

Flora and Fauna Inventory for McPhee Property
Little River, Vancouver Island

This Report was prepared by the **Comox Valley Naturalists Society** at the request of the
Little River Enhancement Society

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Introduction

In mid-May 1999 the Comox Valley Naturalists were approached by Frank Shepard and Edgar Smith of the Little River Enhancement Society. We were requested to inventory the flora and fauna found on the McPhee Property in preparation for a purchase proposal. This was presented to the Club at the May meeting, where volunteers were called for to do the work. A series of field trips visited the property from early June to August 1999.

Acknowledgements

We wish to thank the individual members of the Comox Valley Naturalists Society who assisted to the collection of field data and its compilation for this report. These members are Doug and Marian Innes, Jim and Betty Goodman, Nathan Hentze and Jean Hudson. A special mention and thanks to Helen Robinson who showed a special interest in the property and was instrumental in preparing the plant list.

Site Description

The McPhee property is located in electoral area B of the Comox Strathcona Regional District. It is due east of the Little River Ferry terminus and extends from the beach on the Strait of Georgia to Wilkinson Road. The Little River, which is estuarine in character flows through the property.

Using the ecoregion classification (Demarchi et al., 1990)¹ this property falls within the Georgia Depression ecoprovince. It has a moderate climate and high number of days of sunshine due to the rainshadow formed by the Vancouver Island mountains. The flat lowlands and extensive land/marine interface has resulted in a variety of unique habitats. This classification supports the highest diversity of birds in BC.

This ecoprovince's natural ecosystems are threatened by a huge population growth throughout its range. The Comox Valley is one of the fastest growing communities in BC. Chances for preserving natural areas are limited due to high urbanization and the McPhee property represents a unique opportunity.

The property has been in the possession of the McPhee family for many years. There has been a history of sand and gravel extraction on the site resulting in the formation of two ponds on the south end of the property. Between the ponds and the Little River is forest land on which are located two houses.

A site assessment for the Vancouver Forest Region was done by Green and Klinka (1994)². The province of British Columbia has been separated into 14 biogeoclimatic units based on climate, soil and vegetation. These are divided into subzones and variants. The McPhee property falls within the Very Dry Maritime Coastal Western Hemlock Subzone (CWHxm). The site series is a 03. It is an old beachplain and soil pits showed the profile to be almost pure sand. The understory vegetation is dominated by Salal (*Gaultheria shallon*) with some Red Huckleberry (*Vaccinium parvifolium*), Ocean-Spray (*Holodiscus discolor*) and Oregon Grape (*Mahonia nervosa*).

The government of BC is committed to protecting 12% of the BC land base by the year 2000. Despite significant overall gains in protected areas there are significant gaps within certain biogeoclimatic zones. The CWH xm in which the McPhee property is located is severely under represented under BC's protected areas system. It is estimated that only 2.4% of this biogeoclimatic subzone is protected.³

The forest on the McPhee property is composed of almost pure Douglas-fir (*Pseudotsuga menziesii*). An increment borer was used to drill the trees in order to age them. They were found to be about 90 years old. To the north this forest has a minor component of Sitka Spruce (*Picea sitchensis*) growing along its edge where it borders the Little River. North of this is a treeless beach plain. To the south the forest has black cottonwood (*Populus balsamifera ssp.*) growing on the edge. South of this is a willow thicket which surrounds the ponds.

1 Demarchi, D; R. Marsh, and A. Harcombe, [et al]. 1990. The environment. pp55-145 in Campbell, R., N. Dawe, I. McTaggart-Cowan, J. Cooper, G. Kaiser and M. McNall; The birds of British Columbia. Vol 1. Royal BC Museum.

2 R. N. Green and K. Klinka. 1994. A Field Guide to Site Identification and Interpretation for the Vancouver Forest Region. BC Ministry of Forests

3 Karen Lewis and S. Westmacott. 1996. A Protected Areas Strategy for British Columbia Provincial Overview and Status Report, Land Use Coordination Office

South of the ponds is a field dominated by Scotch Broom (*Cytisus scoparius*) with some young (<20 year old) Douglas-fir.

