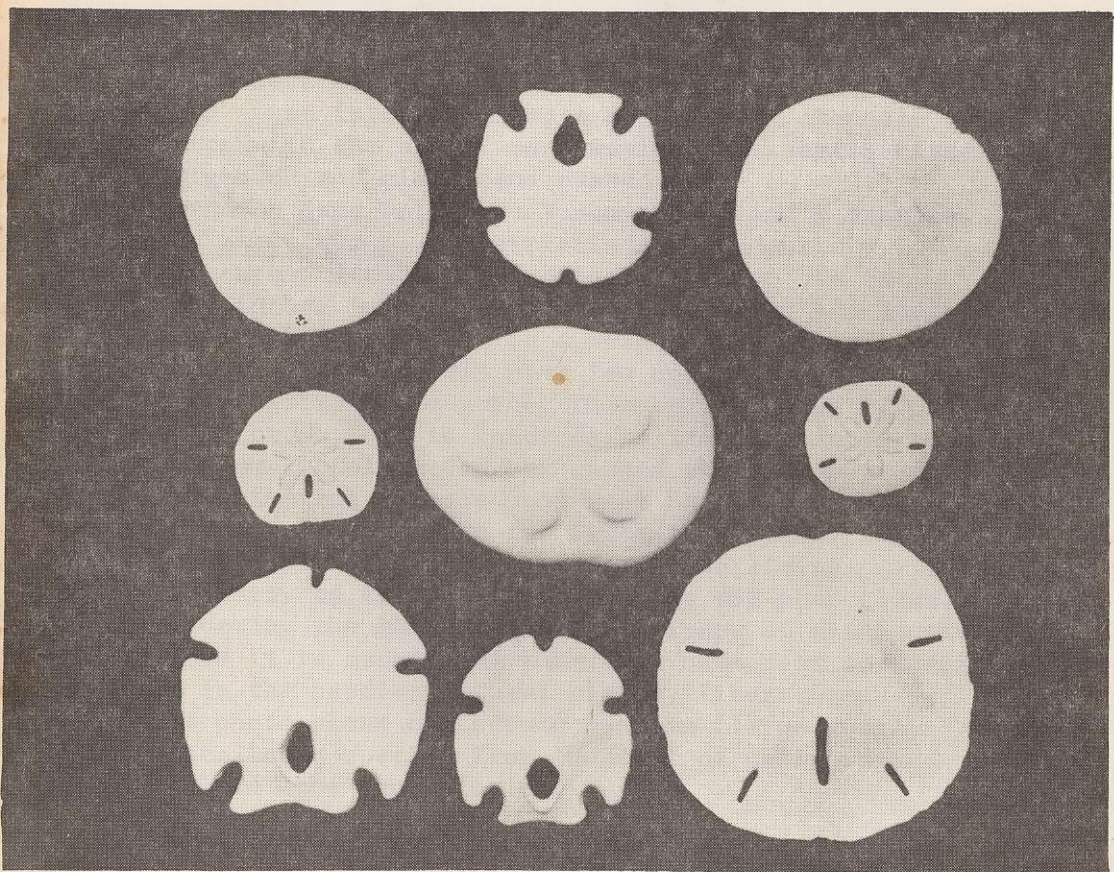


March, 1972  
Vol. 28, No. 7

# THE VICTORIA NATURALIST



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VICTORIA NATURAL HISTORY SOCIETY

Victoria B.C

## THE VICTORIA NATURALIST

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## SAND DOLLARS

Sand Dollars and their relatives, Sea Stars, Sea Urchins, and Sea Cucumbers number nearly 5,000 species in the phylum Echinodermata. All are marine animals. Some species inhabit the floor of the abyssal depths but most are found in littoral regions around the world.

Sand Dollars, as their name suggests, live on sandy bottoms usually in shallow estuaries and bays. They prefer sheltered waters rather than the surf-pounded beaches of the open coasts. Several species inhabit the coasts of the North Atlantic and Pacific oceans.

