E. Underhill and Freeman King
Sea Stars	Wayne Campbell and David Stirling
Mollusc Shells of Miracle Beach	Raymond Barnes
Some Mosses of Provincial Parks	Norma J. Morton
Some Mammals of Manning Park	David Gray and R.Y. Edwards
Some Butterflies of Manning Park	J.E. Underhill
Some Insects of Manning Park	J.E. Underhill and A. Harcombe
Mountain Flowers	J.E. Underhill

Some Berries of S.W. B.C.	J.E. Underhill
Night Sky in Summer	David Stirling
What Tree is that?	R.Y. Edwards and D. Stirling
Trees of Shuswap Lake Park	David Stirling
Ferns of Miracle Beach	Betty Westerborg
Bird Check lists are also available	

*R. Wainwright*

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NEWSPAPER CLIPPINGS

Some members may not know that the Society keeps an album of any newspaper clippings that are of interest to naturalists. For the last six years this task has been most ably undertaken by Mr. Tom Bell. Not only did Mr. Bell scan the papers; cut out; date; paste in; he also bound the albums with stiff covers! Our library now contains six of these handsome volumes, which will be of increasing interest as the years go by.

Mr. Bell now asks to be relieved of this job. We would be glad to hear from any other members willing to take over. The Society will provide the materials and the newcomer will not be required to have bookbinding skills!

A special vote of thanks to Mr. Tom Bell from all the present membership and also from future generations of naturalists.

*Katherine Sherman*

BIRDS - DOGS

Your dog is very special to you only. Your pet's presence on Bird Trips causes anxiety to others, no matter how well behaved. Please do not bring your pet on Bird Trips.

*Rod Muirhead*

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## SCIENTISTS SAY GEOTHERMAL POWER CAN REDUCE POLLUTION

In a seminar on Hydrothermal Systems presented by the Geophysics Program of the University of Washington on December 15, Dr. Ian Donaldson, director of the New Zealand Thermal Research Laboratories of Wellington, New Zealand, presented recent data about a subject little understood by the general public.

Geothermal heat - the heat from the earth's interior - is not yet widely used as a power resource but it is likely to become increasingly significant. For one thing, generating power by geothermal heat causes considerably less pollution than using fossil and nuclear fuels for this purpose.

A good deal of development work has been done in the Wairaki area of New Zealand's North Island, where a geothermal power plant is helping to produce electricity for New Zealand's national grid. Reykjavik, Iceland's capital, is heated by natural steam that is piped to the city from outlying steam vents which also generate some electrical power. Harnessing geothermal heat in this way is locally practical and economical, and more and more areas are being investigated with regard to their geothermal power potential.

A geothermal plant was established in Italy some sixty-five years ago. Since then, Iceland, Japan, Mexico, New Zealand, the United States and Russia are developing or utilizing geothermal power. The center of activity in the United States is the Geysers 85 miles north of San Francisco. Steam is piped to the Pacific Gas and Electric Company power plant which is producing some 82,000 kilowatts of electricity. The Imperial Valley of California is now being studied as a potentially important area, and the nearby Mexicali field in Mexico is slated to start production of electricity in 1971.

Making economic use of geothermal heat presents many problems but some of these are now being overcome. The scarcity of suitable areas, however, remains a serious deterrent. Suggestions for future exploitation include development of steam wells by opening passageways for steam by means of nuclear underground explosions at depths

where the danger of nuclear pollution is minimized. As pollution problems become increasingly serious, geothermal power plants in feasible areas will become increasingly important.

*Reprinted from  
Seattle Audubon Society Notes*

## GEESE

At the end of December and January various reports of white-fronted geese and barnyard geese came from Elk and Beaver Lakes; both were there. A barnyard goose is easily recognized because being overfed and under exercised they have thick necks and a bulky appearance. This rules out the possibility of any wild goose immediately.

There is, however, the possibility of finding a slim goose which could be a barnyard goose long enough in the wilds to lose its weight problem. As any reader of this article knows, barnyard geese come in all sizes, shapes and colors, and there is the possibility of one having the field marks of an immature white-fronted goose but the chance of it having the right combinations of size, color of plumage, bill and legs are too minute to worry about.

After you find a slim brownish goose what then? An immature white-fronted goose should have an unmarked dusky yellow to pink bill (depending on age), and orange legs. But if this is not the case then check for these possibilities: (a) The bean goose, which is recorded on both coasts of North America has, in the Asiatic race, orange legs but has an orange bill heavily marked with black in all plumages. This bird is also larger than the white-fronted goose with a darker head and neck. (b) The grey lag, not recorded on the west coast, has pink legs which immediately separates it from the white-fronted goose and the Asiatic form has a thick yellow bill and it's larger and much greyer than the white-fronted goose.

