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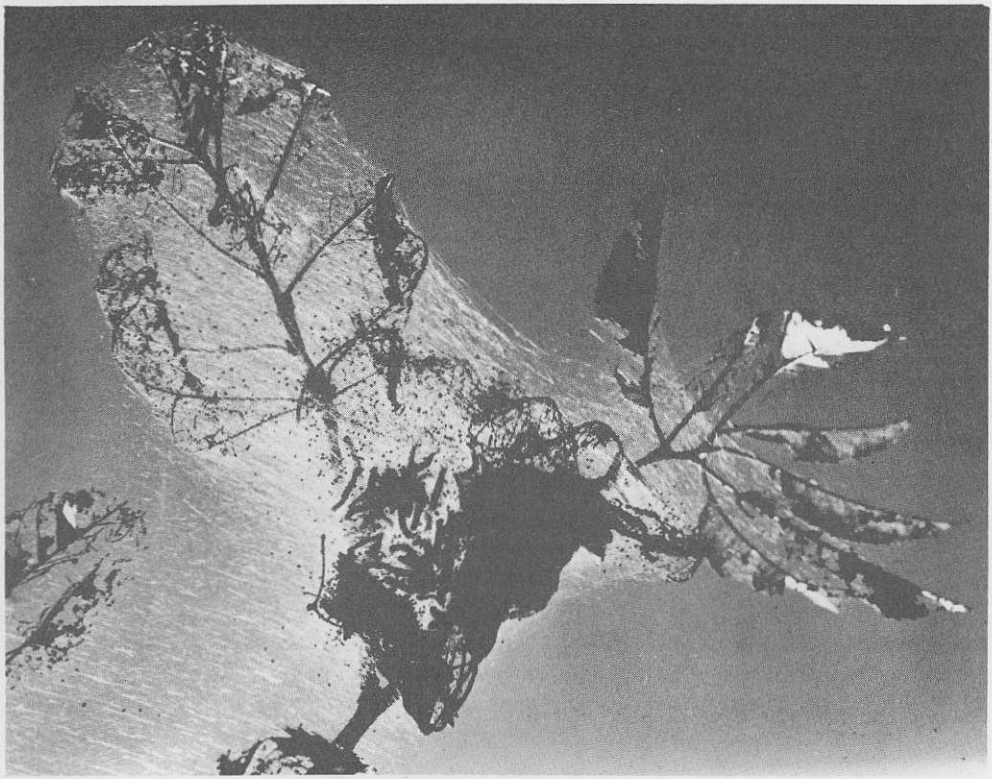

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## CHURCHILL - ITS BIRDS AND PLANTS

By Dorothy E. Swales

On July second, this year, a long-cherished dream came true when my sister, Margaret Newton, and I stepped off the train at Churchill, Manitoba. A white-crowned sparrow (Gambel's sub-species) was singing away right by the station and redpolls were flying overhead. It was an odd experience to be at last among truly Canadian birds -- no house sparrows, no starlings, and to see our birds free from exotic competition. To me, it was also an odd experience to hear a white-crowned sparrow in July, for our eastern race is composed entirely of birds nesting in the high latitudes -- we see them only during spring and fall migrations in the Montreal area. Our eastern race nests mainly along the east coast of Hudson and James Bays, while Gambel's nests on the west side and across the northwest territories along the southern fringe of the Arctic.

Our first impression of Churchill was of a bleak and dusty town bathed in warm air with a delicious tangy undertone from icebergs in the bay. Tons of gravel fill, laid over muskeg to support the town, effectively prevent the growth of flowers, shrubs or grass. A few progressive citizens have carted in muskeg soil and spread it over part of their lots, to support a few stunted petunias, asters or pansies. One man, more imaginative than the rest, planted native rock-plants in tasteful arrangement to form a very attractive garden.

