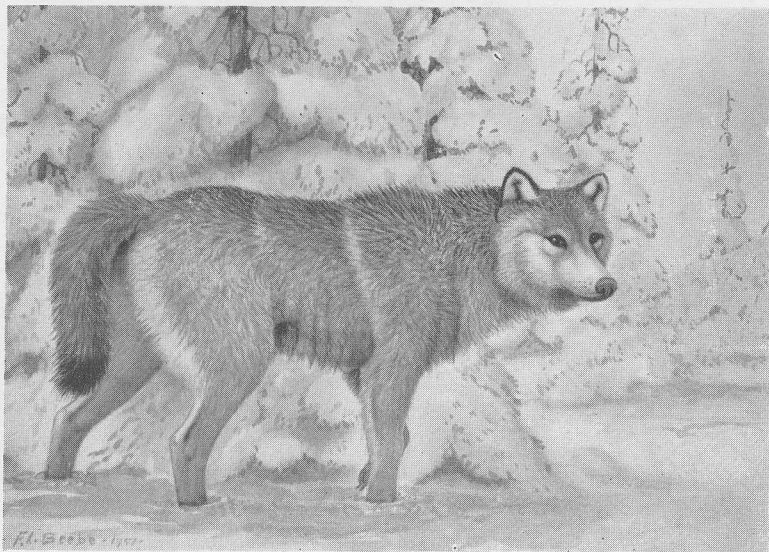


The
**VICTORIA
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(F. L. Beebe)

Wolf

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OUR COVER

The distribution of mammals in British Columbia is of considerable interest to many of us who live here, and the presence of some animals and the absence of others certainly arouses our curiosity.

For instance, the wolf is indigenous to Vancouver Island, though it is a different sub-species to those on the mainland. But on the island we have no coyotes or native foxes. There are wolverines but no skunks; marmots, but no chipmunks or ground squirrels; mice and voles, but no moles; black bears, but no grizzlies; elk and deer, but no moose, mountain goat or sheep; (some goats were introduced in the Cowichan Lake area). We have the beaver, but no muskrat (these were also introduced). No rabbits or hares, bobcat, lynx or fisher, but we have raccoons, martens, mink and weasel. There are similar habitats on the island to those on the mainland where most of these animals are found.

Thinking maybe the geologists could help solve the problem, we went to Mr. Marrion, who informed us that in this part of the world the ice, having reached its most southern advance about 10,000 years ago, started to recede, and as a warmer climate slowly prevailed, the animals gradually made their way north.

At that time the ice was possibly about 3,000 feet thick, and this enormous weight caused the land masses to be depressed, and, as the weight lifted, the land rose again, and the sea with it. It is possible therefore that this mass of ice, with much glacial till on top, formed a bridge, joining the mainland to the islands, providing passage for living creatures including certain of the mammals.

This, of course, does not answer all our questions, but it does give us a reasonable hypothesis as to how the islands became populated, or repopulated, with some of the animals found on the mainland, as during the ice age, the islands must have been a mass of very thick ice, with no life present at all.

A.R.D.

CHRISTMAS BIRD CENSUS

Seen within a fifteen mile diameter circle

SPECIES:	A	B	C	D
LOON, Common			11	
Arctic			2	
Red-throated		1	19	
GREBE, Red-necked	4		10	
Horned	4		51	4
Eared			11	
Western		4	327	
Pied-billed	1	14	5	
CORMORANT, Double-crested	6	4	25	7
Brandt			10	
Pelagic			11	
HERON Great Blue	1	4	27	3
SWAN, Trumpeter		1		
GOOSE, Canada	14	39		18
Black Brant				
White-fronted		1		1
DUCK, Mallard	746	108	65	40
Pintail	47	30	8	
Green-winged teal	56	21		46
American Widgeon	1254	503	54	95
Shoveller	46	22		3
Redhead	1			
Ring-necked		101		
Canvasback	45	3	31	8
Greater Scaup	18	20	343	96
Lesser Scaup		47		
Common Golden eye	4	12	40	9
Barrow Goldeneye	2	12	2	
Bufflehead	16	40	404	88
Old Squaw			76	
Harlequin			2	
White-winged Scoter		2	141	
Surf Scoter	3	2	54	
Common Scoter				
Ruddy	2	12	236	
MERGANSER, Hooded	4	5	1	4
Common	191	17	1	1
Red-breasted	3	2	24	8
HAWK, Sharp-shinned	1	1	1	
Cooper	2			1
Red-tailed	1	1	1	2