*Keith Taylor*

## NEW MEMBERS

Mrs. W. MacKenzie 3171 Henderson Road, Victoria  
Dr. and Mrs. Harold Popham #906-548 Dallas Road, Victoria

(ten new memberships to commence May 1 will appear on next month's list)

## HURRICANE RIDGE

At the March 9th general meeting of the Victoria Natural History Society it was announced that there would be a botany trip to Hurricane Ridge in July 1971, if enough members were interested in the idea. A show of hands indicated that a number of people were interested. For the benefit of those who were not at the meeting, may I explain what is planned.

We will leave Victoria, by chartered bus, on the 11:15 a.m. Port Angeles ferry, July 10th. There is a coffee shop on board but it is a small one and will probably be crowded at that time of year so, for those who do not like to wait in line, it might be a good idea to bring your own lunch.

From Port Angeles the drive up to Hurricane Ridge is about twenty miles. En route one is likely to see deer on the roadside. If there is a suitable place for the bus to pull over it will stop for those who would like to take pictures.

The rest of the afternoon will be spent on Hurricane Ridge botanizing, photographing or doing whatever one feels like doing.

We will return to Port Angeles about 7:00 p.m. to ensure a place for the bus on the 9:20 p.m. ferry for home. There are several restaurants within easy walking distance of the ferry wharf so we will have plenty of time to relax and enjoy our evening meal.

The cost per person will be \$7.75 (this includes bus and ferry fares - not meals).

Anyone wishing to go on the trip may contact me by phone (479-2816 - preferably in the evening) or they may put their names down on a list that will be in the foyer of the Newcombe Auditorium at the April meeting of the Victoria Natural History Society.

The bus seats thirty-nine people. Members of the Society will have first choice but, if there are not enough to fill it, members will be able to invite guests.

It would be appreciated if fares could be paid to me in advance so that I will not have to carry a large sum of money with me on the day of the trip. Notice of cancellation should be given by July 1 so that someone else may fill the vacant seat. The meeting place and exact hour of departure will be announced in a later edition of the *Victoria Naturalist*.

*Terese Todd*

## GENERAL MEETING MARCH 9

This meeting indicated how many worth while projects your Society is involved in, and what constructive things are being done at every season of the year. While the turnout was quite good for this time of the year, it would be great if more could manage to come, not only to fill up the gaps in the comfortable auditorium, but to get involved in the activity at first hand. Remember the offer of help in transportation if it is awkward for you to get to the museum. Elsewhere in this issue there is a mention of Doctor Sparling's plea for the Carl Memorial Fund, and a notice about the Hurricane Ridge Trip, and Freeman King has written a piece on tree planting, so we will skip over those. However, Cy Morehen reported that this year it is hoped to finance the 1970 Bird Report by getting some appropriate advertising. Since about \$400.00 is needed, if you have any suggestions give Cy a call and he will do the leg work to follow them up.

The President reported that a nomination committee will be formed by next month, and since several of the positions on your executive will have to be filled she hoped that volunteers would come forward to stand for election.

The meeting was not all business. Kerry Joy told of his adventurous trip by helicopter to Mount Edziza and his colour slides were so good they made one feel right there in the action. We will not spoil it for you by even trying to report Kerry's talk - maybe in a future issue he will find time from his busy schedule with the Parks Branch to write about it (hint).

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## THE EDITOR'S MAILBOX .....

We had two good letters this month. The first one proves that Greater Victoria has not yet been given over to the subdivision. Will someone reply to Peter Claxton.

3945 Gordon Head Road  
Victoria, B.C.  
March 17, 1971

The Editor  
Victoria Naturalist

Dear Sir:

I am not sure if the following unscientific observation will be of any interest...

Although the clear notes of the Western Meadowlark were still a joyous part of spring and summer when I moved to this area seven years ago, they were heard less and less in recent seasons. Now again, for the past few weeks I have been hearing occasional unmistakable calls.

This morning, as I came from milking at about 7:00 a.m. I was delighted to hear no less than three meadow larks in full voice, performing the several accustomed variants of their song, all within earshot of the old white barn, corner of MacKenzie Avenue and Gordon Head Road - truly a lyrical greeting to a bright and frosty St. Patrick's Day. At least two were still stating their case when I left for work in town an hour later.

I understand by your pages of last spring that the Skylark no longer nests on the UVic campus. Can any of our knowledgeable members tell me which of the many environmental changes has precluded this species, while the Meadow Lark, though hard pressed, still manages to nest.

In closing, may I say that I consistently enjoy your choice of items for the magazine.

Yours truly,

*Peter Claxton*

The other letter from Miss Stevenson is a follow-up of her letter concerning salmon migration. For a new arrival in British Columbia she is learning fast about the environment in which she finds herself.