The townsite is small, and along its east side, bordering Hudson Bay, an untouched strip of tundra has been left on which willows such as Salix calcicola, Salix vestita and Salix reticulata grow freely in the hollows and dozens of species of Arctic flowers on the higher,

stoney parts. Savannah sparrows and redpolls were constantly feeding in and around the willows, and overhead Arctic terns screamed as they flew from the Bay to Churchill River. Occasionally a parasitic jaeger would follow the terns or a raven would croak across the sky. Herring gulls were plentiful along the shores and small Bonaparte gulls nested by the spruce forest at the tundra edge.

Churchill is really in the sub-Arctic, but there is a band of typical Arctic tundra about five miles wide along the border of the Bay, and beyond that a mixed coniferous forest dominated by black spruce, then white, with a scattering of small balsam firs and larch. Some of the best birding was at the junction of these two areas, where forest and tundra birds were both nesting. We saw the nesting sites of lesser yellowlegs, Hudsonian curlew and a shoveller duck sitting on 11 eggs by Landing Lake. We had wonderful views of Harris' sparrow and the stunning Smith's longspur, in a thin spruce stand. The Lapland longspur, with a song a little like our bobolink, pipits and horned larks all stuck to open tundra fields. Semi-palmated plovers and semi-palmated sandpipers seemed to frequent ponds right in Churchill as well as open tundra fields and border forest. Both were very common. I heard the fox-sparrow and the grey-cheeked thrush sing, recognizing them from bird-song records I have at home, but missed crossbills and American three-toed woodpecker a local birdwatcher told me were there.

Canada geese, as well as blues and lesser snows, nest in the Churchill area. So do pintail ducks, old squaws and possibly white-winged scoters and scaups. We saw plenty of scoters at the mouth of Churchill River and scaups on ponds within the town, but I have not been able to get nesting records of them from the Barrens close to Hudson Bay. It is possible they do nest there -- much more remains to be learned about their breeding areas.

Our time for birding was limited because I had to make a large plant collection to take back to MacDonald college herbarium. The flowers were fantastic in their brilliance and numbers were within easy walking range. The most striking when we arrived were Dryas integrifolia, the mountain avens, with cream and yellow blossoms, and Hedysarum mackenzii, a bright magenta legume, but the family best represented was Ericaceae, the heather family. There were mountain cranberry, bilberry, bearberry, bog



rosemary and rhododendron in profusion right within the town limits.

American botanists and ornithologists seem to make much use of Churchill, but Canadians have yet to find their way in sufficient numbers to this paradise for naturalists.

Editors note: Dr. D. E. Swales of MacDonald College is a member of The Victoria Natural History Society and we are indebted to her for this interesting account of part of her summer activity which also gives us a first-hand insight to bird and plant life beyond the usual scope of our travels.

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## THE INSECT WORLD

By John A.Chapman

This is the first of what we hope will be a regular section on insects. Throughout the year, we will try to get contributions from senior and junior members and guests. The following are a few general comments on insect study, and mention of a few items of insect natural history encountered by me this summer.

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The insect world is a large one, full of fascinating creatures and events. A backyard or flower garden can be a source of much enjoyment -- if one can learn to see what there is to see. Knowledge of the natural world helps one to understand and appreciate it more, of course, but no one need feel that they must know a lot to enjoy observing insects. We are all really in the same boat -- entomologist, serious amateur, or nature lover -- the world of insects is far too vast for any person to know more than a fragment of it. A lifetime is needed to become an expert in even one group of insects.

We envy bird and plant students in a way, because they can learn most of the species to be found in a given area, and have fairly complete books to refer to. With insects, one must usually be content, unless a common species is involved, with finding the family to which a specimen belongs (order, family, genus, species - remember?). With a few exceptions, there just aren't any

books that enable one to identify insect species in this area. Exceptions are dragonflies, ants, mosquitoes, butterflies and moths. With most other insects it is a real job even for an expert to track down a name with certainty. However, the very complexity of the insect world helps to make it interesting, and anyone can learn to enjoy and appreciate these little creatures. It may help to remember that no matter how small or inconspicuous an insect is, it has a place in the world and plays a role in the web of life; and that its ancestors have lived in the same way and survived intense hazards and competition since before man appeared on earth.

