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(Photo by Mrs. Don Munday.) Mount Waddington area; Confederation Glacier in the distance.

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THE VICTORIA NATURALIST

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The Victoria Natural History Society

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NOVEMBER MEETING

The regular monthly meeting of The Victoria Natural History Society was held in the Reading Room of the Provincial Library commencing at 8 p.m. on November 14. Mrs. Hobson, the President, was in the chair and we were glad to welcome back our secretary Mrs. Bland who read the minutes of the previous meeting.

Several specimens were exhibited:- Mr. Clay showed a nest of the house finch taken from a clump of broom, close to the ground in Oak Bay, the first report for that area. Several types of poly-pore fungi had been brought in and were named by Prof. Lowe.. Mr. Whitehouse brought a piece of dinosaur bone he had picked up while fossil hunting in Alberta.

The chairman then introduced the speaker for the evening, Walter Jones, Plant Pathologist at the Dominion Laboratory in Saanichton, who spoke on "Parasitic Fungi". The Society has seldom been treated to a clearer or more easily understood explanation of a very technical subject. After listening to Mr. Jones describe the different ways in which parasitic fungi attack host plants and after looking at the numerous slides showing the invading fungus mycelia spreading through the tissue of the host and bursting forth in masses of fruiting bodies one could sympathize with one of the audience who said he was going to give up trying to grow a thing any more. Among the numerous exhibits that Mr. Jones used to illustrate his subject was one which he and the Saanichton staff developed and which has been adopted by many mycological laboratories all over the world. The exhibit was one of the celophane cultures on which a pure culture of the organism required is induced to grow on a sheet of celophane, thus having movable culture that can be examined directly under the microscope or photographed in one plane.

Professor Lowe expressed the appreciation of all present for a most instructive and enjoyable lecture. W.T.

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MICE AND MEN

by G. Clifford Carl.

Last year when the Museum party found two undescribed species of mice on Triangle Island, about 20 miles off Cape Scott, we decided to find out if mice were also present on the other islands in this group. Our interest in these small rodents stems from the fact that often the mice on one island may be found to differ sufficiently from those on another so that the two groups can be recognized as separate races. Moreover, when these insular populations are compared one with another, certain relationships often become evident. Thus, those of certain groups of islands may seem to be more closely related to those of other groups and some population groups may show affinities with mainland species. The original mainland population from which those of the islands were drawn may thus be indicated. When these lines of study have progressed further it may be possible to determine the actual origin of some of these insular populations of mice and possibly of other animals as well.

With these problems in mind we set off up the coast this season, again on the Fisheries Patrol Vessel "Howay", under command of Captain Walter Redford of Victoria. This arrangement with the Dominion Department of Fisheries is indeed a fortunate one for us. We are able to visit outof-the-way places with all our necessary gear while the ship operates on her usual patrol. This time we landed on Lanz Island, the second largest in the Scott Group. We first busied ourselves with setting up camp and then in getting out the dozens of mouse traps which we set in all likely places with expectations of an interesting catch. Two of our party, Charles Guiguet and Frank Beebe crossed to nearby Cox Island in our small boat to set traps there. They took food and sleeping bags with them, planning to camp on the beach but spent most of the night hunting raccoons which were found to be quite numerous.

Before darkness of the first night had set in we had our first catch on Lanz Island -- several adult whitefooted mice, definitely larger than those on Vancouver Island and yet different from those taken on Triangle Island the outermost of the Scott group. When the fellows returned from Cox Island in time for breakfast next morning we found that they too had made a good catch and their mice showed obvious differences in fur colour when compared with ours, indicating a different population again though the two islands are separated by less than half a mile of water.

With these most interesting results so early in our work we were more anxious than ever to investigate the two smaller islands of the group, East and West Haycock or, as they are now named on charts, Beresford and Sartine Islands. These are nothing more than rocks sticking out of the sea, separated from each other and from the other larger islands by 5 or 6 miles of deep water. After a few days' interval of stormy weather the "Howay" picked us up again and set a course for the nearer of the islets, Beresford. While still some distance off we could make out large numbers of sea-lions on the rocks above the surf; the Haycocks are one of several breeding places for these animals on our coast.