Sand Dollars eat sand. Sand grains bearing minute diatoms are swept into the animals mouth along channel-like grooves with the aid of many waving tube feet. Plant food is digested and clean sand passed out.

The common Sand Dollar on Vancouver Island's beaches, Dendraster excentricus, is particularly abundant at Miracle Beach and Rath Trevor Provincial Parks. It is from 3 to 4 inches in diameter and covered with a velvety skin which in living animals is a deep purple, almost black colour. Adult animals have few enemies except summer beach visitors who gather them by the bucketful to take home or crush them in hundreds while splashing around in the shallows. Collecting has caused the disappearance of these fascinating animals from many beaches in the United States. If you go to the beach this summer take only the white skeletons (tests); leave the living animals to carry on their task of keeping the sand clean.

Considering the abundance and intricacy of design of Sand Dollars it is surprising that they have been so rarely mentioned in the popular natural history literature.

Cover photo shows our common species (large round form), a scalloped species from the Gulf of California and a key-hole kind from Florida.

*Cover photo and story  
by David Stirling*



## RABBITS

Rabbits are not native to Vancouver Island, but in recent years many people have reported seeing them and by now they are quite abundant in parts of the Sooke-Metchosin district, and they have also been seen near Goldstream and Shawnigan Lake. Until recent weeks no one was certain what species was involved. It is now known that two species are present and they appear to live quite happily together. These two species are the Eastern Cottontail (*Sylvilagus floridanus*) and the European Rabbit (*Oryctolagus cuniculus*). In the wild state the European Rabbit is very difficult to distinguish from the Eastern Cottontail, and is an altogether different animal from the European Brown Hare of "jackrabbit" (*Lepus europaeus*) so familiar to Torontonians. The young are born blind in burrows, unlike the active precocial leverets (young hares) born in a form (nest) above ground. European rabbits have longer ears than Cottontails, and, with practice, this can be recognized in the field. In the hand, the Eastern Cottontail is usually found to have a very small white spot on its forehead.

Many of the rabbits here are big, fat rabbits, that may be all grey or black with no white on the tail, or pied black and white. These are feral rabbits from domestic stock and are referred to the species *Oryctolagus cuniculus*. Since they live together with Cottontails, maybe one day they will hybridize to puzzle us naturalists still further.

Barbara McLintock and I were watching a mixed colony of both species at Alldridge Point at dusk on October 10, 1971, when we suddenly became aware that we were not alone in our study of them. There was Bubo, the Great Horned Owl, listening and staring intently at every movement the rabbits made. I suspect his thoughts were more concerned with his tummy than with the exact species involved, but in any case, when we whispered, the owl turned and glared at us for disturbing his potential supper.

As to the origin of the Vancouver Island rabbits, who knows? There are many European Rabbits on San Juan Island (see Mrs. Sparling's article, *Victoria Naturalist*, Vol. 28, No. 1, p.2, Sept. 1971), but also many domestic European Rabbits are kept on Vancouver Island. Some doubtless

escape from time to time and breed. There are introduced populations of Eastern Cottontails in the Fraser Valley and in Washington State. Maybe someone brought some over here, and, if so, that was really rather naughty.

*J. B. Tatum*

## CROW NOTES

For the past three years I have had the pleasure of observing the crows in one of our city parks and have discovered what really interesting creatures they really are. Living in such close association with man I believe the crows know much more about us than we know about them and I believe we are missing something in not getting to know them better. A walking person or one sitting minding his own business, causes them no alarm but any sudden change in pace or position immediately puts them on the alert. Children at play, no matter how active or noisy will not disturb them and they will continue to forage within a few yards quite unconcerned.

