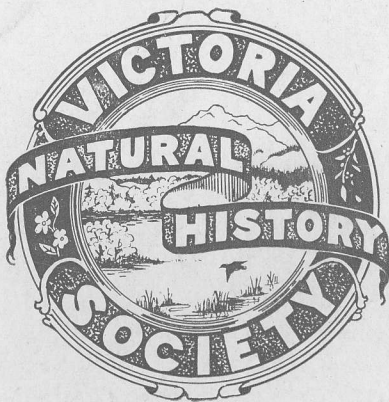


The
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THE VICTORIA NATURALIST

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The Victoria Natural History Society

The December monthly meeting of the Society was held in the Provincial Library Reading Room on Dec. 9. The chair was taken by Dr. Carl. The speaker was Dr. David Turner, who addressed the members on the subject of "Conservation of Natural Resources."

Conservation, said Dr. Turner, does not mean not using the natural resources of our country, but it does mean using them in such a way that they will not be depleted. Removal of forests, for instance, has deprived some soils of the power to hold water, so that the water which falls runs off quickly and in summer wells run dry. In the Surrey area (on the mainland) shallow wells used to be sufficient to supply the town with water, but lately deep-well pumps have had to be installed.

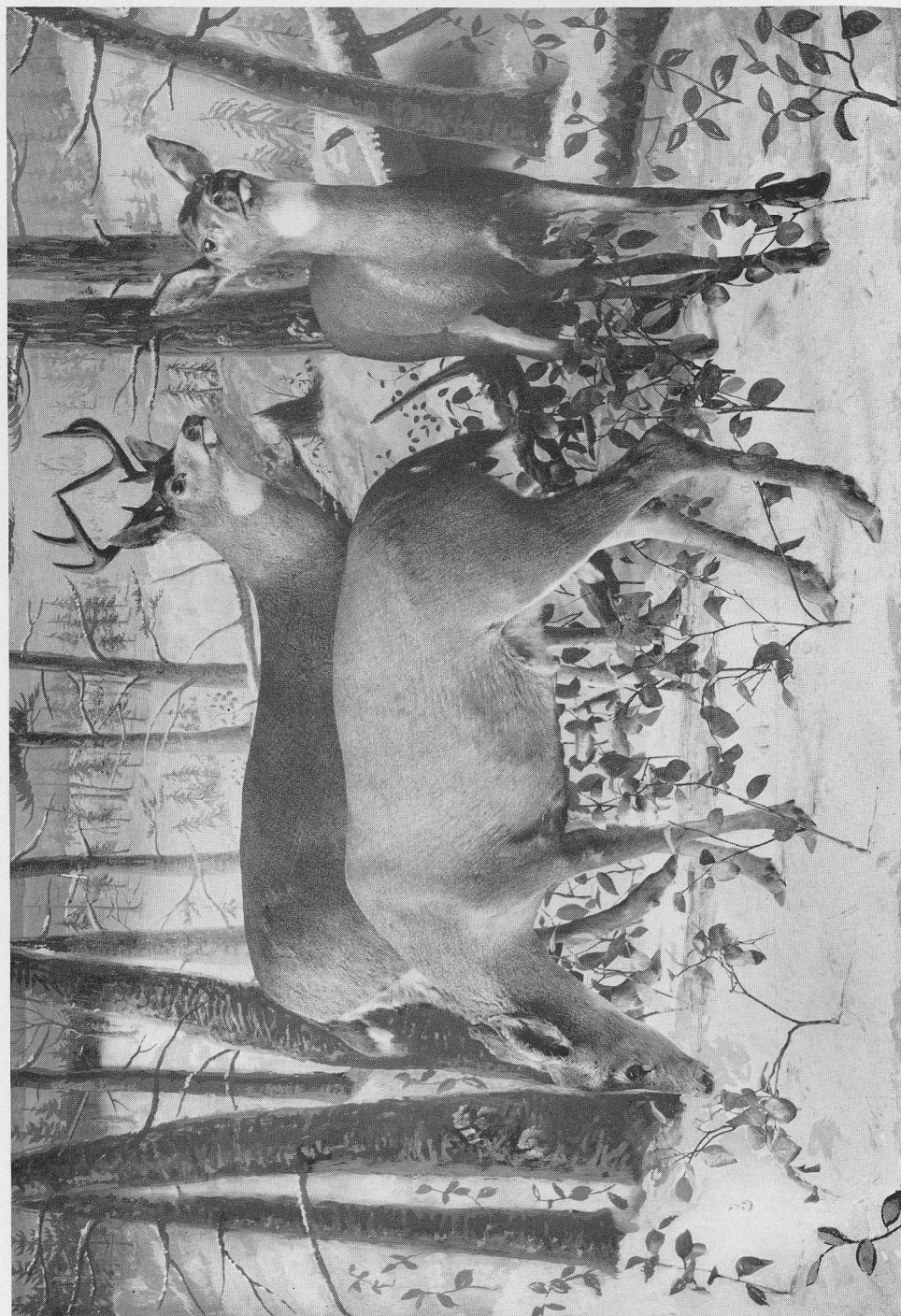
Sometimes certain groups of people want to do something that injures the rights of others. In such cases the government must make a decision on what will benefit the largest, and harm the smallest, group of its citizens.