1908 Billings Road  
R.R. 2  
Victoria, B.C.

March 5, 1971

The Editor  
The Victoria Naturalist  
3250 Exeter Road  
Victoria, B.C.

Dear Sir:

In the matter of salmon migration, I have now received from the Fisheries Research Board station at Nanaimo a pamphlet (enclosed) entitled "Observations on the Migration of Young Sockeye Salmon through a Large, Complex Lake System", by W.E. Johnson and G. Groot. This describes in detail a study of the migration of smolts through the Babine Lake system in 1960 and 1961. In order to study the orientation of migrating fish, they were confined to tanks where their directional preferences could be established. Tests were made at noon, mid-afternoon and dusk; night testing was discontinued at an early stage, presumably because the results were inconclusive.

It was found that on days with a fair amount of sun (less than 60% cloud cover) most of the smolts chose the direction which would lead them to the lake outlet, whereas on cloudy days their choice was erratic. They also evidently had a sense of time: one group which would have had to make a 180° turn to reach the outlet changed direction at the correct time when held in tanks. Observation of schools of fish in the lakes showed that travel was faster on sunny days.

The conclusion reached by the authors is that smolts have "a time-compensated celestial orientation mechanism": it is probable that the sun is used, but the fact that there is good orientation at dusk, when celestial bodies are not prominent, confuses the picture again.



And sometimes the fish swam in the opposite direction to the correct one, which may suggest a relation to the earth's magnetic field.

In a covering letter, a Fisheries Board officer says, "nothing is known about star orientation in fishes."

Yours sincerely,

(Miss) S.J. Stevenson

#### THE DR. CLIFFORD G. CARL MEMORIAL

You are invited to contribute to the Clifford G. Carl Memorial Fund. The money you subscribe will be used by the "Friends of the Provincial Museum" to establish a bursary at the University level to assist a worthy student in the pursuit of Biological Studies. The family of Doctor Carl have requested that the bursary be set up in this form.

Doctor Carl was everybody's friend and never spared himself in promoting Natural History inside and outside the Provincial Museum. His research work is well recorded in his books and pamphlets. We are sure that his many friends will be anxious to share in this Memorial.

We not only invite your support, but we ask that you assist by recommending this worthy undertaking to your friends. The "Friends of the Provincial Museum" is a registered society authorized to issue receipts for income tax purposes.

Let us be generous in making this a worth while bursary, worthy of the name of Doctor Carl.

Send your contributions to:

"The Friends of the Provincial Museum"  
c/o The Provincial Museum, Victoria  
marked "Dr. Clifford G. Carl Fund"

An official receipt will be mailed to your address.

*D.B. Sparling*

#### BIRDS FOR THE RECORD

by G.N. and G. Hooper, 2411 Alpine Crescent (477-1152)

Western gull (1) - Dallas Yacht Pond -	Feb. 21 -
Peregrine falcon (1) - Ogden Point -	Feb. 26 -
	Keith Taylor
Common teal (1) - Panama Flats -	Feb. 27 -
	Keith Taylor and Ron Satterfield
Tufted duck (1) - Oak Bay -	Mar. 6 -
(First seen Feb. 7, at Clover Point)	Keith Taylor
Emperor goose (1) - Esquimalt Lagoon -	Mar. 8 -
	Ralph Fryer

#### Also worth noting:

Black brant (3) - Bowker Avenue (ARD) -	Feb. 28
(1) - Clover Point (KT) -	Mar. 5
Barrow's goldeneye (17) - Sooke (KT) -	Feb. 20
Turkey vulture (1) - Towner Park (ARD) -	Mar. 6
(2) - Pedder Bay (ARD) -	Mar. 13
California gull (1) - Martindale (KT) -	Mar. 6
Rhinoceros auklet (10) - from 'Coho' (KT) -	Feb. 26
(1) - Clover Point (KT) -	Mar. 5
Swallow sp. (approx. 10) - Beaver Lake (RM-G) -	Mar. 6
(Probably Violet-green)	

To look for in APRIL - Least and Western sandpipers; Roughwinged, Barn and Cliff swallows; Purple martin; House wren; Vireos; Warblers; Savannah and Chipping sparrows.

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This is our swan song. We have compiled "Birds for the Record" since December 1966 and it's time for a change. Our grateful thanks go to the many people who have phoned and written to us about their sightings. They are the ones who have made the column possible and we have enjoyed, and profited by, our association with them through the years.

At the time of writing our successor is not appointed, but we wish him (or her or them) a happy and rewarding term as compiler of "Birds for the Record".

