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## VICTORIA NATURAL HISTORY SOCIETY

Mailing Address: P.O. Box 1747, Victoria, B.C. V8W 2Y1

All correspondence, including membership applications and renewals, should be sent to this address.

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The financial year is May 1 to April 30. New members joining after January 1 and before March 15 - half-dues.

Rare Bird Alert  
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### RACE ROCKS CRUISE

Sunny skies and calm seas greeted the 34 naturalists who boarded the MV "Lakewood" on the February 11 boat trip to Race Rocks.

After a false start due to temporary engine problems, we departed Oak Bay at 10:00 A.M. Soon we were passing by Red-necked, Horned, Eared and Western Grebes; Greater Scaup; Surf and White-winged Scoters; Common Murres, Pigeon Guillemots and Rhinoceros Auklets. Our leaders, Wayne Campbell, Michael Shepard and George Sirk helped us sort out the many species of birds present.

We steamed toward Ten Mile Point, from where the ebbing tide carried us south through Baynes Channel, past large concentrations of Mew Gulls and small groups of Oldsquaws, Ancient Murrelets, Bonaparte's Gulls and Common Murres. Sharp eyes spotted a lone Peregrine Falcon perched high on a snag on Chatham Island.

Drifting close to the Chain Islets, we watched 30 harbour seals basking in the morning sun and surrounded by cormorants and gulls. Suddenly the boat came alive with the excited shouts of "EMPEROR GOOSE!" This individual, apparently the third record for Victoria, and the first in 13 years, permitted us to approach within 75 feet. Everyone had a fine view and many photographs were taken.

COVER:

"SEALIONS" ... taken by Bertha McHaffie Gow  
on the Race Rocks Cruise

Scones, tea and coffee were served as we left the islets and cruised over Constance Bank to our destination - Race Rocks. Cassin's Auklet and Red Phalarope were added to our tally along the way, and as we neared the rocks, a SHORT-TAILED SHEARWATER came in to view. This was a treat for the many birders who added this pelagic wanderer to their life lists.

Skilfully manoeuvring the ship among the rocks, the skipper brought us to within 50 feet of 170 California and Steller's sealions hauled out on shore. Here we experienced the incredible aromas, the barking and roaring of these amazing creatures. In company with these giants were Rock Sandpipers, Black Turnstones, Surfbirds and a Whimbrel.

We retraced our wake to Strongtide Islet and threaded a starfish-encrusted channel, before returning to Oak Bay to end a beautiful day at sea.

\* \* \* \* \*

*The Alpine Club of Canada has asked us to inform members that a show of slides will take place in the Newcombe Auditorium of the successful Canadian Himalayan Expedition to Pumori in 1977. FRIDAY, APRIL 14TH at 8:00 P.M.*

\* \* \* \* \*

### SWAN LAKE - CHRISTMAS HILL NATURE CENTRE

*By Grace Barclay, Resident Naturalist*

On an evening in early March, a sign of Spring was noticed at the Nature Centre - the frogs were croaking! Spring is slowly unfolding at the Centre; the pussy-willows have opened, the bird cherry is blooming, the Easter lilies are coming up, and the bird chorus starts at dawn, becomes silent during the day, and resumes around suppertime.

The Swan Lake-Christmas Hill Nature Centre is located between Saanich Road and Douglas Street, south of McKenzie Avenue, at the end of Swan Lake Road. It is managed by a non-profit society made up of volunteer representatives from various groups in the Capital Regional District, including the Victoria Natural History Society.

Since the Centre started three years ago, much background work has been done, and there is now an active school program; a small community program; and a start been made on the trail system. Last Fall we moved into the former private residence that is now our office, meeting place and future display building.

The Nature Centre has a lot to offer the people of the immediate neighbourhood and the whole of the Capital Regional District. It consists of 100 acres of fields and thickets around Swan Lake, and 9 acres on top of Christmas Hill. (The Centre is discouraging use of Christmas Hill until a trail is built.) It is an urban centre, a fact not easily overlooked sometimes as the train whistles past or one becomes aware of the steady muffled sound of traffic, but nonetheless packed with things to see.

It is not always the train or helicopter that causes the flock of wintering American wigeon to take flight out over the lake - often seen in pursuit is a Bald Eagle. Although seen several times a week, it has a habit of disappearing during the school field trips and when the naturalist particularly is looking for it.