I did not know, until rather casual observation changed to intense interest, that the crow, like the dog, will bury its food. I have watched them pull out a tuft of grass, put some morsel of food in it and carefully replace the tuft. If the crow seemed to sense others were watching it would dig out several tufts and replace them, obviously to make it more difficult for the on-lookers to locate the true cache. I often wondered how or if they ever found these caches when they needed them, as until about a week ago I was never able to see them open up a cache and remove the food. Then in the past week, while there was a little snow on the ground, I was able to witness two openings of food caches. On one occasion the crow ate only part of the meat of a nut and then reburied the remainder with the same care and attention. I have watched a crow battle fiercely to protect a morsel from one group of crows and then willingly share it with another.

During the summer months many school children and adults eat their lunch in the park and quite often there are a few lunch bags with scraps of food in them left behind. This is fair game for the crows, and their resourcefulness in getting the food is really something to

see. One can actually see them working out a plan of action. One example I would like to relate is that of a crow with a very strong or tough paper bag who worked several minutes trying to peck a hole through the bottom of the bag but could not get to the food. It then took the bag by the bottom and tried to shake the contents out but could not raise the bottom high enough off the ground. It considered this for a few moments and you could see an idea forming. It dragged the bag to the edge of the curb and again taking it by the bottom it now had the necessary height to shake the contents out over the edge of the curb. If this bird did not show a reasoning intelligence I don't know who can. This bird seemed quite willing to share the food with other interested buddies.

Chestnuts and walnuts are no challenge at all for these birds. The shells are quickly opened when dropped from a height of fifteen or twenty feet. They also perform the same feat at the seashore with shellfish. The only time I have disapproved of their foraging for food was when I saw them with robins' eggs.

I have noticed that crows seem to have a very real social structure and have watched them gather in groups where quite a discussion appeared to take place. Several birds in turn appeared to chair the meeting while the others listened quite attentively. There also seems to be quite a rank structure with crows of lesser rank giving place to those higher in their social scale.

During the first two weeks of January 72, in the late afternoons, at Swan Lake, just off Patricia Bay Highway, hundreds of crows were noted congregating in the trees and on the partially flooded ground. Some were feeding and others roosting in the trees. They were so numerous in the dozen or so leafless trees that the branches looked as if they were foliated with black leaves. Never before have I noticed them in such large numbers in this spot.

Another area in which crows have been a source of curiosity and interest to me is at Forest Island, east of Sidney and north of Sidney Island. Anyone fishing these waters in the early evening must have noticed hundreds of crows in several large flocks, winging their way from the Saanich Peninsula where they have been foraging all day, to roost on this Island. I am very curious to know why, with all the forested areas on the Peninsula, these crows would fly out to Forest Island to roost.

My opinion of crows, when I infrequently did think of them, was that they were a sort of a nuisance and a predatory creature that some people found handy as a target for B.B. gun or .22 rifle. I now find that the crow has developed in me an ever increasing fascination, interest and respect, and the desire to watch him every chance I get.

*J. L. Rennie*

## A PROVINCIAL BIRD

Mr. Elton Anderson, of the Federation of B.C. Naturalists has recently drawn attention to the fact that while the U.S.A. has a National Bird (the Bald Eagle), so far a similar initiative has not taken place in Canada. Let us, the Victoria Natural History Society, therefore now take this initiative.

As a preliminary step toward choosing a Provincial Bird, a list was prepared of those species which occur widely throughout B.C. but do not occur very extensively in the rest of Canada. The list was:

Barrow's Goldeneye	Steller's Jay
Harlequin Duck	Mountain Chickadee
Blue Grouse	Dipper
White-tailed Ptarmigan	Varied Thrush
Pygmy Owl	Townsend's Solitaire
Black Swift	Audubon's Warbler
Vaux's Swift	Townsend's Warbler
Rufous Hummingbird	MacGillivray's Warbler
Hammond's Flycatcher	Gray-crowned Rosy Finch
Dusky Flycatcher	Oregon Junco
Violet-green Swallow	Golden-crowned Sparrow

