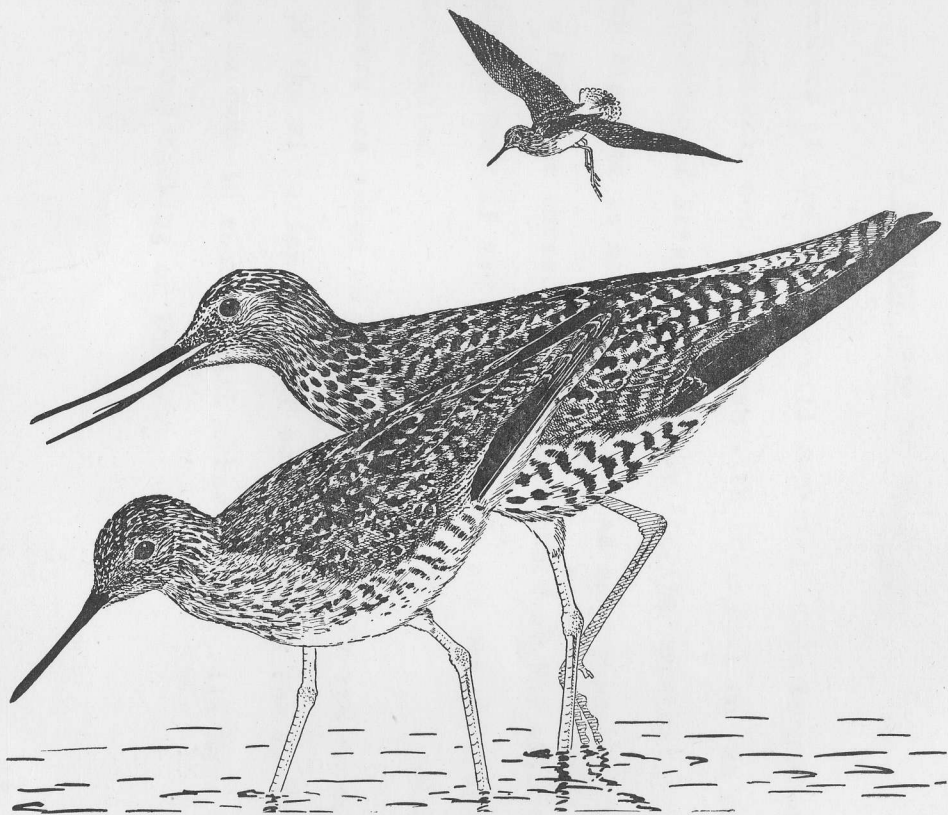


The **VICTORIA NATURALIST**

Vol. 19, No. 4

December, 1962



(F. L. Beebe)

Yellowlegs

Published by the
VICTORIA NATURAL HISTORY SOCIETY
VICTORIA, B. C.

A MESSAGE FROM THE PRESIDENT

Members of the Society will doubtless have become aware of the controversy now in progress with reference to the proposed further invasion of Strathcona Park by logging interests.

The argument is not a simple one as many suppose. However there is a definite threat to the continuance of the wilderness nature of this Park if any further inroads are not carefully and closely controlled.

Members are asked to keep themselves fully and completely informed of the situation, so that such action as the Society is attempting to take in concert with other groups, will have the full support and backing of the membership.

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OUR COVER

Both the yellowlegs are birds peculiar to the American continent. They nest across the most northerly parts of Canada, from the Yukon to Ungava, and their long migration takes them as far south as Argentine, Chili and even to Tierra del Fuego.

The lesser yellowlegs are the least common on the Pacific coast, occurring only on migration during August and September, according to my records. They are not known to nest in British Columbia, and up to about twelve years ago were not even included in the check list of the birds of Victoria. During recent years however they have been found in fair numbers in our district.

The greater yellowlegs are common birds on our shores and can be found during every month in the year except June, being most numerous from August to December. Here again I am referring to my own records. Their breeding range, too, is not confined to the Arctic, as we found them nesting near Mile 83 on the Cariboo Highway last June.