The McPhee property demonstrates great biodiversity due to several distinct ecosystems found within it. There is the beach, the riparian zone of the Little River, the Douglas-fir forest and the wetlands formed by the ponds.

Plant Checklist

The following is a list of the plants identified to date (excluding grasses). The nomenclature is according to Pojar and MacKinnon (1994)⁴ and Hitchcock et al.(1973)⁵ and the listing is alphabetical by family.

FAMILY

Aceraceae

Acer macrophyllum Broad-leaf maple

Apiaceae

Daucus carota Queen Anne's lace
Lomatium nudicaule Indian consumption plant

Asteraceae

Achillea millefolium Yarrow
Artemisia campestris Northern wormwood
Chrysanthemum leucanthemum Oxeye daisy
Crocidium multicaule Goldstar
Eriophyllum lanatum Woolly sunflower
Franseria chamissonis Sand bur
Grindelia integrifolia Gumweed
Hypochaeris radicata Hairy cat's ear
Lactuca muralis Wall lettuce
Senecio vulgaris Common groundsel
Tanacetum vulgare Tansy

Berberidaceae

Mahonia nervosa Dull Oregon grape

Betulaceae

Alnus rubra Red alder

Boraginaceae

Myosotis discolor Bi-colored forget-me-not

Brassicaceae

Barbarea orthoceras American wintercress
Cakile edentula Sea rocket

⁴ Pojar, Jim and A. MacKinnon; 1994. Plants of Coastal British Columbia. BC Ministry of Forests

⁵ Hitchcock, C., C. Leo, and A. Cronquist; 1991. Flora of the Pacific Northwest, University of Washington Press, Seattle and London

Brassicaceae cont.

<i>Cardamine oligosperma</i>	Little western bitter-cress
<i>Draba verna</i>	Spring whitlow grass
<i>Teesdalia nudicaulis</i>	Shepherd's cress

Caprifoliaceae

<i>Lonicera ciliosa</i>	Orange honeysuckle
<i>Sambucus racemosa var arborescens</i>	Red elderberry
<i>Symphoricarpos albus</i>	Common snowberry

Caryophyllaceae

<i>Cerastium arvense</i>	Field chickweed
<i>Cerastium viscosum</i>	Sticky chickweed
<i>Cerastium vulgatum</i>	Mouse-ear chickweed
<i>Honkenya peploides</i>	Seabeach sandwort
<i>Stellaria media</i>	Common chickweed

Chenopodiaceae

<i>Salicornia pacifica</i>	Glasswort
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Cornaceae

<i>Cornus stolonifera</i>	Red osier dogwood
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Crassulaceae

<i>Sedum spp.</i>	Stone crop
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Cyperaceae

<i>Carex macrocephala</i>	Big-headed sedge
<i>Carex spp.</i>	

Cuscutaceae

<i>Cuscuta salina</i>	Salt marsh dodder
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Equisetaceae

<i>Equisetum arvense</i>	Common horsetail
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Ericaceae

<i>Arctostaphylos uva-ursi</i>	Kinnikinnick
<i>Gaultheria shallon</i>	Salal
<i>Vaccinium parvifolium</i>	Red huckleberry

Fabaceae

<i>Cytisus scoparius</i>	Scotch broom
<i>Lathyrus japonicus</i>	Beach pea
<i>Lupinus littoralis</i>	Shore lupine

Fabaceae cont.