From this initial list a short list was prepared by eliminating names for a variety of reasons. None of these birds is already a State Bird, but Alaska's Willow Ptarmigan and Delaware's mythical "Blue Hen" are close enough to cross off two names from our list. The Mountain Chickadee is not normally seen near the centres of population of Victoria and Vancouver. The Rosy Finch and Pygmy Owl are rarely seen, and some beginners find the flycatchers hard to identify. The Oregon Junco has a State name attached to it, and several birds are named after non-Canadian ornithologists. Finally, many of the birds do not stay in B.C. for the whole of the year. The remaining short list is:



Harlequin Duck  
Dipper

Varied Thrush  
Golden-crowned Sparrow

In Godfrey's Birds of Canada the Dipper is listed as "American Dipper", presumably to distinguish it from its European cousin, but the official A.O.U. name is Dipper. Some may feel, however, that its specific name mexicanus militates against its choice as a B.C. Provincial Bird.

As for a National Bird, I have not given this much thought, although I would personally plump for the Canada Jay.

Now please discuss this at a general meeting or at a meeting of the Bird Group, or write to your Executive with your ideas. Ideas not only about which bird you prefer, but how you feel the matter should be handled. I am sure that the F.B.C.N. and the C.N.F. will ultimately be responsible for the Provincial and National Birds respectively, but let us in Victoria start the ball rolling.

*Jeremy Tatum*

#### ENERGY AND THE ENVIRONMENT

(Excerpts from a speech by the Hon. Jack Davis, P.C., M.P., Minister of the Environment, given at the H.R. MacMillan Lecture Series, Vancouver, December 9, 1971.)

Why flood many scarce valley acres when all we are doing is postponing the construction of big nuclear power plants for a year or two? Why flood out trees and wildlife, especially when unique species can be lost and scenic values can be turned into tourist dollars forever? Even if some of this hydro power were to be extremely cheap, such a policy would seem to me to be very shortsighted indeed.

Biologically speaking, big hydro power projects produce few pluses. They produce a lot of minuses. They are usually on the debit side of the ledger as far as our environment is concerned. It follows that wherever a clean source of power is available (at similar cost) the choice is clear; don't dam, don't flood; don't produce water power at all!

#### Moran Mustn't Happen

We've had some big floods in B.C. We've built several gigantic man-made reservoirs to produce hydro-electric power. One, skirting Tweedsmuir Park, feeds the humming turbines at Kemano. The other fills up a quarter of our mighty Mountain Trench and produces energy at the W.A.C.

Bennett Dam in northeastern B.C. Both flood areas which are comparable in size to Banff National Park. Both create scars on the face of our fair province which could last forever.

Build Moran and two-thirds of the salmon rearing capacity of the Fraser River would be cancelled out forever. Today's commercial fishery would be cut in half. Our sports fishery would be downgraded to the extent of tens of millions of dollars and marine life in Georgia Strait would be affected seriously.

Those who say that we can still fish in the lower reaches of the Fraser are closing their eyes to the facts. Once a big dam is built at Moran, the temptation to build other structures downstream will be irresistible. Eventually, we would build a series of dams, and behind them reservoirs, mounting stepwise the Fraser from Hope to Prince George.

The mighty Fraser, in effect, would become another Columbia. The last of the world's great salmon rivers would have been harnessed for power. It would have been transformed into a series of narrow lagoons, long narrow surge tanks into which industry discharged its wastes and on which blooms of algae floated serenely in the summertime.

As a British Columbian, I shudder to think about the cutbanks and the slides which would characterize the Fraser in south central B.C. I worry about the millions of tons of sediment which would accumulate behind a series of dams on the Fraser. I fear for the last California big-horn sheep which winter in the bottom lands of the Fraser around Riske Creek. And all this in order to produce kilowatt hours energy which a single big nuclear power plant could produce right here on our doorstep in Vancouver.

. . . It follows that the debate over Moran is more than a fish versus power dispute. It's an issue between kilowatt hours on the one hand and the preservation of the ecology of B.C.'s biggest and most accessible river system on the other.