VICTORIA, B.C. DECEMBER 22nd, 1962

E	F	G	H	I	J	K	TOTAL
	10	8	6		6	9	50
	2	5			204	50	263
	13		3		1	110	147
	25	1	2		65	30	137
51	133	245	62		18	100	668
4	33	11	31		1	6	97
5	249	80	42		16	6	729
			16				36
3	2		17		3	17	84
	15					30	55
31	131	139	29		4	2000	2345
2	1		1			14	53
							1
1			50				122
	1						1
			3				5
464	105	25	403	1242	39	47	3284
			9	164	1	1	260
	9	18	68	83			301
578	1008	129	298	1337	473	200	5929
13	92	4	37	5	4	50	276
							1
			125				226
9							96
118	1086	112	45	6	22	50	1916
	133	2					182
12	90	43	7		31	30	278
							16
68	642	85	84	104	22	100	1653
	69	9	12		33	50	249
17	120	40	1			100	280
12	89	39	17		35	40	375
45	115	47	40		57	70	433
	1						1
	9		15	23	9		306
3	19	1	27			70	134
			62				272
10	83	35	14			35	214
				1	1		5
							3
	2			2	1	2	12

CHRISTMAS BIRD CENSUS - continued

SPECIES:	A	B	C	D	E	F	G	H	I	J	K	TOTAL
EAGLE, Bald			4	2			1	1			2	10
PEREGRINE FALCON			1								2	3
PIGEON HAWK										1		1
SPARROW HAWK								1				1
GROUSE, Blue		1										1
Ruffed		1										1
QUAIL, California	31		4	10	15	87	64	85	30	50		376
PHEASANT, Ring-necked	4			2		4	19	9	5	2		45
COOT, American	4	201	107	146		29	5	90	13		25	620
OYSTER-CATCHER, Black						38	8				50	96
KILLDEER	12	11	14	3	1	12	9	125	65	6		258
PLOVER, Black-bellied						43					4	47
SURFBIRD						33	1				4	38
TURNSTONE, Black			26		23	127	4				12	192
SNIPE, Common			1	1			1	2	6	6		17
WHIMBREL											2	2
YELLOWLEGS, Greater						3	4		7		15	29
SANDPIPER, Rock						16						16
DUNLIN			19			127		1	5	30	69	251
DOWITCHER									3			3
SANDERLING						3						3
GULL, Glaucous-winged	1510	166	313	150	113	537	302	108	385	98	200	3882
Herring		5			1	1	3	1				11
California											70	70
Mew		3	242	1	12	253	71	4	40	100	35	761
MURRE, Common			1			20		2		4	1000	1027
GUILLEMOT, Pigeon			1		3	12	4	1		12		33
MURRELET, Marbled			35		17	24	14	1		3	200	294
Ancient						5					180	185
AUKLET, Rhinoceros											3	3
OWL, Screech						1						1
Great Horned							1					1
Short-eared											1	1
KINGFISHER, Belted	3	2	3	1	2	1	1				3	16
FLICKER, Yellow-shafted	2											2
Red-shafted	12	10	17	30	9	44	52	21	17	13		225
WOODPECKER, Pileated	1						2	2	1			6
Hairy	2	3					1				1	7
Downy	2	3			1	3	9	2	1	1		22
SAPSUCKER, Yellow-bellied	1											1
SKYLARK				8		5	83	15		15		126

CHRISTMAS BIRD CENSUS - Conclusion

SPECIES:	A	B	C	D
JAY, Steller		2		
RAVEN, Common	9	21	2	5
CROW, North-western	451	208	38	318
CHICKADEE, Chestnut-back	34	37	16	26
BUSHTIT, Common	28	3	11	
NUTHATCH, Red-breasted	15	8	7	2
CREEPER, Brown	5	4	6	
DIPPER		2		
WREN, Winter	15	10	4	
Bewick	9	6	8	1
Long-billed Marsh				
ROBIN,	122	47	1	255
THRUSH, Varied	27	6	6	
Hermit	1			
KINGLET, Golden-crowned	20	20	15	25
Ruby-crowned	3		4	
WAXWING, Cedar				
SHRIKE, North-western	1			
STARLING		15		24
WARBLER, Audubon				
SPARROW, house	1		3	15
MEADOWLARK, Western			16	
BLACKBIRD, Red-winged				
Brewer				
TANAGER, Western				
GROSBEAK, Evening				
FINCH, Purple	14	9	1	
House			52	
PINE SISKIN	625	136	826	100
GOLDFINCH, American				18
CROSSBILL, Red	12	19	45	20
TOWHEE, Rufous-sided	14	16	11	9
SPARROW, Savannah	1			
JUNCO, Slate-coloured		1		
Oregon	31	220	113	28
SPARROW, White-crowned		1	1	
Golden-crowned		10	6	24
Fox	1	6	5	1
Song	13	20	12	10
TOTAL, Individuals - -	5508	2262	3990	1669
AREA SPECIES, Totals - -	60	63	69	46