The greater yellowlegs (we like its French name "Le Grand Chevalier a Pattes Jaunes") are large grey shore birds from 12.15 to 15 inches in length, with a bill from 2 to 2.30 inches long, with very yellow legs, as their name implies. The drawing by Frank Beebe on the cover gives an excellent idea of the different sizes of the two species and their general appearance.

They can be found on mud flats in either fresh or salt water, and also on the rocks of the sea-shore. When flying they are conspicuous objects with their long legs extended out behind and the white rump flashing. In alighting the bird first sets its wings, sails gracefully downward, drops its long legs, and generally teeters before settling down to the business of feeding. Their call is a rather penetrating, whistled series of mellow notes all on one pitch, usually in threes. Their size, grey colour, and teetering habits make them easy birds to identify.

A.R.D.

THE GEOLOGY OF OUR WATERFRONT

by Mr. A. H. Marrion

Article No.3, Dallas Road between Paddon & Douglas Sts.

From the base of the path near Paddon Street to the rock exposure eastwards is a small beach composed of rounded pebbles of various sizes derived from different types of rock, and left by the ice in the receding cliff. Here the lapidarians can hunt for specimens of agate, jasper, dallesite, etc. A granite type of boulder containing blackish fragments of some older rock lies on the beach. Its original home was perhaps nearby, where a mass of Saanich granodiorite (Article 1), with many angular pieces of dark rock, Wark gneiss, or perhaps the older Vancouver volcanics, later eroded away, is seen with unabsorbed angular fragments in it.

A large north to south crack in the base rock, which through erosion and ice scouring, has become a wide shear zone, extends back under the till deposit.

Eastward, a bedded effect of the rocks is interesting. They have an east-west strike and a southerly dip, and have been invaded by several parallel whitish dykes. Removal of the outer portion has left a clifflike face against which the waves dash themselves. The formation offers weak areas in which east-west chasms have developed.

The elevated surface of the rocks hereabouts, and the resulting slower removal of till, has permitted the rock surface to become greatly weathered and broken up. Further along may be seen several dykes of the intrusive granodiorite of varying widths, running north and south. A more compact and therefore more resistant area of rock has been rounded off into a sheepback formation by the ice; nearby is a good sized fault.

Exposure of cliff material shows a compact till of unsorted fine sand, pebbles and cobbles. The capping of clay and sand (Article 2) has apparently been eroded away. There is an interesting sandstone (from the north) with many eroded cavities in it.

There are also several dykes of the greyish-green intrusive called diorite porphyry (Article 2). The rock on the east side of the bay at the end of Douglas Street has its somewhat vertical side undercut by a north-south groove, which has its smoothing and ice scratching well preserved, due to recent removal of its protective covering.

THE SEA

by G. Clifford Carl

Until we have occasion to cross an ocean by either plane or boat we tend to forget the vast extent of this part of our world. We have to be reminded that the oceans of the world are more than double the continents in area, and until very recent times this watery part of the globe was little known or understood. However, great strides have been made lately in gaining knowledge of the sea so that we can now say that much of the mystery has been removed.

A great deal of our information has been gathered in the last few decades mostly as a result of the impetus provided by the Second World War and aided greatly by improved scientific equipment and by the rapid spread of skin diving.

Nevertheless much remains to be uncovered, mainly information concerning the life history of the bewildering array of plants and animals that inhabit the sea, the intricate relationships that exist between them and finally how the resources of the sea can best be used for the benefit of man.

Until quite recently a number of queer notions existed concerning sea creatures in general; some still persist of course, but many have been dispelled by modern research. For example it was once thought that all living things were confined to the upper couple hundred feet of water because below that depth, where day light could not penetrate no plants existed, and no animals could live because of the tremendous pressure. Now we know that despite the lack of plant life in depths greater than about 200 feet, many kinds of animals live in these cold and dark waters. In fact, living organisms have been found in the greatest depths yet explored and there are good reasons to believe that the deepest parts of the oceans will be found to be inhabited by animals of some kind.