The Lake itself is a whole different world, the warm nutrient-rich water teeming with life during the summer. On April 29th, we plan to look especially at some of the many interesting forms of lake life, as well as consider man's effect on Swan Lake. However, you need not wait for a field trip, as the Nature Centre is open at all times (office - week days only) and we would encourage you to come often to explore the many natural wonders to be found at the Nature Centre which your club funds are helping to support.

*(For those of you who have not visited Swan Lake before, the Nature Centre is reached from McKenzie Avenue via Rainbow Rd. to the end, and turn left, then right.)*



## THE DRAGONFLIES OF BRITISH COLUMBIA

By Robert A. Cannings and Kathleen M. Stuart,  
Handbook #35, British Columbia Provincial Museum,  
1977. 254 pp. \$2.00.

### Review by Jeremy B. Tatum

Let it be said at the outset that this work is quite clearly a major contribution to the natural history of British Columbia, of which its authors and the Provincial Museum should be justly proud. It is meticulous in its detail and thorough in its coverage, and the enthusiasm of its authors shines throughout. The numerous illustrations, by the authors themselves, are a joy to look at, and the printing is first class. My search for misprints was a total failure. Only once did I think I found one - the price quoted was only \$2.00. Surely this was wrong! But \$2.00 it is, and I do not know where else you can find such good value for money.

A brief introduction to dragonfly natural history and anatomy is followed by keys to the suborders, sexes, and families, after which each family is treated systematically, keys being supplied for the genera and species of both adults and larvae. Under each species the authors give a detailed description, information on the world range and distribution in British Columbia (with maps) and field notes on habits and habitat.

The main method of identification is dichotomous keys and I tested these, using a 8x binocular microscope, on a few preserved adult specimens (courtesy Dr. Richard Ring, University of Victoria) and on a few living larvae. A well-designed key is to be judged not only by its leading to an unambiguous identification but also by its ease of use and comprehension by a non-expert. I am particularly well qualified to judge the latter criterion, and, in spite of my outstanding non-expertise, I was able to follow the keys to species level without difficulty. Technical terms abound, nearly all of which I was unfamiliar with. But all of these terms are clearly defined in a glossary and in the introduction, and the two-way "choices" in the keys are clearly illustrated and labelled in nearby diagrams.

In spite of the obvious care with which the keys have been designed, I sometimes wonder if dichotomous keys such as these are more useful as an intellectual exercise for their composers than as a practical identification guide for the field naturalist for whom the BCPM Handbooks were originally intended. Most of the criteria in the keys even at the family level require microscopic examination; yet an experienced field naturalist can usually identify a species by sight even at a distance. This requires practice, however, and naturalists should regard the development of field identification as the next challenge in the study of our Province's dragonflies. They will find an excellent starting point in the field notes given for each species by the authors.

An unusual and most interesting feature is that the meaning of each generic and specific name is given. In just one case, I believe the authors nodded when they guessed at a Latin derivation and did not ask Professor David Campbell, who helped out with a few of the others. They suggest that the name *collocata* comes from the Latin *collum* = neck and Greek *cata* = down, but admit that "the implication of a neck bent down is not obvious". My colleague Herbert Huxley, professor of classics at the University of Victoria, and a fine entomologist to boot, discussed this with me and we would like to offer a solution. The difficulty has arisen, we believe, because of the confusion between two similar species, *Erythemis simplicicollis* and *E. collocata*, a confusion that the authors have resolved entomologically (but not etymologically!) by determining that British Columbia specimens are *E. collocata*. Now *simplicicollis* does indeed mean "simple neck", but the *coll* part of *collocata* is quite different and has nothing to do with necks! Rather it is the past participle of the verb *collocare*, meaning "to arrange something in position" -- a name doubtless given to it after Hagen had decided at last where to arrange the species in its taxonomic position. This then, is our modest contribution to our understanding of the Odonata of British Columbia!

According to Cannings and Stuart, about 80% of the 80 or so British Columbia dragonflies occur here locally. Summer is nearly here, and there is a tremendous field of interest here for any naturalist once he has purchased this most excellent book.

EDITORIAL

Our April programmes show the influence of longer days and spring in the air. Botany takes the honours, but other aspects of nature are given attention.

You will notice that Leon Pavlick's talk is in the programme again, having been switched from the March to the April General Meeting.

No more Audubon Films until October, when the new season begins.

On Miss Melburn's authority, the Toothwort (*Cardamine pulcherrima*) seen in flower on February 28th was about three weeks earlier than any of her records show.