The small size of insects probably discourages many from observing them, and we have to admit that it helps to have a microscope at times, but a small, inexpensive 10 - 14 times magnifier is usually sufficient. Although detailed information on insects of this area is hard to find, one is compensated by the number of fine books on insect life in general. For some of the most gifted writers on natural history have turned their attention to insects.

While out with the Juniors at Goldstream summer camp, I was interested to find a blood red midge (mosquitoe-like fly) larva, taken from mud. Most insects have colourless blood. Reddish smears that come from swatted flys are due to their eye pigment. Good red blood that comes at times from swatted mosquitoes is probably human origin! Insects get their oxygen directly from the air through their tracheal breathing tubes. They don't need lungs or an oxygen carrier blood system, as we do. Why, then, should some midge larvae have red haemoglobin in their blood? We don't know for sure, but the mud they live in is an oxygen-poor environment, and the haemoglobin is thought to help them get enough oxygen in such situations. This is a good example of a physiological adaptation, that is, an adaptation relating to function rather than structure.

Some of you may have noticed ant-lions in the dust under Francis Park Nature House. These are larvae of a fragile insect (a neuropteran) resembling, as an adult, a damsel fly. There is nothing fragile about an ant-lion, however! Digging a conical pit in dust, it tackles anything that falls in, and ants are among its commonest prey. One seldom finds good dust deposits on



Vancouver Island. Our Island roads have neither the mud nor the dust found in many other places (is anyone sorry?) It is too damp and the rains wash fine particles away. This is probably the reason ant-lions are seldom found in this area, and then only when unusual conditions create suitable fine dust. The only other time I have seen them on the Island is in coarse wood dust from a badly decayed log.

This spring, Dr. Orr-Ewing, in charge of the tree-breeding programme of the B. C. Forest Service, brought me an earwig, found in one of his pollen collecting bags. He wondered if it had been eating pollen. The earwig was preserved and later its crop (stomach) was dissected and examined with a microscope. Yes, it was unmistakably full of Douglas fir pollen grains -- it hadn't been eating anything else. I wonder how many other things earwigs eat? With patience and a microscope, a person could study this question. Most plants have characteristic structures that show on a microscope scale and permit their identification, especially if one has an idea of what plants or their parts have been eaten. This simple technique needs far more use, as time after time one reads, in accounts of insects, "food habits unknown".

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## SIDNEY ISLAND

by Jack Barnett

On August 10, members of the Society left on a boat trip from Sidney, to Sidney Island, a 2000-acre strip of land in Haro Strait.

The journey there didn't take long, but on the way, we had some splendid views of marbled murrelets, pigeon guillemots, Heermann's gulls and common or California murres.

When we arrived at the wharf on the island we were met by Mr. Jack Todd and his two sons Rickey and David, who had brought down a couple of Model A Fords and a hayrack pulled by a tractor.

Piling into our transportation, we were driven past the airport radar towers, through the woods to a delightful clearing where there was an apple orchard and a lovely cabin.

We looked around the grounds in front and admired the peacocks which were in the shrubs at the edge of the clearing, then went around to a couple of small ponds where some beautiful pink water lilies floated on the surface. A couple of species of dragonflies hovered around and several small tree frogs were along the bank.

Getting on our transportation once again, we were taken across some open fields to another larger pond which receives drainage from the surrounding land. On the way, we passed a flock of sheep resting in the shade of some shrubs and circled them in the hope of seeing a fallow deer which often associates with them. There are several of these deer on the island, probably having swum across Sidney Passage from James Island where they were introduced some years ago.