In numbers of individuals far more plants and animals live in the sea than on dry land. Most of this marine population consists of the smaller forms of life, plants and animals which float freely in the water and in such numbers that they colour the ocean for hundreds of square miles. This drifting life, called plankton, is abundant beyond measure and forms the basic food source for most of the larger animals.

In variety too, the life of the sea exceeds that of

the land. Many of the species of the simplest plant division, the algae, are found in the ocean in the form of seaweeds and every natural group of animals has representatives in the sea. This almost infinite variety in the forms of sea creatures adds to the fascination enjoyed by students of marine biology.

How is it that the ocean supports such a vast number of living things and in such a variety of form? Briefly, all we can say is that sea water provides conditions that are admirably suited for living things. The temperature is relatively uniform, and the basic materials such as oxygen, and growth promoting chemicals are immediately available in almost unlimited quantities. Moreover, the oceans are the oldest part of the world and they have provided a suitable environment for life for a much longer time than have the land masses.

Let us consider marine life in four general groups according to habitat. First, those forms which frequent the shallow waters along the coast line. These include the common sea-shore animals that are familiar to most visitors to the beach, the starfishes, barnacles, mussels, shore crabs, tide pool fishes and a host of other creatures found associated with rocks, boulders, mud, sand and piles or floating wharves. Here too are veritable forests of seaweeds ranging from delicate feather-like fronds gracing a tide pool, to massive beds of kelp securely anchored in deep water along the rocky shore. The intertidal area and the relatively shallow water bordering the land is probably the most productive part of the ocean. Here an abundance of light and plenty of footholds and retreats together with ample food materials carried in by favourable currents all combine to form optimum conditions for growth and reproduction.

Next, the unattached organisms, the plankton already referred to, those smaller plants and animals floating free in the water, some capable of swimming feebly but all at mercy of currents which may carry them great distances. Included here are innumerable plant forms mostly microscopic in size but in such vast numbers they are the staple diet of hordes of plant eaters which spend their life straining this vegetable soup through their food gathering organs. Here also are great armies of crustacea called copepods, plus many shrimp-like forms and astronomical swarms of larval animals including crabs, worms, starfishes, molluscs and fishes. So abundant are these relatively minute specks of life that they cloud the ocean, colour the

water red, pink, brown or yellow and restrict vision to a few feet. Yet they are most important because they provide food to many animals including worms, molluscs, crabs, fishes, some birds, one kind of seal and even some of the whales.

The third group are the fishes and other animals that roam the open water. Here are the schooling forms such as the herring, pilchard, anchovy and menhaden and their predators the tuna, albacore, swordfish and similar species, plus the sharks, salmon and perhaps the cod. Among the invertebrates the squid is probably the most important animal in this relatively open water environment. Even in the deep parts where daylight can never penetrate there lives a population of fishes highly specialized for existence in perpetual darkness. All are carnivorous and many have luminescent organs which enable them to capture prey or to recognize mates.

Finally there are those creatures which live on the bottom in the greatest depths at temperatures near freezing and under tremendous pressure. A surprising number of animals have been found in these deep parts mostly serpent stars, worms and a few types of fish. For food they must depend upon the rain of organic matter which slowly settles from the world nearer the surface.

Since the sea produces food materials which man can use it has been likened to the land in estimating productivity. Up to a point this comparison is quite apt. Marine crops can be produced and these can be harvested. In the case of certain sea weeds slips can be planted, the ground cultivated, and the crop cut as is done on land except that the farmers have to work under water. The comparison breaks down, however, when we consider the other products of the sea such as shell fish and food fishes. Except possibly in the case of oysters, where some cultivation of the beds can be carried on, the crops of the other food organisms are merely harvested, simply because it is either impossible or impractical to carry on any "cultivating" in the true sense of the word. The only way we have at present of ensuring a constant yield is in regulating the amount harvested in some way. In some instances this has been remarkably effective as for example in the case of halibut and also of fur seal both in the Pacific.

