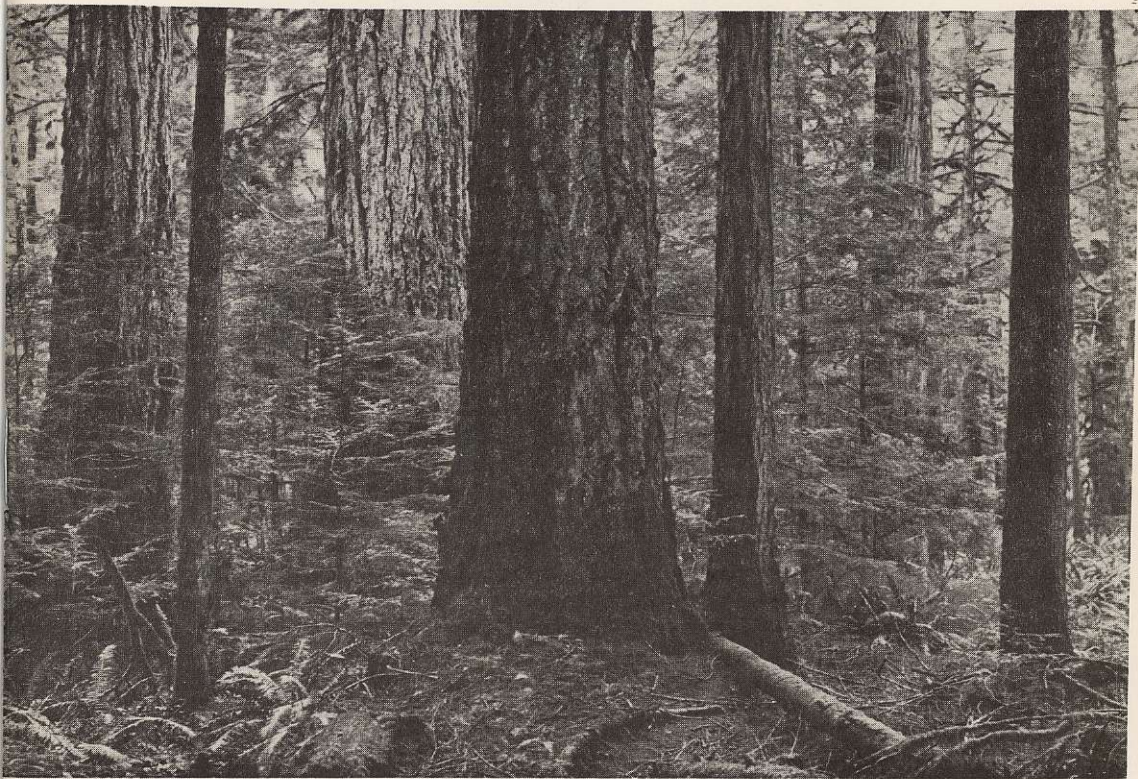


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COVER PICTURETHE GROWING FOREST

Courtesy, British Columbia Forest Service

COVER STORYTHE GROWING FOREST

by T.C. Brayshaw

How many of us, when walking through the forest, pause to wonder how the forest we see around us grew to be in the form in which we find it? Has it grown up, in the sense that individual trees have grown up?

Forest ecologists studying the development of our forests, have found that the forest has a life history, just as an individual tree has, but of a much more complex kind. As generation succeeds generation of its component plants, the forest passes through a series of juvenile, adolescent and mature stages, and if it lives long enough before destruction, may enter a stage that can be called decadent or senile. This following through from stage to stage is termed "Succession". Each stage in succession is characterized by a particular species composition, with one or more species dominating the community. The dominant species take the full brunt of the physical environment and modify it to the benefit or detriment of their associate species, through litter deposit, shading etc. Competition among the plants soon begins to eliminate those species least able to tolerate it. Many dominants so modify their environment that their own seedlings cannot grow in competition with their parents, so that the dominance of the community passes from species to species, with increasing luxuriance of growth in successive communities of plants that are of necessity adapted more and more to the increasing intensity of competition.