We saw several predators flying around -- bald eagles, red-tailed hawks and ravens. There are numerous rabbits on the island, which probably accounts for the presence of the red-tails, but Mr. Todd told us that when snow is on the ground and the lambs are young, ravens are the worst, sitting on the backs of the young ones and pecking them fiercely -- especially their eyes, thus blinding and killing them.

Arriving at the pond, we saw a small fish flopping around in the water, so Rickey Todd, who had his bathing trunks on, waded in waist-deep and brought it out in his cupped hands. The fish was a young trout, about three or four inches long and had a giant water bug, Benacus griseus, gripping it with his front claws and its sucking tube piercing the soft belly. The bug had a body length of two and a half inches, and is the fiercest predator of fresh-water ponds, living on small fish, snails and insects.

Returning to the cabin, we got our bags and enjoyed our lunch under the apple trees.

Once again we got on our transportation, and this time followed the wheel tracks south. Close by, in a clearing near the old farm house, we stopped to look at a large flock of wild turkey, which Mr. Todd had introduced, and which contained about two dozen young and over a dozen older birds. They didn't stay around long but made their way into the bushes and went down the hillside.

We then entered the woods again, which, although



the island had been logged over, contained some tall firs interspersed by beautiful arbutus trees. Salal bushes here seemed taller and greener than we have seen them for some time and we saw some stands of delicate lady fern.

At the other end of the trail, we came to a small clearing and another pond. Here we were introduced to Emily. Let me hasten to explain that Emily is a male ruffed grouse who meets all visitors and will come right up to you to peck your finger in greeting. The large number of strangers present didn't scare him a bit, nor did the Todd's dog which accompanied us everywhere, indeed Emily came up to him, ready to greet him with a soft peck on his nose, but the dog wasn't having any -- probably having had previous experience.

From there, we walked out to the beach on the south side of the island, and on crossing fields, found ladies tresses growing profusely. Some of the more technical of the group wanted to know the scientific name so we called on Mr. Alan Hockly, our latin scholar, who said it was Spiranthes romanzoffiana, one of our common orchids.

Arriving at the beach, we saw something swimming to shore and soon a mink scrambled out of the water, ran across the gravel and disappeared among some logs. Mr. Jack Todd informed us that a number of these animals inhabited the island, and that he had seen them in the orchard, probably hunting rabbits.

Returning to the cars, we were again greeted by Emily, who started to follow us when the cars moved off, but was soon left behind, once we got under way.

Our next goal was a sandspit on the west side of the island, so we returned to the orchard, then went along the tracks to the wharf. Entering the woods, we found two wild turkey on the track ahead of us. They started running ahead and kept it up for some distance, not seeming to have sense enough to run off into the bushes at the side. Finally, one flew off and we were just having visions of an early Thanksgiving dinner for the Todd's when the other turned off.

The path down to the spit turned off the car tracks about a mile from the orchard and because this is the only cleared trail, Mr. Todd on the tractor took the lead. Trying to catch up with him, David, who was driving the

more modern Model A, took one turn which we are willing to swear he made on one wheel, and two grey hairs we have been treasuring, immediately turned white. Rickey, in the old Model A, brought up the rear because there were no foot brakes on the car, and if the emergency did not hold, he would have something ahead of him to stop the car.

As we proceeded downhill, we came to a thickly wooded part and David philosophically remarked, "It's an awfully pretty view from here if we could only see through the leaves." At that time we were busy ducking branches and hanging on tightly to whatever hold we could get our hands on, so we were in no position to verify his remarks.

Coming to the beach, we piled out of the cars and walked along the spit which has Sidney Channel on one side and mud flats on the other. Underfoot, in patches, were carpets of yellow sand verbena, Abronia latifolia, and, to make things interesting for the birders, there were a number of killdeer, least and western sandpipers and three species of gulls on the mud.

On the return journey, Rickey took the lead in the deluxe Model A, and we chugged up the hill in record time, hitting every bump with the regularity of clockwork. Only once, by actual count, did we miss a bump, and that was because the previous one was so high that the car and ourselves flew right over it.