Total number of Birds - - 44,146

E	F	G	H	I	J	K	TOTAL
					1		3
		6	6	51	2	4	106
4	64	48	29	550	6	40	1756
5	63	169	25	100	2	4	481
	26	97	50	30			245
1	1	14	8	22	1	1	80
	2	10	3				30
							2
8	6	26	10	2	4		85
15	12	22	12	8	5	2	100
				1			1
215	219	218	179	2070	72		3398
1		34	5	12	6		97
	1		1				3
22	34	74	22	51	15	5	303
	8	11	8		3		37
		32					32
	1						2
45	48	52		280	2	14	480
	3						3
8	138	45	5	5	15		235
	20	18		1			55
		15		21	2		38
	15			2	75		92
		1					1
		1					1
	29	36		2	1		92
6	71	35	37	4	20		225
250	186	1002	240	600	21	150	4136
			1	6			25
	2	37	2	10			147
9	19	32	20	6	8		144
		2					3
	1	1					3
30	108	273	180	87	63	30	1163
		4		7	6		19
9	12	21			10		92
2	15	10			4		44
7	52	20	20	34	17		205
2280	6871	4103	2863	7504	1748	5348	44146
47	80	74	69	46	60	55	

Total species - - - - - 121

CHRISTMAS COUNT - continued

Eight additional species were seen in the area during the count period, but not on the count day, as follows:- Gadwell, Wood Duck, Golden Eagle, Ring-billed Gull, Bonaparte Gull, Band-tailed Pigeon, Western Bluebird, Orange-crowned Warbler.

CHRISTMAS COUNT - OBSERVERS AND DISTRICTS

- Area A: Mr. R. McKenzie-Grieve, Mr. & Mrs. W. Sendall, Mrs. M. Winstone, Mr. Freeman King, Mrs. M. Moyer, PROSPECT LAKE, FRANCIS PARK, HEALS RANGE.
- Area B: Mr. & Mrs. T. R. Briggs, Mr. & Mrs. J. Palmer, Miss J. Hannay, Miss L. Halsall, FLORENCE LAKE, LANGFORD LAKE, GOLDSTREAM PARK.
- Area C: Mr. D. Stirling, Miss N. Haas, ESQUIMALT LAGOON TO WITTY'S LAGOON.
- Area D: Mr. F. Beebe, Mr. R. Huckin, Mr. W. Adams, PORTAGE INLET, VIEW ROYAL, THETIS LAKE
- Area E: Mr. J.M. Barnett, Mr. J. Robinson, Rev. and Mrs. D. Sparling, Miss Bellefontaine, BEACON HILL PARK, GORGE.
- Area F: MR. G. A. Poynter, Mr. W. Reith, Mr. C. Pritchard, Mrs. E.G.Bousfield, Mrs. E. McKenzie, Miss M. C. Melburn, Mrs. J. R. Parris, CLOVER POINT TO CATTLE POINT.
- Area G: Mr. & Mrs. A.R. Davidson, Mrs. H.M.S. Bell, Dr. G.C. Carl, Mrs. P.M. Monckton, TEN MILE POINT, GORDON HEAD.
- Area H: Mr. R.Y. Edwards, Lt.Cmdr.I. MacPherson, Mr. A. Hockly, Mr. J.E.Underhill, Mr. M. Matheson. ROYAL OAK AVE., ELK LAKE.
- Area I: Miss E. Lemon, Mr. D. Hancock, Mr. F. Buffam, Mr. R. Barnes, Mr. C. Morgan. WILKINSON, BURNSIDE AND INTERURBAN.

Continued -

Area J: Mrs. R. Stirling, Mrs. B. Westerborg, CENTRAL SAANICH, ISLAND VIEW BEACH.