When a forest originates on bare ground, as after clearing or burning, the first stage is usually a community of fast-growing, weedy herbaceous plants which can

tolerate full exposure to the elements, but not to overshadowing or competition by taller plants; bracken and fireweed being conspicuous examples. Tall shrubs and small broad-leafed trees such as willows, alders, and on the mainland, vine maple, follow in the succession, greatly increasing the bed of leaf litter on the ground, and shading out and suppressing the herbaceous species that cannot tolerate their competition.

The first real tree-dominated stage on southeastern Vancouver Island may be dominated by red alder in moist areas, or by arbutus or lodgepole pine on dry rocky ridges. The high nitrogen content of alder litter enriches the soil for future generations of trees, while the arbutus and pine produce acid litter that modifies the soil in a different way. None of these trees, as seedlings, grows well in competition with its own parents, and dominance passes again to other trees, generally Douglas fir. By this time there has developed, under the closing canopy of trees, a forest floor community made up of plants adapted to the shady, humid environment and litter-covered soil. In dry areas along the east coast of Vancouver Island, this Douglas fir-dominated stage is stable, and so is termed the "Climax" stage. However, in moister districts, Douglas fir is less able to grow up under its own canopy than the still more shade-tolerant amabilis fir, red-cedar, and hemlock trees, so that it slowly gives way, over centuries perhaps, to these species as climax dominants. This stage in succession is shown in the cover photograph, taken near Cameron Lake. Here the oldest and largest trees are Douglas fir, recognized by the coarsely ridged bark, while most of the younger trees and seedlings coming up under the canopy are western hemlock trees, which are destined eventually to replace the Douglas fir.

On the wet west and north coast areas, especially in situations where the drainage is slow, the forest floor may ultimately be invaded by sphagnum mosses, the dead remains of which accumulate without decay to form a deep, highly acid, saturated sponge of peat, in which seeding and growth of trees is impeded. Then the forest canopy will begin to break up, the sunlight can again penetrate to ground level, and lodgepole pine may reappear in an open, dwarf bob-forest of stunted trees.

Examples of this senile stage can be seen between Ucluelet and Tofino.

WHAT SHELL-DREDGERS CAN DO

An Audubon News Release for December 12, 1969, says that the National Audubon Society has sued the Texas Parks and Wildlife Commission and five shell-dredging concerns, to halt dredging in the San Antonio Bay area that is destroying the only remaining winter feeding grounds of the rare whooping cranes. The Society says the rare wild birds will become extinct if the dredging continues.

The Society, in Federal Court in Corpus Christi, has asked for an injunction to halt the concerns which, under permit from the commission, dredge up oyster shells from the bay bottom. This provides industry with calcium carbonate at low cost, but conservationists charge that the dredging is a wasteful practice, destroying fisheries and other valuable natural resources.

The Audubon Society describes the dredging as "Disastrous". The dredges rip out aquatic plant life and mud (the under-water equivalent of "top soil") along with the shells, and this also sends out a thick, black cloud of sediment that blocks out the sunlight for long periods of time and that, when it finally settles, forms a smothering blanket of silt. This kills or drives out most of the marine life in the area, including crabs, small fish and other foods of the whooping crane.

The world's remaining cranes - 55 at last count - nest in northern Canada but winter in the San Antonio Bay area of the Texas coast.

The Audubon suit contends that the dredging permits were issued illegally, in disregard of proven damage to fish and wildlife, and in violation of an international treaty with Canada to protect the whooping crane and other migratory birds that feed in the area.

REQUEST FOR INFORMATION ON BIRDS

Members will know that we are hoping to compile, every year, a Report on the birds seen in our area, based on records and descriptions from all local birdwatchers. Records for 1969 should be sent to me after the end of the year and, if possible, before mid-February.

In addition to these records I am requesting two further bits of help as detailed below.

(1) The principles on which the Report will operate is that a description of rare or of common but difficult birds will be required. The description must, of course, be of the particular individual bird that was seen in the field, but provided that this is satisfied and the description is adequate, the record normally will be published. Extremely difficult, or extremely rare, birds will be subject to careful refereeing and scrutinizing, and there will always be a specific reason for not publishing any particular record. Verification by a second observer and photographic evidence are not essential, though they are obviously of great value. The greatest weight is placed on the field description.