For those interested in records, we must note that a total of 57 species of birds were seen from the time we left Sidney wharf until our return there. This information was supplied by our leader, Alan Poynter, who kept count.

Very reluctantly, we boarded the boat for our return, with everyone using superlatives to describe the success of the outing. Certainly we are all indebted to Mr. Jack Todd for such a splendid outing, and all wish to extend him and his boys our thanks for a most thrilling, interesting and enjoyable day.

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ODDITY?

Red osier dogwood, Cornus stolonifera, has been noticed in flower in mid-September this year on Brookleigh Road, Saanich.



## JUNIOR GROUP SURVEY

Last month, in her story of the Junior Group camp at Goldstream Park, Nancy Chapman mentioned a plant, soil, insect and animal survey made by the Junior Group. The following report is the result of that survey. There will not be room in this issue to publish the whole report, but it will be continued in the November issue.

Topography, Rocks and Soil.

Topography -- flat, then sloping steeply to the river bed. Trees are about 65 years old. Plants preferring semi-moist soil live on the slope, those preferring a dryer environment live on the flat area.

Soil -- Hole #1, depth 1 ft., stream bed. Sand, gravel and rooks mixed. Damp on top, water at the bottom. Erosion wore shale layers and granite down to form sand, gravel and rock. The river bed is mainly shale and granite.

Hole #2, depth 1½ ft., stream slope. Decaying vegetable matter on top, following by a layer of humus over mixed sand, gravel and humus. Damp on top, dry at the bottom with rocks and roots throughout. The soil was formed by erosion, and the decay of vegetable matter.

Hole #3, depth 2 ft., campsite area. Decaying vegetable matter on top, followed by humus, red soil and clay. Wet on top, dry in the middle, damp at the bottom. The soil was formed by erosion, and decay of vegetable matter.

Rocks - creek bed -- The creek bed is granite and shale with pockets of black sand and a little gold.

The falls -- shale with veins of quartz. There are some sedimentary deposits of rock held together by hard clay.

The slopes -- sandy soil containing small pieces of granite and quartz.

The Campsites -- soil containing granite glacial deposit boulders.

Soil effect on plant growth -- Cracks in the shale around the falls contain soil for ferns and flowers. The sandy slopes provide a good root-hold and ample water for trees. Mosses and lichens grow on the granite boulders in the campsite area.

Flowering plants. BL - blooming. FR - fruiting.

Bleeding heart - Dicentra formosa - BL.

Flowering plants (cont'd)

Foam flower -- Tiarella unifoliata -- BL.
Hedge nettle -- Stachys ciliata -- BL.
Wall lettuce -- Lactuca muralis -- BL & FR
Spotted coral-root -- Corallorhiza mariculata -FR.
Merten's coral-root - Corallorhiza mertensiana - FR.
Yellow violet -- Viola glabella -- FR.
Pine drops -- Pterospora andromedia -- FR.
Broom rape -- Boschniakia strobiliacea FR.
Indian pipe -- Monotropa uniflora -- BL.
Trillium -- Trillium ovatum -- FR.
Vanilla leaf -- Achlys triphylla -- FR.
Silver green -- Adenocaulon bicolour BL & FR.
Bongard's Buttercup -- Ranunculus bongardii -- FR.
Creeping buttercup -- Ranunculus repens -- BL.
Trailing blackberry -- Rubus vitifolius -- FR.
Star flower -- Trientalis latifolia -- FR.
Prince's pine -- Chimphila umbellata -- FR.
Self-heal -- Prunella vulgaris -- BL.
Bull thistle -- Circium vulgare -- BL.
Bedstraw -- Galium trifidum -- FR.
Blackcap -- Rubus leucodermis -- FR.
Yarrow -- Achillea millefolium -- BL.
Pearly everlasting -- Anaphalis margaritacea -- BL.
Rattlesnake plantain -- Goodyera oblongifolia --BL.
Twinflower -- Linnaea borealis -- FR.