Trifolium dubium

Small hop clover

Ulex europaeus

Gorse

Vicia gigantea

Giant vetch

Vicia hirsuta

Hairy vetch

Vicia sativa

Common vetch

Fumariaceae

Dicentra formosa

Pacific bleeding heart

Geraniaceae

Erodium cicutarium

Filaree, stork's bill

Geranium molle

Dovefoot geranium

Juncaginaceae

Triglochin maritimum

Seaside arrow-grass

Lamiaceae

Mentha arvensis

Field mint

Liliaceae

Allium acuminatum

Hooker's onion

Fritillaria camschatcensis

Northern rice-root

Maianthemum dilatatum

False lily of the valley

Nyctaginaceae

Abronia latifolia

Yellow sand verbena

Nymphaeaceae

Nuphar polysepalum

Yellow water lily

Orobanchaceae

Orobanche californica

Clustered broomrape

Orchidaceae

Goodyera oblongifolia

Rattlesnake plantain

Piperia maritima

Seaside rein-orchid

Spiranthes romanzoffiana

Ladies' tresses

Pinaceae

Abies grandis

Grand fir

Picea sitchensis

Sitka spruce

Pseudotsuga menziesii

Douglas-fir

Plantaginaceae	
<i>Plantago lanceolata</i>	Narrow-leaved plantain
<i>Plantago maritima</i>	Seaside plantain
Polemoniaceae	
<i>Microsteris gracilis</i>	Pink microsteris
Polygonaceae	
<i>Rumex acetosella</i>	Sheep sorrel
<i>Rumex crispus</i>	Curled dock
Polypodiaceae	
<i>Polystichum munitum</i>	Sword fern
<i>Pteridium aquilinum</i>	Bracken fern
Portulacaceae	
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Claytonia perfoliata var glauca</i>	Dwarf miner's lettuce
<i>Claytonia spathulata</i>	Pale spring beauty
<i>Montia linearis</i>	Narrow leaved montia
Primulaceae	
<i>Glaux maritima</i>	Sea milkwort
<i>Trientalis latifolia</i>	Broad-leaved starflower
Ranunculaceae	
<i>Delphinium menziesii</i>	Menzies' larkspur
Rosaceae	
<i>Amelanchier alnifolia</i>	Saskatoon
<i>Holodiscus discolor</i>	Ocean spray
<i>Malus fusca</i>	Pacific crabapple
<i>Potentilla pacifica</i>	Pacific silverweed
<i>Prunus emarginata</i>	Bitter cherry
<i>Rosa gymnocarpa</i>	Dwarf woodland rose
<i>Rosa nutkana</i>	Nootka rose
<i>Rubus discolor</i>	Himalayan blackberry
<i>Rubus parviflorus</i>	Thimbleberry
<i>Rubus spectabilis</i>	Salmonberry
<i>Rubus ursinus</i>	Trailing blackberry
<i>Spiraea douglasii spp. douglasii</i>	Hardhack
Rubiaceae	
<i>Galium aparine</i>	Cleavers

Salicaceae

Populus balsamifera spp.
Salix lucida spp *lasiandra*
Salix scouleriana
Salix sitchensis

Black cottonwood
Pacific willow
Scouler's willow
Sitka willow

Saxifragaceae

Lithophragma parviflora
Tellima grandiflora

Small-flowered woodland star
Fringe cup

Scrophulariaceae

Collinsia grandiflora
Linaria dalmatica
Veronica peregrina var. *xalapensis*
Veronica serpyllifolia var. *humifusa*

Blue-eyed Mary
Toad flax
Purslane speedwell
Thyme-leaved speedwell

Botany Notes

The Seaside rein-orchid (*Piperia maritima*) was found growing on the beach plain. 235 individual plants were counted. This plant has been given blue listed status by Douglas et al (1998)⁶

⁶ Douglas, G., G.B.Straley, D. Meidinger;1998. Rare Native Vascular Plants of BC. Province of BC

Bird Checklist

The following is a list of birds observed or heard on the property. They are listed according to the classification of the American Ornithologists Union (6th edition 1983 and its supplements). A total of 52 species were noted on the property.