It is not enough to preserve only the economically useful, the beautiful must also be cherished.

Dr. R. T. Oliver of Syracuse University has made a survey of the wastage in perishable foods. What agriculturalists call "normal wastage" is 20% to 30% of the total. This includes loss in transport, storage, shops etc. The loss in deciduous fruits is 26% while in green and leafy vegetables it is 43%.

The predominant theme in nature is UNITY, i.e. an interdependence of living things upon each other.

In the past fifty years many areas show a degradation of soil. Such land is called "sick" and only too often cannot be cured. This is the old story



Columbian black-tailed deer.

of destruction of soil for immediate gain.

The Prairie Farm Rehabilitation Group has done good work on the prairies, especially on water conservation. Scoop-outs have been dug to hold water. Some authorities believe that these have also achieved the secondary purpose of increasing the duck population as effectively as "Ducks Unlimited".

Our basic resources are: earth, air and water. Our natural resources are all animal and vegetable life. Interdependence in nature cannot be over-estimated. Government now believes that we have already lost, by extermination, more species of birds and animals than we can spare. The idea that the use we make of our land is basic, is new to our thinking.

Leopold gives the ecological concept of land as follows:

The Biotic Pyramid

Carnivores

Bird and Rodent eating Mammals

Plant-eating Mammals

Insect-eating Birds, Rodents

Plant-eating Insects

Plants

Soil

All these together make up "land".

Dr. Turner closed his interesting talk by showing a table which plotted the hazards in the life of, for example, a bird. Of ten birds alive in the spring of one year only one survives to the following spring. The two most important factors are food and shelter, followed by weather conditions, man's activities, diseases and parasites, predators, habits of species, reproductive capacity, in that order.

THE SHELL MOUNDS OF BRITISH COLUMBIA

We are most of us familiar with the outward appearance of the shell mounds of this province, and we are most of us aware that these mounds are, in the main, the refuse heaps of a people who lived under prehistoric conditions. Many of us have scratched the exposed surfaces of these mounds and thereby have gained some knowledge of their composition. Very few people however, have really dug into the mounds because, to the casual investigator, this is a tedious and unprofitable business and is usually only carried on under the immediate impetus of having seen objects which have been distinterred by others, and mainly by that other class of digger, the man who loads a wagon or a scow.

The pity of it with these mounds lies in the fact that so little really scientific archaeological work has been done among them. Even the Great Fraser Midden at Marpole, B. C. was being stripped of its most valuable strata too rapidly to allow proper records to be made by the late professor Charles Hill-Tout, who was then the only scientist on the spot. The story which this very valuable shell mound had to tell can therefore be only written in part, and the same is true of many another most interesting deposit. Even the work of the late Harlan I. Smith, when examined in the light of the present-day archaeologist leaves much indeed to be desired.

As a preliminary to a brief statement on our own shell mounds let us examine the history and evidence of other middens of the kind. First of all, as to distribution, let us remember that other similar deposits are found in various parts of the world, notable in Denmark where they are associated with crude neolithic pottery. In North America not only are they found on both the Pacific and Atlantic seaboard, but also adjacent to numerous fresh water ways and lakes in the interior.