Each year we make more demands on the sea for food materials, chemicals and minerals. Some marine resources such as the stocks of salmon and pilchard show signs of

depletion, others are apparently as bountiful as ever. Further knowledge of the plant and animal inhabitants of the oceans will help us understand the natural history of the marine world which will enable us to use its resources even more wisely than at present.

FUNGUS FORAY 1962

by M. C. Melburn

Francis Park proved to be such a fruitful area last year it was decided to hold the fungus hunt there again. Our party of 32 observers collected over 80 species, several of which had not been seen there at this time last year. This points up the fact that many of these plants do not fruit each year. Indeed, some may require as much as four or five years to build up to a fruiting stage.

Many 'old friends' were in evidence, elf's saddles, witch's butter, giant clitocybe, little bell and at least four species of sturdy plump russulas so much appreciated by the slugs. In the coral fungus group there were the bright yellow *Clavaria fusiformis*, ash-coloured *C. cinerea* and *C. abietina*, known as Dryad's broom.

Puff-balls, earth-stars and at least three kinds of shelf fungi added their quota of interest to the hunt. Several clumps of inky-caps proved how short-lived is their beauty as they stood beside their late comrades now reduced to a juicy mass of soft black tissue.

In common with other lower forms of plant life e.g. mosses, ferns, horsetails and lichens, etc. all fungi reproduce by spores instead of seeds. Spores of fungi may be white, rusty to brown, pink to salmon or black, the white-spored genera being by far the most numerous. Among our specimens we noted there was a great variety in spore producing surfaces; some were smooth, as in rabbit-ears and elf's saddles, wrinkled, as in *Merulius*, spread over gills as in all the agarics, coating the teeth as in the hydnums or lining minute tubes as in the boletes, the polypores, the porias and their relatives in the genus *Fomes*. Everywhere variety!

Perhaps the most striking species were the amethyst-coloured form of *Laccaria laccata*, the dainty rose and white *Mycena*, *Hypomyces lactifluorum* (a brilliant orange-coloured parasite which completely coats its mushroom host) the attractive little maroon Scotch Bonnets (*Marasmius bellipes*) nodding on their long wiry stems, and the numer-

ous species of *Cortinarius*. In this latter genus the gill colours range through white, greyish, mustard-yellow, browns, cinnabar-red and violet.

Crested lepiota (*Lepiota cristata*) and its cousin *Cystoderma* along with *Hydnum repandum* stood out like flecks of sunlight where they nestled among the green mosses.

All these plants, whether beautiful or drab, edible or not, have their role in Nature's web of life. Since no fungus plant can make its own food, all of them are engaged in converting other plant materials (dead or alive) into food for themselves. Most of our mushroom plants do valuable work in reducing forest debris to a usable state as food for other plants. And, it is now known that many trees and shrubs cannot live without assistance from some root-fungus association (mycorrhiza).

And so, whether student, photographer, mycophagist or nature-hiker we all found something to interest us in Francis Park. As we wandered about under that great green roof supported by its massive fir pillars, it was good to forget for a time the chaotic state of world affairs.

FOSSILS AND BEAVER

by Dorothy Palmer

Probably every natural history society member has seen the grandeur of Englishman's River Provincial Park. Many of us are familiar with other parts of this river, which flows in myriad beauties from Mounts Arrowsmith and Moriarty, winding its way to tidewater just south of Parksville Bay.

For some of us the interest lies in seeing and identifying plants or birds, or any wild creature, or even rocks, or a medley of all these; and for all of us there are reaches of this lovely river which gives a special thrill of pleasure.

This autumn we spent a few hours prospecting one of our favorite stretches, which leads us to the fossils and beaver.

The bridge is long gone that formerly carried the old Alberni highway across a narrow canyon through which the river lingers in deep dark pools; this is about a quarter mile west of Craig's Crossing by the old gravel road. Take a trail down through the woods to the river level and

look up a straight stretch of the river that is beautiful in all weathers and seasons. Clear water ripples over stones washed clean, dividing into numerous lesser streams and backwaters overhung with fir and hemlock, and alders which step out into the river bed occasionally. On the horizon Mt. Arrowsmith looks down the river's course, past the forest giants of Englishman's River Park and the hidden valleys of green pasture interspersed with many beaver meadows.