Name	Code	Total Sightings
Common Loon	COLO	1
Great Blue Heron	GBHE	1
Turkey Vulture	TUVU	1
Canada Goose	CAGO	10
Mallard	MALL	7
Bald Eagle	BAEA	10
Merlin	MERL	4
Peregrine Falcon	PEFA	1
Ring-necked Pheasant	RNPH	26
Killdeer	KILL	10
Spotted Sandpiper	SPSA	3
Western Sandpiper	WESA	2
Least Sandpiper	LESA	12
Bonaparte's Gull	BOGU	3
Mew Gull	MEGU	2
Glaucous-winged Gull	GWGU	3
Rock Dove	RODO	15
Band-tailed Pigeon	BTPI	2
Common Nighthawk	CONI	1
Rufous Hummingbird	RUHU	10
Belted Kingfisher	BEKI	12
Northern Flicker	NOFL	19
Pileated Woodpecker	PIWO	3
Pacific-slope Flycatcher	PSFL	6
Warbling Vireo	WAVI	7
Steller's Jay	STJA	1
Northwestern Crow	NOCR	61
Common Raven	CORA	7
Violet-green Swallow	VGSW	22
Chestnut-backed Chickadee	CBCH	40
Bushtit	BUSH	14
Red-breasted Nuthatch	RBNU	2
Bewick's Wren	BEWR	12
Swainson's Thrush	SWTH	14
American Robin	AMRO	40
European Starling	EUST	159
Cedar Waxwing	CEWA	5
Orange-crowned Warbler	OCWA	3

Yellow Warbler	YEWA	28
Black-throated Gray Warbler	BTGW	1
Common Yellowthroat	COYE	3
Spotted Towhee	SPTO	46
Chipping Sparrow	CHSP	1
Fox Sparrow	FOSP	2
Song Sparrow	SOSP	26
White-crowned Sparrow	WCSP	3
Red-winged Blackbird	RWBL	163
Brewer's Blackbird	BRBL	297
Bullock's Oriole	BUOR	3
House Finch	HOFI	22
Red Crossbill	RECR	4
Pine Siskin	PISI	1
Total:	52 species	1151 individuals

Bird Notes

Canada Goose: A family of two adults and eight juveniles were recorded on the pond May 29th.

Mallard: One adult male was flushed from the pond May 29th. On June 2nd, six day-old chicks were feeding on Little River without an adult accompanying them. They were not seen again.

Great Blue Heron - Heronry: Up until the week prior to the survey the heronry on this property had been active for several years. (pers.comm. Colleen Gagnon, a resident on the property) She stated that a disturbance by "big black birds" over the nesting area seemed to have discouraged them from returning to the nest site. The heronry has at least 10 nests visible from the forest floor. A walk in the evening on June 16th revealed no evidence of herons returning to the site for the night. One heron was recorded flying over the nest site on Jun. 28th. The only heron observed during the survey.

Bald Eagle: An active eagle nest in a black cottonwood tree directly across the road from this property produced one young eagle in 1999. The two adults and one immature used the tall Douglas fir trees on this property as observation, grooming and feeding perches. They were recorded on 7 out of the 9 recording days, either flying over or perched.

Merlin: This falcon was seen three times. June 28th, July 29th, and Aug 5th. On the last day two were observed together, one diving on a flock of Rock Doves, and one flushing a flock of Sandpipers feeding on a sandbar in Little River. Both were observed catching dragonflies (Green Darners) over the pond, then returning to perches to devour them.

Peregrine Falcon: The falcon was observed only once, on Aug. 5th. It had landed on the top of a broken fir. A telescope easily revealed the typical markings of a peregrine. After about ten minutes observation it flew eastward over the beach plain.

Ring-necked Pheasant: Pheasants were recorded on eight of the nine recording days. Two broods appeared. One male was seen feeding on a lawn with seven juveniles, and one female was with two small chicks a few days later. (pers.comm. Colleen Gagnon).

Killdeer: A pair nested on a gravel bar at the pond. The female was seen settling on the nest June 28th. A neighbor said he had counted four eggs in the nest. We did not flush the bird to confirm the number of eggs in the nest. On July 23rd there was no evidence of young or the adults at the site.

Sandpipers: Three species were recorded in Little River at low tide. They are important prey species for Merlins.

Common Nighthawk: This bird was flushed from the ground on June 28th.

Belted Kingfisher: A male and female were observed fishing over the pond area July 23rd.