I would like to publish an Appendix to the Experimental 1969 Report giving a list of diagnostic characters for a few selected species that ought to be included in an acceptable description. I am not competent to do this alone for every species and I am appealing to Members for information. What I am asking for is not information on every species of the sort that is readily available from Peterson. But I am asking for lesser-known diagnostic characters for difficult birds. I have in mind such things as the Horned and Eared grebes, swans, scaups, accipiters, buteos (especially juveniles and various colour phases) eagles, the lesser-known or difficult shorebirds, yellow-legs, dowitchers, the less common gulls, terns, alcids at a distance, crows, confusing fall warblers - especially the Myrtle and Orange-crowned warblers - difficult sparrows. Many of you probably have some birds which you feel you know better than most. Imagine you are Editor of the Report. What characteristics would you look for in a field description before accepting the record? Let me have your ideas, so that the quality of the Report is based on the accumulated experience of all of us.

(2) I imagine that the Annotated Checklist produced by Mr. A.R. Davidson in 1966 will probably be revised in about 1980 and subsequently once a decade. Information for the revision may be taken largely from the Annual Bird Reports. There will therefore be a gap in the published records for the years 1967 and 1968. I want to publish an Appendix in the 1970 Report which will cover the more important events in these two years. This will include new birds added to the Checklist, accidentals, new nesting records, and events of particular interest, such as the Snowy owl invasion.

Much of this information I can obtain from the invaluable Birds for the Record and other material published in the Victoria Naturalist, so I am seeking further information which you may be able to give me for 1967 and 1968, such as descriptions, photographs obtained, photographs and information published elsewhere than in the Naturalist (e.g. newspapers - date and page number), estimates of the total number of Snowy owls recorded in the invasion and so on.

Members who feel that I am being a little finicky about descriptions may like to ponder that in the Naturalists for 1967-8 I found records of seven full species of birds that had never been previously recorded on Vancouver Island. None had a description. Five had no comment at all. One was given without any observer's name. Two concerned species for which the textbooks state that "it cannot be safely identified in the field". One was identified to subspecific level. Come on birdwatchers, this is not good enough!

J.B. Tatum

FOR FASTER NEWS OF BIRDS: Several of our birders are interested in developing a rapid telephone communication system so that they may be advised as early as possible when a rare bird has been seen. Anyone interested in participating should contact the Ornithology Group chairman by letter or by phone, giving name, address, telephone number, and the hours during which he or she may be contacted (some members will not be available during working hours).

A.C.S.

CHRISTMAS BIRD CENSUS

SPECIES:	A	B	C	D	E
Common Loon	-	-	18	-	4
Arctic Loon	-	-	2	-	1
Red-throated Loon	-	-	4	1	3
Red-necked Grebe	28	11	10	-	16
Horned Grebe	21	8	24	2	55
Eared Grebe	2	-	1	-	9
Western Grebe	1	-	1,013	-	3
Pied-billed Grebe	2	7	-	7	-
Double-crested Cormorant	5	2	30	2	9
Pelagic Cormorant	-	2	39	-	46
Brandt's Cormorant	-	-	-	-	20
Great Blue Heron	2	-	17	1	1
Mute Swan	-	-	-	6	4
Canada Goose	3	-	11	60	-
Black Brant	-	-	-	-	-
Snow Goose	-	-	-	-	-
Mallard	299	90	144	179	770
Pintail	-	15	3	3	1
Green-winged Teal	4	32	3	-	-
European Widgeon	-	-	-	-	-
American Widgeon	208	204	181	8	454
Shoveller	-	2	1	-	-
Redhead	-	-	-	-	-
Ring-necked Duck	25	18	-	23	-
Canvasback	45	-	7	-	10
Greater Scaup	-	5	46	91	64
Lesser Scaup	8	-	-	-	1
Common Goldeneye	4	38	35	-	112
Barrow's Goldeneye	-	4	-	-	3
Bufflehead	14	30	275	85	105
Oldsquaw	-	-	10	-	17
Harlequin	-	-	5	-	11
White-winged Scoter	-	-	100	35	26
Surf Scoter	29	-	37	-	81
Ruddy Duck	-	-	61	-	-
Common Merganser	48	10	9	4	-
Red-breasted Merganser	36	5	53	18	19
Hooded Merganser	3	29	6	36	12
Sharp-shinned Hawk	-	-	-	-	-
Cooper's Hawk	2	1	-	2	-