Mayfair Lanes carpark is at the corner of Roderick and Oak, just off Douglas. We are sorry that "Ash" was put in instead of the other deciduous tree "Oak" last month. Anyone like to act as proof reader?

In the F.B.C.N. Newsletter of March 1978, members will note Louise Irwin's comments on the future of F.B.C.N. It is pertinent to ask Victoria Natural History Society members where they stand in recognising the importance of maintaining the continuance of natural history subjects which we still have. (The Peregrine Falcon, Sea Otter, Vancouver Island Marmot and Pink Erythronium come to mind.)

Are we prepared to back the F.B.C.N. in fighting for the survival of these and other endangered species and the survival of ALL naturalist subjects? Do we, as Natural History members, just take for granted that "someone else" will keep alive the wonders of the world which we enjoy? Or are we, personally, willing to help in the fight against those who consider money matters more than anything else and would destroy anything that comes in the way of making it?

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*YOUR MEMBERSHIP LAPSES ON APRIL 30. This is the first reminder to renew. Another will be given in May.*

*PLEASE NOTE THAT DUES HAVE GONE UP. SEE INSIDE FRONT COVER.*

PLANTS ARE WILDLIFE TOO

With Spring coming, what do we look for first? Lighter evenings and longer days probably. Then what next? Colour, after the drab winter? Which means flowers and shrubs. But what if there were no flowers and shrubs left to see? Would Spring mean as much to us?

Rachel Carson wrote "Silent Spring" and we were shocked, but how just as shocking to envisage a colourless Spring.

The World Wildlife Fund (Canada) has put out a leaflet drawing attention to the plant section of wildlife. A 1976 survey compiled by a university botanist lists 440 species of wild plants found only in Canada which are rare or endangered - about 10% of our native flowers. If species found in both Canada and other parts of the world are included, close on 40% of our wild flora is in danger of disappearing FOREVER.

Surgery depends on a number of drugs from jungle plants, yet these life-giving jungles are being destroyed at the rate of 52 acres a minute every day.

The World Wildlife Fund asks your help to carry on its work. Look at the wild plants that give you pleasure and think what your world would be without them - their continuing to survive may depend on the World Wildlife Fund.

Contributions may be sent to: World Wildlife Fund, 60 St. Clair Avenue East, Suite 201, Toronto, Ontario, M4T 9Z9.

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*The Canadian Nature Federation is another force at work in helping to save habitat. Recent activities have included intervention in pipeline and tanker issues as they relate to environmentally sensitive areas, and also involvement in the discussions concerning pollution of the Great Lakes. Cheques payable to: Canadian Nature Federation, 46 Elgin Street, Ottawa, Ontario, K1P 5K6, for either Environmental Program or Nature Sanctuaries Fund.*



AN UNUSUAL SIGHT*By E.H.W. Elkington*

On 11th February while working in the garden in the early afternoon, at 572 Island Road, I noticed a flock of crows behaving in a strange way - flying and circling at unusual speed round a large old fir tree some 50 yards away. Then I noticed a white object seen through the branches of the tree.

On moving my position, I saw a Bald Eagle sitting high up on a dead branch. It was obviously eating something. I went into the house and got the field glasses and to my surprise, the eagle was eating a crow.

I watched with great interest as with one foot he grasped the branch, and with the other he manipulated the body of the crow. He spent some time plucking the breast, seizing the feathers and flicking them out of his mouth, then tearing off large chunks of the breast and swallowing them. He spent the best part of an hour over the meal. Then sat for about another hour looking from side to side.

He was not the least bit disturbed by people walking under the tree and just looked down on them. He was an unusually large bird and his snowy head and white tail were in spotless condition.

INCUBATED OSPREYS

Ospreys are amongst Britain's rarest birds, so when a forest fire broke out near one nest and the parents flew away, Warden Harvey Burton was afraid the eggs would get chilled. So he climbed the tree at midnight and put the two eggs in a Thermos flask filled with warm corn. They were then rushed to an incubator at the Wildlife Park, Aviemore (Scotland) while Harvey replaced them with dummies to keep the female brooding should she return.

When the young ospreys forced their heads through the shells, Harvey returned them to the nest and the female returned and settled on them.

DRAMA IN GANGES HARBOUR*By I.C. Shank*

Shortly after lunch on January 19, while sitting at my desk, I heard a bird crying in a very distressful tone, but as my view of Ganges Harbour was partially obscured, I rushed outside to see what the noise was all about.