Area K: Mr. C. J. Guiguet, WATERS FROM TRIAL ISLAND TO DISCOVERY ISLAND

JUNIORS PARTICIPATING:

Gerry Nelson, Shirley Martin, Lynn Bain, Dave Gray, Trevor Gibbons, Gail Moyer, Nancy Chapman.

SOME BIRD COUNT HIGHLIGHTS

Last season's possible bird count of 138 species (124 on count day, 14 additional seen during the week) may stand as a record for some time to come. This season's possible total was 130 if we include the cowbirds found on January 6 by Alan Poynter. Two species resident in the area, the horned lark and the mountain quail have not yet been recorded on our census.

The 14,000 drop in the number of individuals is due entirely to fewer starlings and robins. Starlings dropped by 10,000 while robins decreased by 4,000. Possibly mild weather and abundant food helped to prevent these two species from concentrating in our area, or perhaps a large roost was missed. Numbers of most other species remained fairly constant.

The taking of this Christmas bird census is becoming more popular every year. Nine counts were taken in British Columbia this year end, some of them for the first time. Here are some of the figures:

Victoria's count was 121 species and that of Vancouver 113. Penticton, which includes Naramata and Summerland got a record total of 72 species. Another count was taken lower down the Okanagan valley covering the area around Oliver, their number being 48, which included the rare white-headed woodpecker. Farther south still at Osoyoos, Richter Pass and Anarchist Mountain the group identified 39 species, amongst which were eight trumpeter swans and a canyon wren. Vernon and Kelowna bird watchers each found 65 species. A census was also taken for the first time on North and South Pender Islands. Here 48 species were seen.

On December 30th, David and Ruth Stirling, along with Raymond Barnes and Chris Morgan, travelled to Courtenay to participate in the Comox district Bird Census. In spite

of poor weather, as a strong gale was blowing at the time accompanied by frequent rain showers, they identified 76 species, and a total of 11,357 birds, the highlight being a flock of approximately two thousand dunlin concentrated in a flooded field, and the sighting of eleven bald eagles.

We also received the Edmonton count, their total of 29 species being considered very satisfactory for that area.

Toronto has a well established society, as they had 123 observers in the field, covering 28 routes, which produced 76 species.

Vancouver also undertook a bird count at Ladner, but no figures have been received to date.

David Stirling and A. R. Davidson.

THE CHRISTMAS BIRD COUNT
BEACON HILL & GORGE AREA

by J.M. Barnett

You don't have to go into the woods and fields in the suburbs to see a variety of birds, as witness our total of forty-seven species in the heart of the city.

This year we did not add any unusual species to the list, but a herring gull in the park was a welcome sight.

Any large movement of a species into the Victoria area is generally to be noted in the park, and this year it involved siskins. The Rev. and Mrs. Sparling, with Miss Bellefontaine, who is on a visit here from England, counted 250 of these birds in their area. (The total for the count area was 4136.)

The waterfront is always an interesting spot for birds, and this year we were fortunate in having the assistance of Mr. J. Robinson, who is a new member from Montreal. His 25 power Scope was a great help in identifying some of the birds out on the water.

Our best spot for these birds was a little bay east

of the V.M.D., where we saw gulls, scoters, baldpates, grebes, guillemots and a small flock of seventeen murrelets.

We were unfortunate in not getting the wood duck and the Townsend warbler, both of which had been seen by Mr. Robinson two days earlier.

It is always a tired but happy group of people who get together at the home of the Poynters in the evening to hear the results.

The job of entertaining and feeding forty-two bird watchers means a great deal of hard work, and we would be remiss if we did not join with all those present in thanking Alan and Helen for being such charming hosts and bringing this auspicious day to such a wonderful end.

A NATURAL HISTORY ASSOCIATION

In December a meeting was held in Vancouver to discuss the formation of an Association of British Columbia Natural History Societies, which was represented by delegates from Vancouver, Kelowna, Vernon, and Victoria.

On February 23rd another meeting will be held in Victoria to form this association, appoint an executive, and draw up a constitution, and delegates will be present from Kelowna, Vernon, Penticton, Duncan and Vancouver.

We would be most grateful if our members could see their way to putting up a delegate. Would those willing please get in touch with Mrs. Gladys Soulsby at 2150 Granite Street, Telephone EV.6-5028.