All of these mounds are, as we have stated,

in the main refuse heaps. From the relics they contain we know that some of them at least have been made from the accumulations which have gathered around certain villages which have arisen from ancient times. Some, on the other hand, appear to be made up of the residue or refuse left behind at places where the seasonal clam production was harvested by being gathered, opened and dried before being transported to storage in winter quarters. In this latter type of mound very few relics indeed are found - a slate fish knife perhaps or a very occasional broken spear point may be all that will reward the investigator for endless hours of searching.

It is natural then that our chief interest should lie where we have some indication that the site of the mound is identical with the site of some ancient village. One of the first questions which arises on such a site is: what is the relative age of the strata and their contents? Unfortunately the arrangement of the strata of such mounds is very uneven, due doubtless to the relative position of the various houses and of the location of the paths between them.

In certain mounds in Alaska evidences are found of three ages of culture: (1) the Littoral, identified by the prevalence of refuse from sea urchins and by the absence of human handiwork; (2) the Fishing period, identified by the abundant fish bones and very primitive forms of stone implements, and (3) the Hunting period in which bones of mammals are prevalent. In my own work among the mounds I have found very little evidence of such distinctive ages. There is, however, one indication of periodic development that eventually may prove to be worthy of a recognized place in our serriations. I refer to the prevalence of the friable residue of mussel shells which preponderate in some of lower strata of our shell mounds. It will be interesting to know what evidence others have to submit on the score of serriation of strata.

Here is an interesting problem for the naturalist who is willing to view the proposition from a truly scientific angle. First of all, use nothing but a hand trowel and work along the exposed cross sections of any of the shell mounds with which you may be acquainted. Having decided to work upon a certain mound, let your notes refer to: (1) Geographic location; (2) Topographic environment, with special reference to possible village sites, canoe landings, vegetable food areas and the adjacent sea bottom production of molluscs, with species named. (3) Using numbers together with conventional signs or distinctive colours make sketch showing serriation of strata of the face of the mound indicating shell species and echinoderms contained in each. (4) Note also the following: The state of each layer; are the shells whole, broken, friable or much mixed with black soil or other detritus? (5) Fish bones and animal bones; identification very desirable. (6) Artifacts found in each layer, with reference to the number assigned to said layer. (6a) Artifacts owned by settlers in the vicinity, if same have come from the mound; sketches with dimensions of each. (7) Indications of house sites whether by contortion of strata, by remnants of posts found in situ, or otherwise. (8) Other information in relation to the mound, as to ownership history of former excavations, etc. (9) Sketches with dimensions of plan, elevation and other features including the site as a whole with reference to harbourage, sea bottom, burial grounds and bulb digging meadows, etc.

It is hoped that copies of the evidence thus gathered will be placed in the hands of a responsible person or group whose duty it shall be to compare the various conditions and the evidence gained therefrom and to issue a consolidated report thereupon. To those who are interested in the more laborious phases of excavation we issue this plea. Do not start work until you have studied scientific recommendations for this highly specialized work, or at least have read a sequel to this article which we hope to publish shortly.

A.E. Pickford,
Prov. Museum.

CORRESPONDENCE ON THE BALD EAGLE

We continue to print excerpts from persons known to have considerable knowledge of Bald Eagles by quoting from two recent letters received by Mr. J.O. Clay. The first letter from which we quote is from Mr. W. S. Maguire, New Westminster:

"The Bald Eagle is so few in number on this lower Coast Area as to constitute but a minor problem from its food habits, and it surely is a master of the Air Lanes.

One can hardly give it a clean sheet in the matter of game birds such as Ducks, Pheasant, Grouse etc., but I think a point many Gun Club members overlook, or perhaps are unaware of, is that most such birds are wounded by gunfire or are diseased so that in the first instance we avoid the incident of death to a gun shot bird through starvation, and in the second we avoid perpetuation by breeding of diseased birds.

.....

I watched as many as 18 adult birds all feeding at the same time about a mile offshore (west coast of Graham Island) during a run down from Zangara to Skidegate in July of this year. There evidently was a "run" of some sort of small fish and the eagles were wheeling around over a concentration perhaps approx. the size of Victoria Inner Harbour, dropping to sea surface, feet submerged to seemingly leg length, and rising with a small fish- herring or pilchard size - usually with one in each foot. Remarkably, the same area was also being fully used by Tufted Puffins, Rhino Auklets, Pigeon Guillemots, murrelets, both Ancient and Modern (i.e. marbled) Glaucous-winged Gulls etc., etc.