VICTORIA, B.C., DECEMBER 20, 1969

F	G	H	I	J	K	L	TOTAL
14	15	-	6	-	5	7	69
12	56	-	11	-	-	23	105
-	9	-	2	-	1	3	23
10	17	-	3	-	-	57	152
103	250	-	162	-	31	39	695
19	29	-	-	-	-	6	66
50	68	-	19	-	-	-	1,154
-	-	2	1	-	-	-	19
1	8	3	17	-	1	-	78
86	181	-	7	-	25	180	566
28	2	-	-	-	-	35	85
2	-	1	1	-	-	20	45
-	-	-	45	-	-	-	55
2	-	-	47	1	1	-	125
1	-	-	-	-	-	-	1
-	-	2	-	-	-	-	2
142	527	202	663	543	1,123	17	4,699
-	-	51	4	138	71	-	286
8	-	115	53	103	3	12	333
1	2	-	-	1	-	-	4
498	208	748	1,257	792	2,425	55	7,048
27	-	19	-	3	-	3	55
-	-	-	7	-	-	-	7
-	-	2	9	4	-	-	81
-	-	-	-	-	-	-	62
958	150	-	39	-	4	38	1,395
-	-	32	-	-	-	-	41
36	110	-	20	-	20	19	394
-	-	-	-	-	-	-	7
455	125	2	337	10	72	63	1,573
32	41	-	13	-	8	115	236
88	70	-	-	-	-	55	229
28	95	-	29	-	10	3	326
85	56	-	126	-	15	47	476
-	-	-	-	-	-	-	61
-	-	-	138	-	-	-	209
20	58	5	5	-	-	6	225
-	5	2	84	-	-	3	180
-	2	-	-	-	-	-	2
4	-	-	2	-	-	-	11

CHRISTMAS BIRD CENSUS - continued

SPECIES	A	B	C	D	E
Red-tailed Hawk	4	-	1	3	1
Bald Eagle	-	1	1	1	1
Peregrine Falcon	-	-	-	-	-
Sparrow Hawk	-	-	1	-	-
Blue Grouse	-	-	-	1	-
Ruffed Grouse	1	-	-	2	-
California Quail	6	-	-	1	-
Ring-necked Pheasant	8	1	-	1	-
American Coot	-	18	122	51	4
Black Oystercatcher	-	-	-	-	-
Killdeer Plover	-	1	28	-	-
Black-bellied Plover	-	-	3	-	-
Surfbird	-	-	-	-	-
Black Turnstone	-	-	2	-	38
Common Snipe	-	1	1	4	-
Upland Plover	-	-	-	-	-
Spotted Sandpiper	-	-	-	-	-
Greater Yellowlegs	-	18	-	-	-
Lesser Yellowlegs	-	-	-	-	-
Rock Sandpiper	-	-	-	-	2
Dunlin	-	-	11	-	-
Sanderling	-	-	-	-	-
Glaucous-winged Gull	279	435	388	142	454
Western Gull	-	-	-	-	-
Herring/Thayer's Gull	-	1	-	1	6
Mew Gull	5	2	16	17	369
Common Murre	-	-	1	-	1
Pigeon Guillemot	-	-	1	-	8
Marbled Murrelet	-	-	2	-	8
Ancient Murrelet	-	-	-	-	-
Rhinoceros Auklet	-	-	-	-	-
Rock Dove	-	12	10	24	182
Band-tailed Pigeon	-	-	-	-	-
Mourning Dove	-	-	-	-	-
Great Horned Owl	-	-	-	-	-
Screech Owl	-	-	2	-	-
Short-eared Owl	-	-	-	-	-
Belted Kingfisher	1	1	4	-	3
Yellow-shafted Flicker	-	-	-	-	-
Red-shafted Flicker	14	15	20	2	3
Pileated Woodpecker	1	-	-	1	3