### MORE AIDS FOR BIRDWATCHERS

Birdwatchers are a travelling bunch. Complete with bird book, checklist and binoculars they are becoming a familiar sight to the natives of Patagonia, Tanzania and Oaxaca. In fact, it is difficult to get away from them anymore. But if you are doing your bird chasing nearer home I would like to introduce you to a handy checklist and a bird finding guide that I have discovered recently.

The Traveller's List and Checklist for birds of North America is a handy pocket size (4" x 7"), 38 page booklet published by the American Birding Association, obtainable for 50 cents from Roland Wauer, A.B.A., Box 67, Big Bend National Park, Texas 79834.

The Traveller's List provides you with the names of all bird species in phylogenetic order recorded north of Mexico. Eleven columns allow you ample space for recording lifers and birds seen on trips. An alphabetical listing of the general names of birds helps the beginner who is not familiar with the usual phylogenetic order. There are also several blank pages for notes and addresses.

A Guide to Bird-Finding in Washington by Terry Wahl and Dennis Paulson is a mimeographed 8½" x 10" soft cover booklet obtainable from the Department of Zoology, University of Washington, Seattle, 98195. No price is quoted but I think it is \$1.00. This guide has a checklist of the birds of Washington and gives detailed bird-finding coverage of 62 locations in Washington and 8 in Southern British Columbia. Each location is given a full page which includes elevation, life zone, habitat types, detailed instructions on how to get there, where the birds are and what you might see.

I have an extra copy to lend to anyone looking for birds in the state of Washington this summer. Good birding!

*David Stirling*

### FEBRUARY GENERAL MEETING

With just over eighty members present, Dr. Tatum opened the meeting by presenting a painting of stellar jays to Karen and Keith Taylor who are leaving Victoria for Australia.

The speaker of the evening, Mr. Al Grass of the Reifel Bird Refuge, showed slides of Wells Grey Park where he worked as a parks branch naturalist last summer. Al's booming voice exemplified his great interest in natural history and his desire for the conservation of the Park's natural features. He covered a wide range of subjects from the gumbo road into the park to a caribou migration trail from high on a mountain slope. The interest in conservation roused by this young naturalist was shown by the question and answer period, which was one of the liveliest of the season. Al, in his spare time, writes nature articles and has established an owl protection and care program on the lower mainland.

The business of the meeting was brief. However, a start was made on the proposed amendments to the constitution, and the change regarding the objects of the Society was debated with interest before being passed. (See the supplement to the February Victoria Naturalist.) Business was adjourned at 9:55, after which time members enjoyed refreshments in the museum staff coffee room. A display of three beautiful bird paintings by the 16 year old Victoria artist Michael Hunter was the center of attraction.

Included in the business of the March 14th meeting will be consideration of seven by-laws and proposed new scale of membership fees. There will undoubtedly be debate on the proposed amendments, and members should make every effort to be present to have their say. Remember, if you do not come to vote, you can have no grounds for complaint.

*Ray Beckett*

### THE EDITOR'S MAILBOX

Mr. Duncan Urquhart, one of our up-island members, writes from Courtenay to report bald eagles very numerous close by the Puntledge River on the ski road to Forbidden Plateau. As many as six and twelve at one time were approached very close before taking flight. Possibly heavy snow cover had something to do with both the numbers gathered and also the lack of fear of humans.

From Campbell River, Mrs. Bill Breeden writes of annas hummingbirds at the feeder all through January. A male was



seen regularly through snow, wind, rain and fog with the female turning up occasionally.

Rosemary Shipway reports that the new Mittlenatch Natural History Club which started in November 1971 with six members has already grown to 36.

S.W. Chaffey's letter is printed in full.

*Editor*

5451 Alderly Road  
Victoria, B.C.  
Jan.17, 1972

Editor

Dear Sir:

My wife and I receive a great deal of pleasure from watching our birds. We have two or three feeders which give us much delight.