Neither island has a beach so landings have to be made by scrambling onto the rocks at just the right instant, that is when the ever-present swell lifts the small landing boat to the top of its rise. This lack of a beach, lack of a suitable camping spot and finally lack of assurance that the weather would permit us to get off again when we wished, made it impractical for us to stay over-night on either of these islets as we had originally hoped. Our stay ashore was therefore brief, only so long as tide and weather conditions allowed the ship to stand off the shore.

With time against us we hurriedly searched for signs of the presence of mice but could find no run-ways except those of sea-birds, no cuttings of grass and no droppings. We were disappointed but nevertheless set out 5 to 6 dozen traps in likely places, We spent the rest of our short period ashore examining the bird and sealion population and making a plant collection, until the ship's whistle warned us that our time was up.

After spending the night in the shelter of the larger islands we returned early the next morning and lay off the rocks again while the landing party went ashore. In the first trap was a big, fat mouse and about a dozen others were taken in the remaining sets. Despite the seeming lack of sign, then, a population of mice was present on this island, apparently living among the debris just above high-tide mark.

We were not surprised then, to find mice on the remaining island when it was trapped the following night. After the specimens were all measured, recorded and made up into study skins it was obvious even to the untrained eye that the animals from each island probably represented a distinct race or population. All that is required now is a statistical comparison to be made between these mice and those from other islands and the adjacent mainland after which a learned paper can be written on the mice of the Scott Islands!

But how did these mice get to these isolated spots in the first place, someone may ask? No one knows but we can make a pretty good guess. The early ancestors of the present rodents may have arrived by way of ancient land or ice bridges such as existed at one time between Alaska and Siberia in the Bering Sea area. Or they may have been carried to these places by native Indians intentionally as pets or unintentionally as stowaways. Or, they may have arrived by accidental transport on a raft of forest material carried into the sea by a landslide.

The latter suggestion seems to be the most likely one. Such landslides occur every so often along our coast; in the course of hundreds of years it is easy to conceive that mice and other small creatures might be thus carried into the sea along with uprooted trees and other debris. These would provide shelter, food, and transportation for considerable distances by ocean currents to eventually land at some distant point, perhaps an island hitherto uninhabited by their particular species. After all it would require only one mouse to start a population providing it was a female in a "delicate condition":

Such a beginning from a lone individual also accounts for the fact that these insular populations tend to have distinctive characters. Being composed of animals descended from one parent and inbred over countless generations such populations tend to preserve original individual differences which in time become racial traits.

The lowly mouse then may prove to be an important animal in the eyes of naturalists studying the distribution and origin of the fauna of our Province. In all probability the quest for further specimens will take us up the coast again next season and again we will travel "loaded for mice".

Toad Tadpoles in Fast Water:

Mr. L. J. Clark of Victoria reports finding tadpoles of the common toad in the Gordon River some miles above its mouth, on August 21, 1950. The tadpoles were in fast water, an unusual habitat for this species since toads almost always spawn in standing water of small lakes or ponds. A lesser yellow-legs was observed feeding upon them.

Mid-air High-jacking by Gulls:

Writing in "British Birds" May, 1949, Alfred Hazelwood reports seeing a herring gull attack another that was carrying a stolen guillemot egg. After making the first gull drop the egg the second one stalled in full flight, seized the egg by the small end and landed with it, unbroken, after evading the attacks of two other gulls. A companion of the observer mentioned seeing the same manouver carried out except in this occasion the attacking gull power-dived to recover the egg.

Our Vancouver Island gulls seem to confine their mid-air pirateing to fish which are not quite so fragile as guillemot eggs.