I saw no evidence of any eagle attempting to take any seabird, but my observation on this occasion was merely as we chugged past.

We now quote from a letter to Mr. Clay from Mr. Theed Pearse of Comox:

"On and off I have been watching eagles, around here..... and doubt if I have seen a dozen cases of an attack on live birds. The Eagle is too slow and clumsy to be a match for a duck on the wing and, when it does go after any waterfowl, it is generally in pairs and it is by soaring down that it finally secures its prey. This is borne out by the action of birds on the water on the appearance of an eagle, they fly off presumably because safer in the air.

The game boards and others may urge that the Eagle is destructive but this may be on the principle that it is not game and therefore of no use and being in the predator class it may be injurious and so must not be tolerated but why should others be deprived of the pleasure of seeing a pair of eagles soaring around, a reminder of what B.C. was, for the sake of the few game ducks taken and these, probably, injured birds."

DEER ON QUEEN CHARLOTTE ISLANDS

by
A.E. Pickford

When our fur traders first contacted the Queen Charlotte Islands the mammalian fauna was very limited. A list of the mammals made by Chittenden in 1884 shows the black bear, the land otter, marten, the weasel, mice and a small species of caribou, as the only mammals known on the islands at that time. Among the species absent were the deer, the grizzly bear, wolves and other predators, with the beaver, the squirrel and the rabbit.

But, as is well known, the once absent deer is very plentiful on the Islands to-day, and thus the question arises: How did they get there since the Hecate Straits are too broad for them to swim? The following information in partial answer to this question may be of interest. The Ven. Archdeacon W. H. Collison in his "Wake of the War Canoe" states that at one time he purchased from the Tsimshians seven live deer, to which small herd was added one other picked up by a steamer. These eight deer were carried across to the Queen Charlottes by the Hudson Bay Company and were liberated there. Under the protection of a Hudson Bay official, who was also a magistrate, these deer and their progeny flourished for several years. But, Collison says, after the death of the magistrate, the Haida Indians shot the deer and he fears they were exterminated.

But it seems that this was not the only effort made in this direction for, sometime in the early seventies, Alexander McKenzie of Masset brought deer and rabbits to Graham Island. And, at a later date a Rev. Mr. Robinson repeated the experiment on Bare Island in Skidegate Inlet. It is a matter for speculation as to which of these efforts (or which of any other) had its part in the population of deer now so abundant on the Islands. Whatever the answer to that question may be, it is certain that the absence of wolves and cougar enabled the stock to increase at a faster rate than is possible on the mainland.

Reverting to Collison's fears that the progeny of his original effort was exterminated, let us add a thought which arises out of our studies of Indian life in the Province. The thought revolves around the word "gunshy". Deer which had not experienced the effect of gunfire would be readily seen even in the close vicinity of a settlement. Once the Haida began shooting them off it would be only natural for these deer to take to the woods and to remain in places where Collison would not usually be. So perhaps his original effort was not so unsuccessful after all. His native congregation would doubtless help him to believe that there were no deer.

A. E. Pickford,
Provincial Museum.

GENERAL NOTES

We are happy to report that the membership total of our society is on the upgrade and our finances in a healthy state. But the attendance at the monthly and group meetings has not been as good as last year. This is in spite of the fact that we have had some very good talks.

Mr. Monckton's talk on January 13th will be amply illustrated. Will you be sure to come? Bring with you one of our new members, if you are acquainted with any. New members are sometimes shy of appearing alone for the first time.

Mr. Winkler's offer to give six talks on Historical Geology is a very generous one. If you attend the geology group meeting in Dr. Carl's office on Jan. 6th at 8 o'clock you will hear more of this.

Mr. Foster, our new Botany group convener, has a number of interesting suggestions to put to the botany group WHEN he can meet them. Where were you on the night of the last botany group meeting?

The next is on January 20th at 545 Superior St.

A WINTER CHRYSALIS

In early September I found on the rocks at Prospect Lake a caterpillar of the Swallow Tail butterfly.

It was about 2 inches long and a brilliant green with long, most curious black markings on the segments behind the head. These looked like staring eyes and are for protective purposes, meaning to frighten its enemies.