A few hundred yards above the river bend the far shore rises to a bluff. Some time in the past colossal flat-sided boulders split off this bluff, falling into the river. Opposite the bluff, across the stream, there is a large gravel bank when the river is low. There we found a fossilized ammonite.* It is probable this gravel bank could prove interesting for fossil-hounds. The lower reaches of the river are known to be good for fossil hunting, and Mr. A. H. Marrion has a very large ammonite which was found in this area, in what the geologists call the Nanaimo formation. Our unimportant specimen sparks plans to look for more fossils up that way.

This gravel bed is just below a beaver dam, and a grove of small alders through which part of the river winds. Many birds are singing in the trees; glittering dragonflies pursued their leisurely ways, and our botanists would find there many interesting plants. Access to the river is easy here, but low water of late summer does facilitate progress.

Do not expect too much from the beavers - there will probably only be a loud slap of tail on water. A full moon and a long wait might help.

* AMMONITE - One of the coiled, chambered fossil shells of the cephalopod mollusks of the extinct genus Ammonites, allied to the pearly nautilus.

THE NEW SOCIETY AT DUNCAN

We welcome this new member to the natural history societies of British Columbia, and wish them every success.

We would like to remind them that we are only too willing to help in any way we can. In our next issue we hope to be able to publish a list of their officers.

See the programme page re the meeting on December 7th.

MEMO OF A MEETING

by J. M. Barnett

On October 27th the Pacific Northwest Bird and Mammal Society held a meeting in the Douglas Building Cafeteria, at which many of our members were present.

Dr. J. Hatter of the Fish and Game Branch spoke on "Recognition of Wildlife Values", and Mr. Bristol Foster presented a paper on the evolution of mammals on the Queen Charlotte Islands, which he has been studying for the past few years.

Mrs. Grace Bell, with Mr. York Edwards commenting, presented excellent tape recordings of about twenty bird calls made around Victoria, among which we found the trilling notes of black turnstones and the melodious whistles of the black-headed grosbeaks most interesting.

Dr. Hatter, in his paper, drew the attention of the audience to the great need of educating the public to the importance of wildlife. No government, he said, recognizes wildlife's right to share the land with man, and the only way we can overcome this attitude is to set the stage where wildlife is of interest to the people.

Wet lands are the homes of numerous mammals, birds and insects, but today these areas are being drained for commercial use. Leduc Marsh, one of the best haunts for migratory wild fowl in British Columbia, is fast disappearing because our government does not recognize the importance of wet lands. We make laws for the protection of migratory birds, yet destroy the environment that supports them. Give the wild fowl the habitat they require and the species will look after themselves.

Naturalists in British Columbia are falling down on their responsibilities. Although there are more people interested in Nature than there are hunters, it is a well-known fact that hunters are doing more for conservation than naturalists.

The Pacific Northwest Bird and Mammal Society moved to look into preservation of wet lands and to seek the co-operation of nature clubs.

This is a worthwhile project and should receive the full support of our own society.

The same evening a banquet was held at the Empress Hotel to commemorate the Provincial Museum's 75th Anniversary, at which the speakers were the Hon. Earle C. Westwood, Hon. W. N. Chant, Dr. G. Clifford Carl and Dr. L.S. Russell, Director of the National Museum at Ottawa.

Mr. Westwood told the audience that the cramped quarters of the present museum and the need for more commodious premises was well known to his department, (Mr. Westwood is the Minister of Recreation and Conservation, under which the Provincial Museum operates), and that he hoped it would not be too long before a suitable building would be constructed in which the numerous valuable and unique exhibits, now, alas, in storage, would be made available to the public.

THE CHRISTMAS BIRD COUNT

The Annual Bird Count is being held on the Saturday before Christmas, December 22nd.

Areas will be much the same as last year.

Maps and instructions will be sent to the leading hand in each area.