**** * ****

NOTE TO A CONTRIBUTOR:

We have an unsigned article submitted. Would appreciate if the writer would identify himself to the editor, but, if he so wishes, his anonymity will be respected.

**** * ****

NOTES ON MORTALITY AMONGST BIRDS

by Adrian Paul, Kleena Kleene

Species such as grouse and ducks, which raise quite large families, are decimated by various predators.

It seems likely that the swallows' worst enemy is a sudden absence or serious scarcity of flying insects.

How about loons? They appear not to seek safety in numbers, and there is reason to think that even eagles leave them alone. Last winter a common loon was washed up on the beach where I lived. There was no obvious cause of death. It is significant that they lay only two eggs. There was also a red-necked grebe washed ashore. When it first arrived it was still alive, but was allowing the wavelets to bump it against the sloping beach. In a couple of hours it was dead. Again there was no apparent cause.

For birds of prey (apart from the smaller being sometimes eaten by the larger) it seems fairly clear that the chief "enemy", not counting man, is starvation. As evidence of this, a neighbour told me he is convinced as a result of his own observations that pygmy owls die of starvation in winter, and I recently picked up a dead one myself. Some years ago, while skiing I came across a dead owl which had obviously fallen off a branch where it had been sitting. One May or June I saw a hawk hanging head down, each talon grasping a branch. It appeared to have been there for some time, and as it was only about five feet from the ground it seemed likely it had grabbed the branch while falling from a higher perch.

Cold weather would no doubt contribute to the death of these birds, but it is significant that Brewer blackbirds for instance, which normally go south in the fall in this area, sometimes stay all winter in the vicinity of their summer breeding grounds at a spot such as a barnyard, where food is available, and I knew of one instance where a junco, which had apparently been left behind during migration, survived the winter, with its sub-zero weather, by visiting a neighbour's feeding table.

The marvellous little chickadees, which make a go of it at forty to fifty below, have the advantage of being omnivorous, and probably spend the nights in small parties in a woodpecker cavity. One observer has expressed the opinion that chickadees are sometimes killed and eaten by shrikes.

THE GEOLOGY OF OUR WATERFRONT

by A. H. Marrion

Article No.5. Dallas Road: Horseshoe Bay to Cook St.

A dirt path runs down to the beach from the "Lookout" building. The rock exposure has streaks and masses of white, hard siliceous intrusive rock. This is much more resistant than the main body of rock, so that its surface is quite smooth, while the darker rock is rough and eroded more deeply.

An outcrop of granodiorite (Article 1) is very noticeably fractured into small pieces, more so than the darker invaded Wark gneiss, with the result that the ice developed a fairly large basin in the former. A large boulder of the darker rock is wedged in an east-west widened crack in the rocks. A more solid mass of granodiorite rounds the depression to the west and south, so that the surface is well rounded and smoothed.

The steep sides of the rock on each side of the bay dip into deep water. After the ice finished its work of rock erosion, its next step was to fill the gaps between with glacial debris, and then, with the land uplift, the sea waves concentrated their strength between the rocks to wash out the material.

Rock erosion, accelerated by the fractured rock surface, is noticeable on the point. At the top of the bank of gravelly till is a white granite boulder, while another lies at the base. Much broken shell matter - oyster, cockle, clam, etc. appear to come from the till. This was possibly thrown up into the surface vegetation by wave and wind.

One might ask "whence came the accumulation of boulders in a rock basin at this point?" On a newly exposed surface of blackish rock are some well preserved ice scratches, etc. Further east is another collection of four boulders; two granite, one sandstone with erosion cavities, and one peculiar blackish rock with a blackish mica shining out as the light strikes it from different angles.

About 300 feet east of Finlayson Point the high bank consists of sandy till with many cobble stones, with here and there a larger boulder. The upper part is again covered with a brownish clay about eight feet deep. Nearer the steps the clay is capped with two feet of sand (now black soil), while at the base is a large white boulder.

Eastwards of the steps blasted rock fragments have been dumped over the bank to stop erosion. The banded structure

of the pieces identifies them as Colquitz gneiss (article 1). At this point beach boulders are more numerous. Why? From Finlayson Point east the Wark gneiss disappears, and the Vancouver volcanics become the surface rock.

HUMPBACK WHALE

On New Year's day a humpback whale was seen in the waters off Uplands Park. It was first sighted by J. Brenton a few minutes after 4 p.m. and was under observation by Miss Brenton and M. C. Melburn for approximately thirty-five minutes. During that time it broke water repeatedly and in the intervals the area was marked by almost constant turbulence. At times the animal ploughed along for many yards just below the surface.