I took it home with various leaves, but it would not eat anything. After two days of incessant walking round its box it wove a silken mat on the side and hitched itself up by a fine thread. In the next few days it lost all its green colouring and turned a purplish brown, but its eye markings were still clear.

In this stage it stayed for many days shrinking all the time. Then in moving the box I disturbed it and was surprised to see it rouse up and walk off into the leaves again. After a while it settled down on to a wild cherry leaf and here it finally turned into a very nobby chrysalis, the basic colour being buff, marked from head to tail with dark brown stripes.

David Duke,
Junior Member.

SPECIAL NOTICE

AT THE MOMENT OF GOING TO PRESS WE ARE INFORMED THAT A SPECIAL BIRD GROUP MEETING WILL BE HELD ON ---

WEDNESDAY, JANUARY 7th, at 8 O'CLOCK AT THE HOME OF MISS SARA SPENCER, 1040 MOSS ST.
MR. J.A. MUNRO, THE DOMINION WILD LIFE OFFICER FOR B.C., WILL BE IN VICTORIA FOR A FEW DAYS AND WILL SPEAK TO US ON "WILDLIFE CONSERVATION". HIS TALK WILL BE ILLUSTRATED BY NATURAL COLOUR PHOTOS.

JUNIOR PAGE

Activities: Since the last issue a number of visits to various places of interest have been made by the Juniors following the Saturday morning meetings.

On November 15th the Forest Pathology Laboratory, in the Belmont Building, was host to our group. Thanks to Dr. Buckland and his assistants we had a very enjoyable and interesting time.

On November 22nd the Junior Group attended the matinee performance of Indian dances by Mr. and Mrs. Ernesti.

On November 29th we were guests of the Entomological laboratory. Mr. Andison explained the facts about a few of the insect pests prevalent about Victoria and also demonstrated a small power sprayer. On December 6th we went to the mapping and blue-printing department much to our enjoyment. Thanks for this interesting visit goes to Major Firth and Mr. Morris.

The morning of December 13th we were invited by Mr. Andrews to the Air-survey division of which he is head. There we peered through stereoscopes at photos taken, had aerial cameras explained to us; were shown how the photographs are assembled to form maps; and taken to the dark room where we watched attentively the process of printing the photographs on light sensitive paper. Each member was given an aerial photograph of Victoria and a map explaining the method.

NOTE: In the near future we shall have an article in the "Youth Editor", a monthly magazine published by a number of young people in Victoria. Anyone wishing to make a yearly subscription of fifty cents may contact the Junior Editor, Charles Faulkner. There will be no junior meeting until Saturday, Jan. 10th.

We hope you have had a very Happy Xmas and that you will have continued happiness through 1948.

Charles Faulkner.

NOTICES

Tuesday Geology group meeting in Dr. Carl's office
 Jan.6th at the Museum at 8 o'clock.
 1948 Speaker: Mr. Winkler.

Tuesday Monthly meeting in the Provincial Library
 Jan.13: Reading Room at 8 o'clock.
 Speaker: Mr. Philip Monckton (of the
 Provincial Land Survey Dept.)
 Subject: "Experiences of a B.C. Land
 Surveyor in the Field."
 (Mr. Monckton's talk will be illustrated by
 some very excellent Kodachrome slides.)

Tuesday Botany Group meeting at 545 Superior St.
 Jan.20: (downstairs). This is Mr. Foster's office.
 Speaker: Mr. R. Hammond.
 Subject: "The Interrelationship of Plants."

Wednesday The Third Audubon Lecture.
 Jan.28th: Speaker: Mr. Roger T. Peterson.
 Subject: The Riddle of Migration.

Tuesday Entomology Group Meeting at 545 Superior
 Feb. 3rd: Street, upstairs.
 Subject will be announced later.

CHRISTMAS BIRD COUNT

This will be taken on Boxing Day, December 26th, in
 Beacon Hill Park and other places, at 2 p.m. Phone
 Mr. Clay for further particulars.



Great Fraser Midden, Marpole, B.C.

P.T. Timmins

Victoria Natural History Society

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Annual Subscription: Single, \$2.00; Family, \$3.00; Junior, \$1.00.

To David Anderson
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