CHRISTMAS BIRD CENSUS - continued

SPECIES	F	G	H	I	J	K	L	TOTAL
Yellow-billed Scaup	-	1	-	3	2	4	-	18
Hay Woodpecker	1	1	-	-	-	3	-	9
Dor Woodpecker	-	-	-	-	1	-	-	1
Sp. Hawk	-	-	-	-	-	-	-	1
Goon Raven	-	-	-	-	1	-	-	2
Northwestern Crow	-	-	-	-	-	1	-	4
Cl. Woodpecker	35	63	-	15	1	51	-	172
Coon Woodpecker	3	22	11	7	4	12	-	69
Western Woodpecker	79	19	2	376	-	-	-	671
Br. Greenlet	36	4	-	-	-	-	27	67
Dr. Wren	-	-	-	9	44	17	-	99
Wi. Wren	66	25	-	-	-	-	13	107
Beck's Wren	4	-	-	-	-	-	-	4
Bo. Wren	79	8	-	-	-	-	1	128
Var. Thrush	-	-	57	33	4	1	-	101
Go. Wren	-	1	-	-	-	-	-	1
Red-crowned Kinglet	-	-	-	1	-	-	-	1
Ge. Wren	7	7	-	-	-	-	-	33
Northern Shrike	1	-	-	-	-	-	-	1
Sp. Wren	55	-	-	-	-	-	-	57
Ho. Sparrow	75	-	-	4	-	40	-	130
Western Meadowlark	1	-	-	-	-	-	-	1
Red-crowned Kinglet	690	1,660	220	1,224	98	276	900	6,766
Bo. Wren	1	-	-	-	-	-	-	1
King Gnatcatcher	1	1	-	-	-	-	8	18
P. Wren	770	55	295	503	117	469	200	2,818
Ho. Wren	161	32	-	6	-	-	-	201
P. Wren	2	10	-	12	-	1	-	34
A. Wren	2	3	-	-	-	-	26	41
Red-crowned Kinglet	2	32	-	2	-	-	120	156
Red-shafted Flicker	-	-	-	-	-	2	-	2
S. Wren	-	22	99	11	1	-	-	361
Bl. Wren	-	5	-	17	-	-	-	22
Gr. Wren	-	6	-	1	-	-	-	7
Ho. Sparrow	-	-	-	2	-	-	-	2
Wi. Wren	-	1	-	-	-	-	-	2
Go. Wren	-	-	-	-	-	1	-	1
Lo. Sparrow	-	4	-	-	-	-	-	13
So. Sparrow	1	-	-	-	-	-	-	1
Lo. Wren	28	45	22	23	19	9	-	200
Lo. Sparrow	-	4	-	-	-	1	-	7

CHRISTMAS BIRD CENSUS - continued

SPECIES	A	B	C	D	E
Yellow-bellied Sapsucker	1	-	-	-	-
Hairy Woodpecker	-	3	-	-	-
Downy Woodpecker	-	4	3	1	-
Skylark	-	-	-	-	-
Common Raven	4	5	1	9	4
Northwestern Crow	244	52	137	24	67
Chestnut-backed Chickadee	37	70	44	153	25
Common Bushtit	-	25	4	-	-
Red-breasted Nuthatch	1	6	-	6	-
Brown Creeper	-	7	4	5	1
Dipper	-	3	-	-	-
Winter Wren	1	6	-	12	-
Bewick's Wren	5	2	3	2	1
Robin	64	25	9	24	107
Varied Thrush	-	1	-	1	-
Golden-crowned Kinglet	7	16	45	115	3
Ruby-crowned Kinglet	6	2	1	-	1
Cedar Waxwing	-	-	-	-	3
Northern Shrike	-	-	-	-	-
Starling	36	75	43	14	247
House Sparrow	5	8	8	-	2
Western Meadowlark	-	-	3	-	-
Red-winged Blackbird	-	-	-	-	3
Brewer's Blackbird	-	24	-	-	25
Evening Grosbeak	-	40	-	-	-
Purple Finch	6	15	-	6	-
House Finch	-	13	9	-	6
Pine Siskin	194	320	423	295	132
American Goldfinch	-	-	-	-	-
Red Crossbill	-	25	14	6	-
Rufous-sided Towhee	7	20	2	8	4
Savannah Sparrow	-	-	-	-	-
Slate-colored Junco	-	-	-	-	-
Oregon Junco	97	110	41	67	53
Harris' Sparrow	-	-	-	-	-
White-crowned Sparrow	-	-	1	1	-
Golden-crowned Sparrow	-	9	3	-	4
Fox Sparrow	-	2	3	4	1
Song Sparrow	10	2	3	7	3
<u>Total Individuals</u>	<u>1,833</u>	<u>1,909</u>	<u>3,563</u>	<u>1,574</u>	<u>3,628</u>
<u>Total Species</u>	<u>47</u>	<u>59</u>	<u>68</u>	<u>52</u>	<u>60</u>