As it is essential that our Count be as accurate as possible, no unusual birds will be accepted unless verified by two or more observers.

If possible check your area before census day.

Members wishing to participate contact D. Stirling - GR.9-4646 or T.R. Briggs - GR.8-4145.

The Poynters extend an invitation to the adult participants to call around during the evening while the compilation of the various groups' figures is being made.

The address is 1555 Monterey Ave.

For the interest of our bird-watching friends, our total last Christmas was 123 species, with 11 additional seen in the count period, the total for individuals being 58,441. This is our best count TO DATE!

JUNIOR JOTTINGS

by Freeman King

The Junior Branch seems to keep on growing. We have now approximately 70 members, and an average turnout on Saturday of about 30 to 35. The Group Supervisors are "A" Group - David Gray, "B" Group - Nancy Chapman. Group leaders are "A" David Zirul, Ann Proctor, Gerry Nelson, and Deiter Hartmanshenn. "B" Group, Shirley Martin, Lynda Gregg, John Errington and Trevor Gibbens.

During the month we visited Snag Valley, on Munn Road.

This is an interesting valley with its many snags and new forest growing, and predominating the new growth are the arbutus trees.

The field trip to Thetis Park to explore the upper dam was rewarding as many water creatures were found, including an abundance of fresh water sponges.

The trip out to Goldstream to see the salmon run was exciting in spite of the heavy rain, for many dippers (water-ouzzels) were seen as they dove under water in search of salmon eggs. Here we saw the way nature cleans up the dead fish by the ever present ravens, gulls, and many small animals who find this a rich harvest.

The Leader section made an expedition to Young Lake at Sooke. Many varieties of fungi were found, including one specimen of the fly agaric, which was over 10 inches across the top of the cap. It was a lot of fun cooking our lunches beside the stream in the rain.

The Leaders are making an ecological survey of a sample section at Francis Park. The area to be covered is approximately 100 yards square, and it will take many months of observation and study to complete our project. The main reason for this survey is to find out the changes that occur as a result of the heavy fall of limbs from the various trees caused by the recent storm.

An expedition to the Biological Station of the Fisheries Research Board at Nanaimo is planned for the 25th. Dr. John Chapman is arranging this trip for us.

The senior juniors are willing to help this Christmas with the bird count, if they are needed. This is one way in which they can learn and appreciate the value of this project.

NOTICE OF MEETINGS

1962

Friday

AUDUBON SCREEN TOURNovember 30th:Speaker: Chester P. Lyons

Saturday,

Subject: Nature's Plans and Puzzles.December 1st:Place: Oak Bay Junior High School
Auditorium at 8 p.m.

Thursday,

BOTANY GROUP MEETING: At the Provincial

Dec. 6th:

Museum at 8 p.m.

Miss Enid Lemon and Miss M.C. Melburn will present the slides and commentary of "Fun with Fungi", part 2.

Members are invited to bring live specimens for identification.

Chairman: Miss Emily Sartain.

Saturday,

FAMILY NIGHT meeting of the newly formed Cowichan Valley Natural History Society at DUNCAN.

Dec. 8th:

It is hoped as many as possible will be able to attend. Please contact Freeman King regarding the time and place of meeting.

Saturday,

BIRD FIELD TRIP: Meet at the Deer Pen in Beacon Hill Park at 10 a.m. Bring lunch.
Leader: Mr. Tom Briggs.

Dec. 8th:

Tuesday,

GENERAL MEETING: at 8 p.m. at the Douglas Building Cafeteria on Elliot Street.

Dec. 11th:

Speaker: One of the staff of the U.S. National Park Service from the Olympic National Park, Port Angeles, Wash.

Saturday,

CHRISTMAS BIRD COUNT: will be held on this day. For further particulars telephone David Stirling or T.R. Briggs. See page 58 for details.

Dec. 22nd:

The Juniors will meet each Saturday at Monterey Parking lot at Hillside and Douglas Streets at 1:30 p.m. for field trips.
Leader: Mr. Freeman King.

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

VICTORIA NATURAL HISTORY SOCIETY

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