The location was about one hundred yards off shore directly East of the Oak Bay Memorial. A report was at once 'phoned in to Dr. G. C. Carl who later received another report from Mark Guiguet who had seen the whale about noon the same day and in the same area.

For a description of this species of whale see pages 268-269 in Museum Handbook #11 "The Mammals of British Columbia".

M.C.M.

TRUMPETER SWANS

by M. Winstanley

The morning of the 8th of January will be remembered by a group of bird watchers of the Victoria Natural History Society.

Word had been passed around that some trumpeter swans were feeding in the fields between Martindale and Dooley Roads.

Leaving the cars on Dooley Road we walked down Lochside and got near enough to watch these rare and handsome water-fowl without disturbing them, which we were able to do with the aid of our binoculars.

There were eight of them, six adults and two immatures, and they were quietly resting and feeding on the grass. Later we saw them walk forward and stretch their huge wings. One appeared to be lame, which made us wonder if this one injured bird had delayed the rest of the flock

on their journey further south.

This was a sight not often seen in Victoria, and as there are only about fifteen hundred of these trumpeters in the world, we considered ourselves very lucky indeed.

JUNIOR JOTTINGS

by Freeman King

A little frost, snow and rain adds an interest to the field trips for the hardy juniors.

Our expedition to Goldstream Camp Site was well worth the effort. Many kinds of mosses, fungi, trees and shrubs were found. After the ramble we held a camp-fire and finished up with a marshmallow roast.

The trip to start the junior branch at Duncan was a great success, there being 48 boys and girls who turned out for the occasion. Five of our leader group went along, Gail Moyer, Dave Gray, Nancy Chapman, Shirley Martin and Gerry Nelson, each of whom took some of the instruction periods. We hope to go up to Duncan again.

Our latest trip out to Beaver Lake was more than exciting, when a swan was found marooned on the ice. Some of the leader group stayed on the rescue job till dark.

I would like to congratulate the four leaders who were the guest speakers at the January general meeting of the Society. It was the first time any of them had had this experience. They got across the message of the Francis Park and the Nature House by way of a different approach.

The leader section have manned the Nature House each Sunday and are now working with their groups for the forthcoming Exhibition on February 8th.

NOTICE OF MEETINGS1963Friday,
Feb. 8th:

The Junior Branch will hold an exhibit of specimens of many subjects at 7:30 p.m. in the Douglas Building Cafeteria on Elliot St. Dr. David B. Turner, Deputy Minister of the Department of Recreation and Conservation, has kindly consented to open the "SHOW".

Sunday,
Feb. 10th:

BOTANY GROUP FIELD MEETING: Owing to the postponement of the trip scheduled for January 13th, this ramble for the purpose of identifying trees and shrubs in winter, will be held on this date. Cars will meet at the Monterey parking lot at Hillside & Douglas Streets at 1:30 p.m.

Tuesday,
Feb. 12th:

GENERAL MEETING: At the Douglas Building Cafeteria at 8 p.m.

Mr. R. York Edwards, biologist of the Provincial Parks Branch will speak on "Naturalists are Lucky", and show a film entitled "Quetico".

Mr. Edwards is well known; we look forward to a full turnout.

Saturday,
Feb. 23rd:

BIRD FIELD TRIP: To Mount Douglas Park. Meet at the Monterey parking lot at 9:30 a.m., or at the Park at 10 a.m. Bring lunch. Leader: Mr. T. R. Briggs.

Tuesday,
Feb. 26th:

BOTANY GROUP: The botany group will meet at the Provincial Museum at 8 p.m. The speaker will be Mr. George A. Hardy, well-known retired botanist from the Provincial Museum. Mr. Hardy's talk, to be illustrated, will be "WILD FLOWERS AS THEY GROW".

The Juniors will meet each Saturday at the Monterey parking lot at 1:30 p.m., for field trips.

Leader: Mr. Freeman King.

Anyone who would like to join these trips is very welcome.

VICTORIA NATURAL HISTORY SOCIETY

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Minister of Recreation and Conservation

MR. J. W. EASTHAM
Former Provincial Plant Pathologist

Honorary Life Members

DR. G. CLIFFORD CARL
Director, Provincial Museum

MR. GEORGE A. HARDY
Former Provincial Botanist

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