Violet-green Swallow: This species was recorded on seven out of the nine observation days. Although no nest sites were found, they were utilizing the aerial space over this property for feeding on insects.

Northern Flicker: One Northern Flicker hybrid⁷, a cross between the red-shafted and yellow-shafted flicker form, was recorded June 16th, June 28th and July 29th. One juvenile Northern Flicker was noted June 28th.

Northwestern Crow: One adult was feeding a young bird June 28th.

Chestnut-backed Chickadee: One juvenile was recorded June 28th.

Bewick's Wren: A family of five was seen Aug. 5th.

American Robin: On July 29th a nest was found in a large willow with one nestling. Several robins were observed carrying insects in their bills when the survey was done, an indication that they were feeding young in the vicinity.

Cedar Waxwing: A pair of Cedar Waxwings was noticed flying into a large willow shrub July 29th. Upon closer scrutiny they were seen to be building a nest. Aug.5th an adult was incubating on the nest. Aug.9th a careful visit to the nest revealed 3 warm eggs, no adults were seen going to or coming from the nest. The visit was very short so as not to disturb the area. Aug. 16th the nest was revisited briefly. Two hatchlings and one egg were visible - the adult quickly returned to the nest.

Spotted Towhee: One juvenile was observed on each of Jun 28th and Jul.23rd. Two juveniles were recorded July 29th.

Song Sparrow: Two juveniles were seen; one Jun 28th, and one July 29th.

Red-winged Blackbird: Three unoccupied nests were found among the willows near the pond on July 29th, after the water level had dropped. They were made mostly of sedge leaves wrapped around the willow whips. This was an area where many red-winged blackbirds were recorded earlier in the survey, and where several female blackbirds were seen with insects in their bills.

Brewer's Blackbird: A juvenile was observed being fed July 29th.

House Finch: One juvenile was noted Jun 21st.

A total of fifty two species of birds were recorded during the nine week-days of

⁷ Peterson Roger Tory; 1990. A Field Guide to Western Birds. Houghton Mifflin Company., Boston.

recording, with a total number of sightings numbering 1,151.

Due to the limited time frame, the number of species recorded is by no means a complete record of the birds using this habitat. The spring and fall migration for example would include more species of waterfowl and passerines.

Miscellaneous Inventory

American Beaver (*Castor Canadensis*): Seen twice in the pond. It dove towards a beaver house on one occasion.

River Otter (*Lutra Canadensis*): May 29th one river otter was seen swimming in the pond. Aug. 5th three river otters were observed swimming just off the shoreline. There was one adult and two juvenile young.

Columbian Blacktail Deer (*Odocoileus Hemionus Columbianus*): One doe was observed in the meadow June 2nd. A two-spike buck was seen twice following the meadow trail into the Douglas-fir timber on June 11th and June 29th.

Anthills: They are very numerous on this property, a total of fourteen were recorded. The diet of Northern Flickers is highly dependant upon ants, more than any other bird in North America. "Anting"⁸ is a ritual performed by many birds. Ants are placed in the feathers by the bird, or the bird will spread its wings over an anthill supposedly to use the formic acid secreted by the ants to rid themselves of parasites. Ant trails are easily observed forming a network in many places.

Sand Wasp Colonies: Sand wasps⁹ catch flies to feed young larvae in their burrows. The colony here is almost continuous along a path on the northwest side of Little River.

Reptiles: Two Garter snakes were recorded. One on dry land, the other one was swimming in the pond.

Amphibians: One Red-legged frog was seen sunning itself at the edge of the pond Jul. 23rd.

⁸ Erlich, Paul, D. S Dobkin, and D. Wheye; 1988. Birder's Handbook. Simon & Schuster Inc., New York.