This morning I heard a crash against a window and a great deal of squawking. Rushing to the window, I saw an injured Towhee flapping on the ground and was about to dash out and pick it up, when to my astonishment, another Towhee swooped down and picked up the injured bird, and flew away with it to some nearby bushes. It appeared to me, during the fleeting glimpse I had had, that the injured bird was still alive, for its wings were flapping and that it was being carried by one of the legs. I was so astonished that my wife phoned Mrs. Bell who suggested that I write and tell you of this, which to me, is an unusual event in the bird world.

It would be interesting to know if this is usual practice amongst most birds.

Truly yours, *S.W. Chaffey*

Your editors came across what we think is a good bird food recipe. Boil one cup of sugar and one cup of water for about five minutes. Mix with one cup fat or bacon grease and cool slightly. Add bread crumbs, corn meal, and bird seed until mixture is firm. Pack in a tin can and secure on its side in a tree crotch or on a window sill.

## BIRDS REPORTED

Canada Geese	( 13)	Jan. 15	Tsehum Bay
Glaucous Gull	( 1)	Jan. 16	Clover Point
			R. Satterfield
Hummingbird sp.	( 1)	Jan. 19	Forester St.
			Mrs. Parker
Red throated Loon	( 4)	Jan. 22	Tsehum Bay
Siskins	( 27)	"	Clark's Marina
Gadwell-1 male 3 female		"	Beaver Lake
Gadwell-2 male		"	Island View
Peregrine Falcon	( 1)	"	Martindale Road
Savannah Sparrows	( 5)	"	"
			R. Satterfield & K. Taylor
Fulmers	( 7)	"	Davidsons, Clover Point
Bohemian Waxwings	( 40)	Jan. 25	Mill Bay
			Mrs. G. Soulsby
Band Tailed Pigeons	(130)	Jan. 29	Uplands
			Davidsons
Meadowlarks	( 27)	"	Hunt Road
			R. Mackenzie-Grieve
Marbled Murrelets	( 20)	Feb. 5	Gibraltar Point
Ancient Murrelets	( 6)	"	"
			Davidsons
Golden Eagle imm.	( 1)	"	Cordova Bay
			Davidsons
Dunlin	(150)	Feb. 8	Bowker Ave.
			Tuesday Group

*M. & L. Slocombe, 3134 Henderson Road (592-9047)*

## NEW MEMBERS

Mr. & Mrs. E. Briscoe	204-477 Superior Street
Mr. & Mrs. H. Hoag	740 Middleton Street
Miss M. Gardner	1003 - 415 Michigan Street
Miss A. Gibson	#7 - 1595 Rockland
Dr. R. Poczzi	#11 - 1595 Rockland
Miss C. Laidlaw	406 - 450 Dallas Road
Miss C. Lothian	2515 Arbutus Road
Mrs. D. Warbey	1530 Dallas Road
Miss D. White	268 Pallisier Avenue
Mr. J. Truscott	3431 Mayfair Drive
Mrs. B.Y. Tupper	Box 391, 2187 Bellvue Avenue
	West Vancouver
Mr. & Mrs. D.E. Weston	1215 Montrose Avenue