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WHAT TO LOOK FOR IN DECEMBER

To the ardent naturalist every period of the year will yield something of interest to prying eyes, no matter what section of natural history invites your attention. To those interested in botany, there is much to see and learn. While the brilliant flowers of summer days are over, there is yet evidence of preparations for a future season's work. Seed pods, fruit capsules and so forth are still to be seen. Close to the ground may be found the little rosettes of stonecrop, buttercups and a host of other seedlings or perennial plants getting ready for the go signal at the first chance. An over ambitious miner's lettuce may be found in flower in some sheltered spot while weeds such as chickweed, and groundsel, bloom all winter.

Bushes and trees are well worth investigating for bud and scale signs, each of which is distinct as to species and variety. A botanist should be able to name most of his species at any stage of their growth. December is a good time to start to make notes for future reference as the observed plants develop. Do not forget that this is the mushroom season when many fine kinds may be found in sheltered woods.

By the sea shore a rich harvest can be made, of all manner of life forms, the seaweeds among them. After the heavy storms that prevail at this season many deep-water forms of life are stranded on the beach providing an opportunity for close examination.

Special attention should be given to the "holdfasts" of the giant kelps, for many small things find a refuge in their labyrinthine depths, - shells, crustaceans, and so forth.

If you are unable to venture far from home, pay attention to the porch light. At this time of year the <u>Mottled Umber Moth</u> and two species of <u>Winter moths</u> should turn up, together with the <u>Brown Tissue</u> and a <u>Snout Moth</u>. Look for the wingless females of the first three; they can easily be mistaken for spiders, but the six legs will dispell any doubt on that score. G.A.H.

Bird-haunts around town in December:

A stroller, particularly one blessed with binoculars, can find much of interest even during the short days of winter. An hour or two spent in Beacon Hill Park seldom disappoints an active observer. The woods bordering on Cook Street will reveal chickadees.downy woodpeckers. Seattle and winter wrens. In the tangle of ocean spray and wild rose can be found song and fox sparrows, juncos and towhees. The grassland adjoining the woods shelter meadowlarks and towards the center of the park a close look at the great Garry oaks will disclose tree-creepers and flickers while the Oregon crab tree interests a varied thrush or two or a few robins. The lake and adjoining lawns swarm with widgeon, teal and mallards; as also does Goodacre Lake, here one often sees a chance flock of 50 or so siskins and always glaucus-winged and herring gulls, scaup, canvasbacks, two species of geese and even wood-duck or an occasional hooded merganser. Besides the mute swans an injured whistling swan is being cared for and fed. From the cliffs to the south good views can be had of water birds, golden-eve, surf-scoters, horned and eared grebe, loons, cormorants, and little bands of busy turnstones. Many of these species are coming into bright plumage already. A short walk along the cliffs in the afternoon, going eastward toward Clover-Point, beyond Horsehoe Bay will bring you in sight of hundreds of widgeon, scaup golden-eye, a few old squaw and harlquin ducks, also cormorants and one or two murres, murrelets and an occasional heron. As the shores around the city are protected from hunters armed with guns the nature lover armed with a love of living things and possibly, a pair of binoculars or a camera, may enjoy undisturbed pleasure in watching these creatures in their native element.

J.O.C.

Strange Appetites of Crows: From various parts of Europe come reports of bird castings containing rubber. Members of the genus <u>Corvus</u>, particularly rooks, hooded crows and jackdaws seem most adicted to this unusual feeding habit. Has anyone heard of similar occurrences locally?

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On the evening of October 24 the Ornithology Group met at the home of Mr. and Mrs. Tildesley and were treated to a most enjoyable and instructive talk by Mr. Charles Guiguet of the Museum staff. His subject was the classification of birds and while emphasizing the absolute necessity of universal method of classification he pointed out the differences caused by the need for field keys and the more detailed standards required by pure scientists. The field man needs a system of classification whereby he can place the birds he sees in a conveniently labeled pigeonhole without measuring the parts of the bird in detail. The pure scientist takes numbers of the same species and measures them in detail, after that he subjects his measurements to statistical analysis and from this and relative information he decides the limits of species, sub-species, etc. As these results are sometimes arrived at without adequate numbers of birds and without much field observation, there is a tendency to split species into too many sub-groups. The main difficulty of the taxonomist is that he requires static conditions under which he can say just what his name will apply to and where it will be found whereas nature is not static; evolution is a continuous process. As Mr. Guiguet explained, when you get to the actual nesting grounds it is quite probable that you will find several of the so-called sub-species all in one nest.