F	G	H	I	J	K	L	TOTAL
-	-	-	-	-	-	-	1
-	1	-	2	1	1	-	8
4	10	4	1	-	4	-	31
-	-	-	38	1	12	-	51
2	4	4	3	2	2	-	40
288	1,560	312	756	252	91	-	3,783
70	305	87	89	34	125	-	1,039
95	125	-	50	-	6	-	305
1	1	-	1	1	-	-	17
1	11	5	-	2	8	-	44
-	-	-	-	-	-	-	3
1	21	-	18	2	8	-	69
3	16	10	4	4	7	-	57
245	560	56	224	62	100	-	1,476
2	4	-	8	-	1	-	17
-	45	-	3	4	11	-	249
1	5	-	27	1	6	-	50
-	90	-	-	-	-	-	93
-	1	1	-	-	1	-	3
3,150	450	234	1,173	192	601	-	6,215
98	140	79	6	6	6	-	358
1	2	-	2	-	-	-	8
-	-	5	5	-	-	-	13
-	-	431	17	-	100	-	597
-	17	-	-	-	-	-	57
6	11	1	16	4	-	-	65
62	167	88	14	22	39	-	420
100	320	21	6	105	145	-	2,061
-	-	-	3	-	-	-	3
-	-	-	-	-	-	-	45
19	31	19	27	7	32	-	176
-	2	-	-	-	-	-	2
2	3	-	-	-	1	-	6
104	503	39	119	52	94	-	1,279
1	-	-	-	-	-	-	1
10	-	-	-	1	14	-	27
26	51	6	9	16	25	-	149
9	14	3	4	-	6	-	46
9	24	22	24	3	36	-	143
<u>9,120</u>	<u>8,608</u>	<u>3,287</u>	<u>8,048</u>	<u>2,661</u>	<u>6,185</u>	<u>2,101</u>	<u>52,517</u>
<u>75</u>	<u>76</u>	<u>40</u>	<u>76</u>	<u>42</u>	<u>58</u>	<u>30</u>	<u>120</u>

CHRISTMAS BIRD CENSUS - continued

At the time of going to press the Upland Plover has not been fully confirmed.

Seen during count period, but not on count day:

Marsh Hawk, Bonaparte's Gull, Barn Owl, Saw-whet Owl, Hummingbird sp., Water Pipit, Hermit Thrush, Brown-headed Cowbird, White-throated Sparrow.

AREA A - Prospect Lake-Munn Road: R.C. Mackenzie-Grieve, L. Halsall, C. Morehen, K. Joy, C. Hodson.

AREA B - Florence Lake-Goldstream: Mr. & Mrs. T. Briggs, Mr. & Mrs. J. Palmer, J. Hannay, B. Wise, R. Satterfield, W. Fitzpatrick, Mrs. Dunsford.

AREA C - Esquimalt Lagoon-Witty's: E. Lemon, M. Slocombe, E. Kerr, Mr. & Mrs. Muirhead, S. Lees, M. Miller.

AREA D - Portage Inlet-Thetis Lake: R. Beckett, W. Adams, J. Brown, W. Sendall, J. Sendall, F. Bone.