## PROGRAM FOR APRIL 1971

- Executive Meeting: 8:00 p.m. Board Room 104M  
 Tuesday April 6 Provincial Museum
- Botany Field Trip: Thetis Park: Meet at Mayfair Lanes  
 Saturday April 3 parking lot (north side) 10:00 a.m.  
 or 10:30 a.m. at the park. Bring  
 lunch. Leader: Terese Todd  
 Phone: 479-2816
- General Meeting: 8:00 p.m. Newcombe Auditorium,  
 Tuesday April 13 Provincial Museum (south entrance)  
 Dr. T.M.C. Taylor will speak on  
 "The Federation of B.C. Naturalists,  
 Past, Present and Future".
- Bird Field Trip: Meet at Matfair Lanes parking lot  
 Saturday April 24 (north side) 9:30 a.m. or Francis  
 Park 10:00 a.m. Bring lunch.  
 Leader: A.D. Turnbull 592-6025
- Ornithology Meeting: 8:00 p.m. Room 216 Oak Bay Junior  
 Tuesday April 27 Secondary School
- Junior Group: Meet every Saturday 1:30 p.m. at  
 Mayfair Lanes parking lot (north  
 side) for field trip.  
 Leader: Freeman King 479-2966

Note: The spring meeting of the Federation of British Columbia Naturalists will be held in Vancouver, April 30 and May 1 and 2, 1971.

Banquet: 7:30 p.m. April 30. Business meeting Saturday May 1. Field Trip Sunday May 2. For further details see Federation Newsletter or phone Elton A. Anderson 477-1132.

## MUSEUM EVENTS

- Heritage Court Presents: 8:00 p.m. Newcombe Auditorium  
 Friday April 2 "Tribal Traditions in Northwest  
 Indian Totem Pole Carving"  
 by Peter Macnair

# VICTORIA NATURAL HISTORY SOCIETY

## Honorary President

Honorable W. K. Kiernan, Minister of Recreation and Conservation

## Honorary Life Members

Freeman F. King, Albert R. Davidson, George E. Winkler  
Miss M. C. Melburn, Miss E. K. Lemon, Mrs. L. E. Chambers

## Officers 1970—71

### President

Mrs. F. A. Sherman  
2168 Guernsey Street - - - 386-1965

### Vice-President

A. D. Turnbull  
3614 Cadboro Bay Road - - 592-6025

### Immediate Past President

Dr. D. B. Sparling, #9, 1354 Beach Drive - - - - - 385-2229

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**Corresponding Secretary:** Mrs. H. F. Dickson, 2084 Neil Street - - - 592-1862

**Treasurer:** E. E. Bridgen, 2159 Central Avenue - - - - - 383-3577

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**Program Chairman:** A. D. Turnbull, 3614 Cadboro Bay Road - - - 592-6025

**Audubon Wildlife Films:** Miss Enid Lemon, 1226 Roslyn Road - - - 385-4676

A. H. Couser, #403, 435 Michigan Street - - 384-0832

### Group Leaders

**Botany (Summer)** Miss Terese Todd, Barker Road, R.R. 6 - - - - 479-2816

**Botany (Winter)** Mrs. J. M. Woollett, 624 Harbinger Avenue - - - - 384-4836

**Entomology:** Dr. R. A. Ring, 1467 Jamaica Road - - - - - 477-4883

**Ornithology:** A. C. Schutz, 2060 McNeill Avenue - - - - - 386-0541

**Marine Biology:** Freeman F. King, 541 McKenzie Avenue - - - - 479-2966

David Stirling, 3500 Salsbury Way - - - - - 385-4223

**Junior Naturalists:** Freeman F. King, 541 McKenzie Avenue - - - - 479-2966

Mrs. E. C. Osborne, 1536 Vining Street - - - - - 385-8164

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**Ornithology Records:** Dr. Jeremy Tatum, #416, 3187 Shelbourne Street 592-1332

**Federation of B.C. Naturalists:** Kerry Joy, Millstream Lake Rd., R.R. 6 478-5093

**University Liaison:** Dr. Jeremy Tatum, #416, 3187 Shelbourne Street 592-1332

**Membership:** Mrs. Eleanore Davidson, 2144 Brighton Avenue - - - 384-9595

**Publicity:** Freeman F. King, 541 McKenzie Avenue - - - - - 479-2966

**Librarian:** A. R. Davidson, 2144 Brighton Avenue - - - - - 384-9595

### "The Victoria Naturalist"

**Editor:** Roy D. Wainwright, 3250 Exeter Road - - - - - 592-1310

**Assistant Editor:** A. R. Davidson, 2144 Brighton Avenue - - - - - 384-9595

Annual Dues, including subscription: Single \$3; Family \$5; Juniors \$2.

Junior Membership is restricted to those not under 9½ years and not over 18 years.

Dues and changes of address should be sent to the Treasurer.