⁹ Knopf, Alfred A. Inc.; 1988. The Audubon Society Field Guide to North American Insects and Spiders. Chanticleer Press Inc., New York,

Appendix I Bird Inventory

* ^ - flying

~ - with chicks

s - singing

	29May	2Jun	11Jun	16Jun	21Jun	28Jun	23Jul	29Jul	5Aug
COLO	0	0	0	0	0	0	1	0	0
GBHE	0	0	0	0	0	1^	0	0	0
TUVU	0	0	0	0	0	0	0	1^	0
CAGO	10~	0	0	0	0	0	0	0	0
MALL	1	6~	0	0	0	0	0	0	0
DUCKsp.	0	0	0	0	0	0	0	0	2
BAEA	0	1	1^	0	1	2	1^	3	1
HAWKsp.	0	0	0	1^	0	1	0	0	0
MERL	0	0	0	0	0	1	0	1	2
PEFA	0	0	0	0	0	0	0	0	1
RNPH	0	1	1	8~	1	1	12~	1	1
KILL	1	1	3	1	2	2	0	0	0
SPSA	0	0	0	0	0	0	0	1	2
WESA	0	0	0	0	0	0	0	0	2
LESA	0	0	0	0	0	0	0	0	12
SANDsp.	0	0	0	0	0	0	0	0	35^
BOGU	0	0	0	0	0	0	0	2^	1
MEGU	0	0	0	0	0	0	0	1	1^
GWGU	0	0	0	0	0	0	0	2	1
RODO	0	1^	0	0	0	0	3^	5^	6^
BTPI	0	0	0	0	1	0	0	1^	0
CONI	0	0	0	0	0	1	0	0	0
RUHU	0	0	3	2	1	3	1	0	0
BEKI	0	1	2	0	0	3	2	2	2
NOFL	0	2	1	2	3	4	1	5	1
PIWO	0	0	1	0	0	0	0	2	0
PSFL	0	0	0	0	1	3	1	0	1
WAVI	0	1	1	0	0	0	4	1	0
STJA	0	0	0	0	0	1	0	0	0
NOCR	0	4	5	9	4	6	3	10	20^
CORA	0	2^	1^	0	4^	0	0	0	0
VGSW	3^	9^	1^	5^	1^	1^	0	0	2^
CBCH	0	2	0	0	6	12	12	8	0
BUSH	0	0	0	0	0	12	0	0	2
RBNU	0	0	0	0	0	0	2	0	0
BEWR	0	2	0	0	1	1	2	0	6
SWTH	0	0	2	2s	4s	3	0	3	0

	29May	2Jun	11Jun	16Jun	21Jun	28Jun	23Jul	29Jul	5Aug
AMRO 0	7	5	5	5	6	7	2	5	3
EUST 0	3	6	51	29	16	1	43	10	
CEWA 0	0	0	0	0	0	0	0	4	1
OCWA 0	0	0	0	0	3	0	0	0	0
YEWA 0	5	6	2	3	4	7	0	0	1
BTGW 0	0	0	0	0	0	0	1	0	0
COYE 0	2	0	0	0	0	1	0	0	0
SPTO 0	1	6	6	7	3	11	10	2	
CHSP 0	1	0	0	0	0	0	0	0	0
FOSP 0	0	0	0	0	0	2	0	0	0
SOSP 0	5	3	3	4	2	3	3	4	2
WCSP 0	1	1	0	0	0	0	0	1	0
RWBL 10	30	17	15	53	32	1	5	0	
BRBL 0	4	6	40	15	0	20	210	2	
BUOR 1	1	0	0	0	0	0	1	0	0
HOFI 0	0	3	2	5	0	1	5	6	
RECR 0	0	0	0	0	0	0	4	0	0
PISI 0	0	0	0	0	0	0	1	0	0

Appendix II Miscellaneous Inventory

* + Doe Deer
! Buck Deer

	29May	2Jun	11Jun	16Jun	21Jun	28Jun	23Jul	29Jul	5Aug
Beaver	0	0	0	1	0	1	0	0	0
Otter	1	0	0	0	0	0	0	0	3
Deer	0	1+	1!	0	0	1!	0	0	0
Anthill	0	2	0	0	3	3	2	4	0
Sand wasp colony	0	0	0	0	1	0	1	0	0
Garter Snake	0	0	0	0	1	0	1	0	0
Red-legged Frog	0	0	0	0	0	0	1	0	0