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## JUNIOR JOTTINGS

By Nancy Chapman.

The Juniors have been quite active in the last month; outings have been made every Saturday afternoon as usual. Attendance has been very good.

An expedition was made around the lower swamp in Francis Park to an old Indian kitchen midden, discovered by one of the boys. Here, Indians of long ago stopped to cook their meal of clams after a day's journey in from the sea. Kitchen middens can be found all over the Island, especially near the coast.

In the powerline area behind Francis Park, we saw ecological changes caused by the work of man. Clearing away trees for the powerline allowed sun-loving plants such as thistle, spreading dogbane, groundsel and waxberry



to take hold. These were followed by seed-eating birds. Fallen trees attracted ambrosia and bark beetles, which in turn attracted woodpeckers.

On a trip into Logan Park, we found an excellent example of glacial scouring -- deep gullies and gouges in granite outcrops and many kinds of rock deposited by ice.

Another area of Logan Park was explored the following week and we found many kinds of insects -- crickets, grasshoppers, ants, aphids, leaf-miners and caterpillars. Nests of a mud dauber, paper wasp, potter wasp and black widow spider were also found.

A display by the Junior Leaders was exhibited in the Horticultural Society Flower Show on September 12th, 13th and 14th.

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## FRANCIS PARK

by Freeman King

Lightning struck a large Douglas fir along the Cave Trail and a chunk of wood about 50 feet long was ripped from a tree. A burn mark runs down the sapwood right to the roots without touching the heartwood. The wound will be left untouched to observe healing processes and to see if there will be an insect attack or if lichen growth will begin.

A start has been made on the new addition. The oak tree that overhung the Nature House has been removed, and plans have been made to build a storage shed for the caretaker -- a phone request will go out for a work party to build it. Since the birthday party in May, over 2000 people have visited the park. The Nature House will be open during the fall and winter.

## BIRDS FOR THE RECORD

Solitary sandpiper -- seen near Sidney by Mr.& Mrs.A.R. Davidson, Aug.3, Saanichton Spit,and Aug.17, Tatlow Rd.
Sandhill crane -- seen by John Rimmington.
Golden plover -- observer not reported.
Long-tailed jaeger -- seen between Denman Island and Texada Island, Aug.29, by Bill Reith and son Rowallan.
Pileated woodpeckers -- seem to be with us in greater numbers this Fall.

## MEETINGS AND FIELD TRIPS

Regular Meeting: The regular monthly meeting of The Victoria Natural History Society will be held at 8:00 P.M., October 8, in the cafeteria of the Douglas Building. Guest speaker will be Mr. Ed Lohbruner who will speak about his trip to Japan.

Botany Meeting: October 22, 8:00 p.m. in the Provincial Museum. Mr. G.A. Hardy will speak on "More Wildflowers as They Grow".

Bird Field Trip: October 5, 9:30 a.m., Clover Point. Bring lunch. Alan Poynter will lead.

Future Speakers: Speakers at the regular monthly meetings will be: - November, Mr. Charles Guiguet, Provincial Museum; December, Mr. Louie Kirk, Olympic National Parks; January, Dr. Orr-Ewing, B.C. Forest Service; February, Members of the Junior Group; March, members' evening with coloured slides.

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## COVER PICTURE

Fall webworm, Hyphantria cunea(Drury), often identified by the uninitiated as a tent caterpillar, has been abundant all over Vancouver Island this year. Listed as a common defoliator of broadleaved trees, the group shown on the cover are behaving according to pattern by defoliating an apple tree. Webs of these insects become conspicuous during the July - September period. They mature in late fall, and winter as pupae in dark-brown cocoons on the ground or attached to tree trunks. Adult moths, nearly white, appear in the spring.

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Thank you, members, for articles submitted. Those not used this month will be printed next month -- an editor always feels better with a little "copy" on hand.

Editor.

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