Note:- The editor has available a series of articles on this subject in "British Birds" Species and Subspecies B. W. Tucker.

W. T.

<u>New Book</u>: "Songs and Other Sounds of Birds" by Alexander V. Arlton 1949. 195 lithographed pages. Here at last, we can say, is the book on bird song. While the author does not claim it to be complete it contains notes on most North American species with material from other workers in the field and often supplemented with the song on the conventional musical staff. An introduction containing material on birds' sounds in general is followed by notes on methods of recording and imitating bird song. A list of useful references, a glossary of musical terms and an index completes the volume. Copies available at \$5. from the author, A.V. Alton, Parklands, Washington, U.S.A.

BOTANY NOTES

Second Field Trip:

The botany group held a most successful field trip on May 13th. Meeting at the home of Mr. and Mrs. George Hardy, the party went by car out along Blenkinsop Road to a foot-path leading up the west arm of Mount Douglas Park. All started up the path but were soon scattered over the slopes. Some climbed high, some not so high but all found beauty and interest. There was a brilliant patch of Oregon Grape (Berberis nervosa or B. aquifolium) near the beginning of the path with Chocolate Lily and wild Easter Lily bordering the path further along. Higher up there were Larkspur, Camassia, Lupin, and Woolly Sunflower (Eriophyllum lanatum), with Valerian and Mimulus clinging to the rocks. Those who climbed high enough to sit and enjoy the view from the upper slopes felt well rewarded for their effort.

By tea time all members had found their way back to the Hardy garden with its wide lawn and hospitable garden chairs. Nearly forty members assembled there to enjoy the tea served by the hostess, assisted by Mrs. Bland, Miss Perry and others. Mr. Tom Taylor expressed the gratitude of everyone present to Mr. and Mrs. Hardy for having given the Botany Group a particularly delightful outing. Marilla Stansfield.

EDITOR'S NOTE: May we wish all our readers a most happy Christmas and everything of the best in the New Year.

We end 1950 with an eighteen percent increase in membership and an ever increasing interest in The Audubon Screen Tours. With this keen interest shown by Victorians it seems reasonable to suppose that the study of natural history would arouse some interest in other parts of the Province, yet, as far as we can find out, our own and two clubs in Vancouver are the only ones functioning. The editor would like to hear of other organizations of this nature or of people in other centres that would be interested in starting Natural History Societies. W.T.

RED WATER

by D. B. Quayle, Provincial Fisheries Department.

Early fall is one of the times of year when red water or "red tide", as it is sometimes called, appears in British Columbia coastal waters.

At intervals during the month of September the waters of Ladysmith Harbour have been blood red in colour, and the same thing has occurred in other localities. Fortunately, in British Columbia the red tide appears to cause little or no damage. However, oysters may be discoloured by it to such an extent that they cannot be marketed until after the red tide has disappeared.

The red colour in Ladysmith Harbour has been caused by the rapid multiplication or "blooming" of a small organism -- a dinoflagellate, Gymnodinium splendens. This is a golden coloured species when examined under the microscope, about 0.06 mm. long and 0.05 mm. in breadth. Another species, Gonyaulax alaskensis, is also known to cause red water in the north east Pacific. In Ladysmith Harbour the colour is usually found in patches but at other times it is widely spread. Occasionally definite streaks may be observed, especially alongside floats where the water is calm, and one can almost see the rapid multiplication in numbers. In some parts of the world, particularly Florida and Japan, the occurrence of red water causes mass mortality of fish and certain invertebrates. In the winter of 1946-47 in a part of Florida the beaches were littered with the bodies of dead fish at a density of more than 100 pounds per lineal foot and this mortality coincided with the appearance of red water. An alcoholic extract of the red plankton redissolved in water was found to be toxic to fish.