It was soon evident that the bird crying, or should I say shrieking, was a Great Blue Heron taking evasive action to avoid a following Bald Eagle. The latter, however, was gaining on him, and when it seemed likely he was to fall a victim, he dropped into the water, but soon re-appeared with only his neck and head visible. The eagle kept circling and made five or six passes at the partially submerged heron, who would shriek as the eagle approached and at the last moment managed to get his neck and head out of the way of the eagle's talons. The eagle seemed to be so disconcerted by the heron's defensive tactics that he finally broke off the attack and flew away.

As soon as the eagle had gone the heron managed to surface and take to the air, winging his way to a grove of fir trees where he customarily hangs out. He was lucky to be alive.

Several years ago, the feathers of a Great Blue Heron were found on a stump, in this area, so I now wonder if a Bald Eagle was responsible for the kill.

\* \* \* \* \*

Miss Melburn reports a crow being plucked and eaten on Dalhousie Street by a Pigeon Hawk the same week as Dr. Elkington saw one being consumed by a Bald Eagle. An unlucky day for the crows. But the interesting point to notice is the difference in size of the predators - Eagle 32 inches, Pigeon Hawk 12 inches. A crow is 14-1/2 inches and must weigh a lot more than the hawk. Is there a scarcity of pigeons in Oak Bay? Or are crows preferred? Anyone know?

The following is taken from the Greater Victoria Environmental Centre Newsletter (Nov./Dec. 1977):

### ESTUARIES - CRADLES OR GRAVES?

Estuaries are one of the most productive habitats on earth and yet are one of the most endangered.

An estuary is a river mouth where tidal action brings about mixing of salt and fresh water. Estuaries can include shallow bays, lagoons, channels, sloughs, tidal flats and salt marches. Most people think of them as damp, muddy, uninteresting and 'useless' places which should be filled in and developed for 'useful' commercial purposes. Estuaries have long been used as sewers or sinks for municipal and industrial effluent from the communities which naturally spring up on the flatlands of river valleys and coastal plains. This effluent, together with dredging, draining, filling in and log booming, is extremely damaging to these sensitive and highly productive areas.

Why are they so valuable? There are many reasons:

- 1) They provide nurseries, spawning and feeding grounds for a large portion of the commercial and sport finfish and shellfish;
- 2) They provide shelter and food for birds and other wildlife - especially during the winter for migratory birds;
- 3) They are highly productive - large amounts of plant life are produced which, on decaying, provides most of the food for the aquatic life;
- 4) The spongy soil acts as a water purifier and helps to filter out air-and-water-borne pollutants;
- 5) The marsh grasses act as a barrier against wind and water erosion;
- 6) Recreational potential - fishing, bird watching, etc.

In British Columbia, protection of these valuable natural resources is particularly important. The bulk of our coastline is rocky and not suitable for the development of marshland. Hence, our fish (salmon, etc.) are extremely dependent on the relatively few marshes which do exist - the largest ones being at the mouth

of the major rivers, e.g. the Fraser River Estuary. The problem is compounded in B.C. by the fact that we are relatively short of flat terrain along our coastline and most of it coincides with the estuaries. Consequently, they have been chosen as 'ideal' spots for settlements. The Fraser River estuary and several estuaries along the eastern side of Vancouver Island are, so far, the most severely damaged. However, people are becoming more aware of the need to prevent their further deterioration and their value to our commercial fishing industry is more readily recognised by our governments. But industry is still applying pressure to develop more and more estuarine land.

The Cowichan River Estuary is a case in point. The shell fishing grounds have been closed due to coliform contamination from sewage effluent and it is estimated that some 600 acres of the original 832 acres have been affected by existing industrial activity (log booming, etc.) Now, both Island Shake and Shingle and Western Forest Industries have made proposals to build mills on the remaining land, claiming that more jobs are needed in the area. A group of concerned citizens - the Cowichan Estuary Preservation Society - is opposing further development. They would like to see the "status quo" maintained and they argue that further development could jeopardize existing marine based jobs. If you are concerned about the future of the Cowichan Estuary, this society can use your financial and moral support. Their address is: Box 20, R.R. #5, Khenipsen Road, Duncan, B.C. (Phone 746-6375).

(The Victoria Natural History Society has sent a letter of protest about the Cowichan River Estuary proposal.)