AREA E - Beacon Hill Park - Esquimalt: R. Fryer, M. Seymour, I. Jarvie, G. Soulsby, L. Rutherford, J. Groves, A. Hockly.

AREA F - Clover Point-Oak Bay: D. Stirling, A. James, T. Bell, D. Guthrie, L. Parris, M.C. Melburn.

AREA G - Ten Mile Point-Gordon Head: Mr. & Mrs. Davidson, Dr. & Mrs. Sparling, D. Turnbull, J. Bryden, G. Bell, M. Collins, C. Carl.

AREA H - Swan Lake-Panama Flats: A. Schutz, R. Phillips, Mr. & Mrs. Wainwright, E. Harvey, L. Monckton.

AREA I - Blenkinsop - Elk Lake: Mr. & Mrs. Matheson, Mr. & Mrs. Hooper, J.E. Underhill.

AREA J - Burnside-Quick's Pond: F. Beebe, A. Harcombe, J. Tatum, N. Fatt.

AREA K - Martindale-Island View Beach: R. Stirling, M. Sheppard, B. Parlow, W. Spriggs.

AREA L - Chain and Trial Islands: C.J. Guiguet.

The compiler wishes to thank all who took part in the count, especially leaders and referees who so willingly supplied and examined information on unusual and difficult species. Particular thanks are due to Dr. and Mrs. J. Bristol Foster for so successfully undertaking the enormous task of being hosts to the participants in the evening of Count Day; and to Mrs. Gwennie Hooper for typing this report.

Compiled by Jeremy Tatum

A SWITCH OF DIRECTORS: On December 31, 1969, Dr. G.C. Carl retired as Director of the British Columbia Provincial Museum. Doctor Carl has served this province well. He continues to serve it in the Museum's Division of Marine Biology in the Curatorial Building. Dr. J. Bristol Foster is Acting Director until a successor has been appointed.

PAGES PER VOLUME: At the January General Meeting the number of pages in each magazine issue was discussed. The number of pages in recent volumes may be of interest.

Volume 23, ending in May, 1967, had 112 pages. Volume 24, with blue on the cover and containing the series on notable naturalists, had 128 pages. Volume 25 (red on cover) had 124 pages. If the current volume, Volume 26, had eight issues of 12 pages each and one (February) of 16, it would, like Volume 23, have 112 pages. Possibly, the number of pages is less important than the quality and variety of material filling those pages.

BIRDS FOR THE RECORD

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

White-throated sparrow (1) - St. Patrick -	from Dec.15 -
(seen every day except Count Day)	Grace M. Bell
Rufous hummingbird (1) - Gonzales Ave. -	Dec.21,22 -
	Mrs. Barry
Brown-headed cowbird (8) - Martindale -	Dec.21 -
	Rob Mackenzie-Grieve
Glaucous gull (1) - Clover Point -	Dec.21 -
(first year plumage)	Allan Schutz
Marsh hawk (1) - Martindale/Island View -	Dec.26 -
Pine grosbeak (8) - Saseenos, Sooke -	Dec.27 -
	A.R. and Eleanore Davidson
(3) - John Dean Park	Jan.10 -
	Ralph Fryer
Water pipit (1) - Blenkinsop Lake -	Jan. 3 -
	A.R. and Eleanore Davidson
Upland plover (1) - Carey Road -	Jan. 6 -
Gadwall (1) - Martindale -	Jan.10 -
Red-tailed hawk ("black" phase) (1)-Martindale -	Jan.10 -
	Ralph Fryer

Residents and winter residents:

Western meadowlark (28) - Lochside/Martindale(CM) -	Dec.30
European widgeon (1) - Roy/Carey (AJ) -	Jan. 7
(9) - 5 Poynter's Puddle;	
1 Martindale; 2 Wallace Dr.; 1 Ascot Dr. (RF) -	Jan.10
Great horned owl (1) - John Dean Park (RF) -	Jan.10
Thayer's gull (70) - Martindale (RF) -	Jan.10

PLANES ROUT BIRDS: On October 14, the Vancouver Sun had a UPI news story from Vienna. It seems that on Mondays, Wednesdays and Fridays, a private air force zooms low over the Austrian border, sending thousands of starlings fleeing into Hungary. On Tuesday, Thursdays and Saturdays, the Hungarian Air Force strikes back. War planes buzz the frontier and birds flit back to Austria.