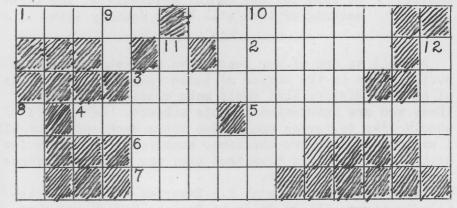
Shellfish toxicity (dangerous to humans) along the Pacific Coast has been traced to the dinoflagellate, <u>Gonyaulax catenella</u>, upon which the molluscs feed. This is an open ocean species, most prevalent during the summer months.

More information on the occurrence and distribution of red water is desirable together with a knowledge of the causative organisms.

JUNIOR NATURAL HISTORY PAGE

Editor: Doreen Wilby Phone: E.2357

. Watch for the answers on this page.



by Doreen Wilby.

Across:

- 1. What is the first flower of spring?
- 2. The plural of alga?
- 3. A cat that barks like a dog?
- 4. What is all living matter composed of?
- 5. What is the family name of rats and mice?
- 6. What are the seeds of kelp?
- 7. What shape are the eggs of owls?

Down:

8. How many months does the dormouse sleep?
9. Does a bird use its tongue for singing?
10.The -- owl is a ventriloquist.
11.What was the lecture on Nov.18th?
12.Is an eel a snake or a fish?

Bird Feeding Time:

We welcome back to our garden the song sparrow, the Towhees and the Oregon juncos. The song sparrows flit across the garden path to the place where they found food last winter. They remember; so do the towhees. The juncos are not as tame.

NOTICE OF MEETINGS

TUESDAY:	GENERAL MEETING, 8 p.m. Reading Room
Dec.12:	Provincial Library, Mr. Edgar Stansfield,
	Natural History Rambles, with coloured slides.
SATURDAY	10 a.m. in the Provincial Museum, last meeting
Dec.16:	of 1950 for the Junior Naturalists. The first
	meeting of 1951 will be on January 13th.

A visit to one of our best known book shops recently surprised me in the number of books there are in the field of natural history that would make wonderful gifts for those who are interested in this subject. Later on I should like to review one or two books each month but all I can do, in this pre-Christmas number, is to list a few of the titles in the hope that they may be of assistance to the harassed shopper.

BIRDS:- "Birds of Canada" P.A.Taverner. Allan Brooks illustrations; "Field Guide to Western Birds" and "How to Know The Birds" by R. T. Peterson, are good hand-books but a fuller treatment is given in "Birds of the Pacific States" by Ralph Hoffman. The new edition of Audubon's illustrated "Birds of America" is available and the small "Birds", 112 illustrations with distribution maps inset, of American birds. Besides these there are a number of books on attracting birds, nest box building and some very attractive books from Britain.

In the general field the list is too long to include here but a few titles might be mentioned:- "Morning Flight" and "Wild Chorus" by Peter Scott, "Canadian Spring" by Florence Jaques with the most wonderful woodcut illustrations by her husband, and about half a dozen books by Dan Mc.Cowan, the Banff naturalist and "The Bird Who Made Good" by Elswith Thane.

In Botany the choice is not so wide. First choice would go to "Wild Flowers of the Rockies", by Geo.A. and Winifred Hardy, illustrated by Frank L. Beebe. One of the newer tree books is Grant's, "Trees and Shrubs of the Pacific Coast" which covers wider field than the old favourite "Forest Trees of the Pacific Coast" by W.A. Eliot who also wrote "Birds of the Pacific Coast". In this field it would be hard to improve on the latest edition of "Native Trees of Canada", Bulletin No.61, Dominion Forest Service, Dept.Mines and Resources, Ottawa.

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To