PROGRAM FOR MARCH 1972

- Executive Meeting:** 8:00 p.m. Board Room 104M  
**Tuesday, March 7** Provincial Museum
- General Meeting:** 8:00 p.m. Newcombe Auditorium Pro-  
**Tuesday, March 14** vincial Museum (south entrance)  
 Discussion and voting on the pro-  
 posed changes to the constitution  
 and by-laws (including fee scale  
 increases).
- Audubon Wildlife Film:** 8:00 p.m. both evenings and  
**Friday, March 10** 2:30 p.m. matinee on Saturday  
**Saturday, March 11** Newcombe Auditorium  
 Robert W. Davison "Journey  
 in Time"
- Entomology Evening:** Elliott Building, University of  
**Wednesday, March 15** Victoria, Room 062, 8:00 p.m.  
 Dr. Ring, Dr. Chapman, Dr. Harris  
 et al.
- Bird Field Trip:** Meet at Mayfair Lanes Parking Lot  
**Saturday, March 18** (north side - corner Oak and  
 Roderick) 9:30 a.m. or Martindale  
 Road 10:00 a.m. Bring lunch  
 Leader Rod Muirhead - 384-6005
- G. Clifford Carl** 8:00 p.m. Newcombe Auditorium  
**Memorial Fund Program:** "Roving Three Continents" - a  
**Saturday, March 25** film by Dr. Bristol Foster.  
 Sponsored by Victoria Natural  
 History Society. Admission \$1.00  
 Students and O.A.P. 50¢.
- Ornithology Meeting:** 8:00 p.m. Board Room 104M  
**Tuesday, March 28** Provincial Museum
- Junior Group:** Meet every Saturday 1:30 p.m.  
 at Mayfair Lanes parking lot  
 (north side - corner Oak and  
 Roderick).



# VICTORIA NATURAL HISTORY SOCIETY

## Honorary President

Honourable 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 1971 - 72

### President

Dr. Jeremy Tatum  
#416-3187 Shelbourne St.  
592-1332

### Vice-President

K.R. Beckett  
4484 Markham St., R.R. 3  
479-5548

### Immediate Past President

Mrs. F.A. Sherman, 2168 Guernsey St. - - - - - 598-3237  
Recording Secretary: Mrs. R.C. Muirhead, 3431 Salsbury Way - - 384-6005  
Corresponding Secretary: Mrs. H.F. Dickson, 2084 Neil St. - - - 592-1862  
Treasurer: E.E. Bridgen, 2159 Central Ave. - - - - - 598-4025  
Assistant Treasurer: Mrs. E.E. Bridgen - - - - -

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Programme Chairman: Miss Jennifer Brown, 809 Selkirk St. - - - 382-8006  
Audubon Wildlife Films: Miss Enid Lemon, 1226 Roslyn Road - - 598-3517  
A.H. Couser, #403 - 435 Michigan St. - - 384-0832

### Group Leaders

Botany: Miss Terese Todd, Barker Road, R.R. 6 - - - - - 479-2816  
Entomology: Dr. R.A. Ring, 1467 Jamaica Road - - - - - 656-2246  
Ornithology: Rod Muirhead, 3431 Salsbury Way - - - - - 384-6005  
Marine Biology: Freeman F. King, 541 McKenzie Ave. - - - - - 479-2966  
David Stirling, 3500 Salsbury Way - - - - - 385-4223  
Junior Naturalists: Freeman F. King, 541 McKenzie Ave. - - - - - 479-2966  
Mrs. E.C. Osborne, 1536 Vining St. - - - - - 385-8164

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Ornithology Records: Dr. Jeremy Tatum, (see address above)  
University Liaison: Dr. Jeremy Tatum (see address above)  
Membership: Mrs. A.R. Davidson, 2144 Brighton Ave. - - - - - 598-3088  
Librarian: A.R. Davidson, 2144 Brighton Ave. - - - - - 598-3088  
Federation of B.C. Naturalists: Kerry Joy, Millstream Lake Rd., R.R.6 478-5093  
Friends of the Museum: Dr. D.B. Sparling, #9-1354 Beach Dr. - - - 598-4262  
A.D. Turnbull, 3614 Cadboro Bay Rd. - - - 592-6025  
Publicity: Harold Hosford, 450 Tipton St. - - - - - 478-5794

### "The Victoria Naturalist"

Editor: Roy D. Wainwright, 3250 Exeter Road - - - - - 592-1310  
Assistant Editor: Mrs. David Stirling, 3500 Salsbury Way - - - - - 385-4223

Annual Dues, including subscription: Single \$3; Family \$5; Junior \$2  
Junior Membership is restricted to those not under 9½ years and not over 18 years.

Financial Year is May 1 to April 30.

New members joining after January 1 - half fee.

*Dues and change of address should be sent to the Treasurer.*