It's part of "the great Austro-Hungarian wine war" and owners of the great vineyards on both sides of the border feel strongly about the millions of grape-eating starlings.

PACIFIC SEARCH

Some of our members would undoubtedly be interested in Pacific Search, a journal devoted to the natural sciences in the Pacific Northwest, and published in affiliation with the Pacific Science Center in Seattle. It contains articles on a great variety of subjects all pertinent to British Columbia as well as to the area as a whole. Topics, ranging from anthropology to zoology, include such subjects as the prehistoric Marmes man, killer whales, hummingbirds, satellites and identification keys to local flora and fauna.

The publishers are making a special introductory offer to Canadian subscribers of \$3.50 for the first year which includes ten monthly issues. The regular annual subscription in Canada is \$4.00 (U.S.funds). The address is Pacific Search, Inc., 200 Second Avenue North, Seattle, Washington 98109.

The December, 1969, issue had an editorial by Harriet Brewster on the problems and risks of conveying oil from Alaska's North Slope to the "lower 48". One suggestion has been for icebreaking tankers, modelled after the Manhattan and twice as big to push through the Arctic ice of the Northwest Passage.

Harriet Brewster writes, "If a ship carrying two million gallons of oil breaks, that oil will be spread by the surfaces of moving blocks of ice shearing against each other. All two million gallons have been calculated capable of covering one quarter of the Arctic Ocean. So what, that the Arctic turns black? The air flow patterns and ocean currents round the world depend on cold air and water moving out of the polar regions.

The strong reflective power of ice keeps it from melting; albedo, a measure of solar energy which is reflected and lost, is high in water. Albedo of oil is low; ice covered with black absorbs solar energy and will melt. If the reflective power of the entire Arctic were altered, the world's climate would be too".

This editorial in the December issue of Pacific Search is Volume 4, No.3. It may be seen on request at the General Office of the British Columbia Provincial Museum.

Ruth Chambers

PROGRAM FOR FEBRUARY 1970

- Executive Meeting 8:00 p.m. at home of Mrs.S.Prior,
 Tuesday February 3 1903 Shotbolt Road.
- General Meeting 8:00 p.m. Douglas Building
 Cafeteria.
 Tuesday February 10 Speaker: Murray Matheson -
 "West Coach Beaches".
- Bird Field Trip Elk and Beaver lakes. Bring
 lunch. Meet at 9:30 a.m. at
 Saturday February 21 Douglas and Hillside or 10 a.m.
 at Beaver Lake parking area.
 Leader: A.C. Schutz 386-0541
- Botany Meeting 8:00 p.m. Room 216, Oak Bay
 Tuesday February 24 Junior High School.
- Junior Group: Meet every Saturday at Douglas
 and Hillside for field trip.
 Leader: Freeman King 479-2966
- Heritage Court Presents: 8:00 p.m. Newcombe Auditorium
- Friday February 6 Dr. Sidney Jackman:
 "History and the Historian"
- Friday February 13 Bill Holm: "The Art and Life of
 Willie Seaweed, Kwakiutl Artist"
- Friday February 27 Hugh Nasmith: "Victoria under
 Ice".

A SWITCH OF EDITORS: This is my 27th issue. On January 6, the Executive granted my request that I be allowed to retire on January 16 when the dummy of the February issue was completed. So my thanks to all those members who've helped me greatly in the past three years. All material on hand goes to Mr. A.R. Davidson who is producing the March and April issues. Please send contributions to him until April 1 when Mr. Roy D. Wainwright, 3250 Exeter will take over as Editor.

Editing has, on the whole, been great fun. I've laughed often, sworn sometimes and learned a lot. But since last July I've been column-writing as well. It's too much.

Ruth Chambers

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Annual Dues, including subscription: Single, \$3; family, \$5; juniors, \$2.

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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.