*John Ruskin said: "God has given us the earth for our life. It is a great entail. It belongs as much to those who come after us as to us, and we have no right, by anything we do or neglect to do, to involve them in any unnecessary penalties, or to deprive them of any benefits which are theirs by right."*

## FEBRUARY BIRD RECORD

No.	Species	Date	Area Seen	Observer
2	Black Scoter	4	Whiffen Spit	Leila Roberts
1	Orange-crowned Warbler	9	2600 Penrhyn	R. McK. Grieve
1	Emperor Goose	12	Chain Islets	R.W. Campbell
1	Cassins Auklet	12	off Discovery Island	" "
4	Western Bluebird	15	Taylor Rd.	M.&V. Goodwill
1	Virginia Rail	17	Quick's Bttm.	Mike Bentley
1	Wood Duck	17	Blenkinsop L.	Nancy Lovett
1	Hutton's Vireo	18	Haro Woods	E.&A. Davidson
28	Gadwall	18	Quick's Bttm.	R. Satterfield Vic Goodwill
1	"Eurasian" green-winged teal	18	Ascot Pond	R.S. & V.G.
1	Harris' Sparrow	19	McIntyre Rd.	Mike Bentley
15	Water Pipits	19	" "	" "
12	Skylarks	19	Island View Rd.	" "
200	Killdeer	19	Martindale Rd.	" "
19	Ruddy Duck	20	Elk Lake	R. McK. Grieve
2	Black-legged Kittiwakes	21	River Jordan	M&V. Goodwill
1	American Kestrel	21	" "	" "
4	Tree Swallow	22	Cowichan Bay	Vic Goodwill
1	Marsh Hawk	22	" "	" "
3	Tree Swallow	23	Quick's Bttm.	M.&V. Goodwill
5	Whistling Swans	25	Somenos Lake	R. Satterfield Vic Goodwill
14	Trumpeter Swans	25	Somenos Lake	R.S. & V.G.
3	White-fronted Geese	25	" "	" "
1	California Gull	25	Bowker Ave.	R. Satterfield
2	Barrow's Goldeneye	26	Sayward Beach	R. McK. Grieve
12	Turkey Vultures	25	Munn Rd.	Doug Davidson
21	American Kestrel	27	Michigan St.	A.H. Cousar
20	Wilson's Snipe	28	Quick's Bttm.	Tuesday Group

Owing to changes in their migratory pattern, the movements of Black Brant Geese are being studied by the B.C. Fish and Wildlife Branch in co-ordination with the B.C. Wildlife Association. Anyone sighting these birds should note numbers, place seen and flight direction. Phone your findings to 386-2780 please.

## APRIL PROGRAMME

SUN. APRIL 2

BOTANY: Mill Hill. Leader: Stephen Mitchell. (477-9248) Morning only. Meet Mayfair Lanes, 9:00 A.M.

TUES. APRIL 11

GENERAL MEETING: in Newcombe Auditorium, 8:00 P.M. Speaker: Leon Pavlick. Plant Ecology in the Okanagan (see Editorial).

SAT. APRIL 15

ORNITHOLOGY. Birds at White Rock. Leader: Jack Williams. 7:00 A.M. Ferry to Tsawwassen. Accomodation limited, so phone Tim Murphy - 385-5357.

THURS. APRIL 20

SPRING MIGRANTS. Lead yourself! Meet 9:30 A.M. at Animal Compound in Beacon Hill Park.

SAT. APRIL 22

BOTANY: Cowichan Pink Lilies. Leader: Leon Pavlick. Meet Mayfair Lanes 8:30 or Honeymoon Bay Wildflower Reserve 10:00 A.M. Bring lunch.

SAT. APRIL 29

AQUATIC ECOLOGY. Leader: Grace Barclay. (479-0211) Meet Swan Lake Nature Centre at 1:30 P.M.

SUN. APRIL 30

GEOLOGY. Leader: Dr. Robert A. Brown. (385-2693). Meet Mayfair Lanes 10:00 A.M. Bring lunch.

JUNIOR PROGRAMMESAT. APRIL 1

SWAN LAKE NATURE CENTRE. Meet Mayfair Lanes, 1:30 P.M.

WED. APRIL 12

TIDE POOLS. Talk by Museum Marine Biologist. Meet Museum, 4:00 P.M.

SAT. APRIL 15

BOTANICAL BEACH. Meet Mayfair Lanes, 9:00 A.M. Bring lunch.

WED. APRIL 26

MUSEUM. Meet at Curatorial Tower entrance Dr. Carcasson, Entemologist.

SAT. APRIL 29

INSECTS FIELD TRIP: 1:30 Mayfair Lanes.