

A L E C T U R E

- on -

FLORA OF BRITISH COLUMBIA

- delivered at -

THE HORTICULTURAL HALL

- on -

Tuesday, August 26th, 1930,

- by -

PROFESSOR DAVIDSON.

TRANSCRIPT FROM SHORTHAND NOTES

- of -

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PROFESSOR DAVIDSON.

LADY BYNG in the Chair.

THE CHAIRMAN: Ladies and gentlemen, we have got before us a very pleasant afternoon in listening to Professor Davidson. He is an old friend of mine, whom I knew in Canada nearly five years ago, and what he does not know about flowers of British Columbia is not much worth knowing. I am not going to make a long speech, because all a Chairman has to do is to introduce the lecturer, and I have the greatest pleasure in introducing ^{Prof} Dr. Davidson to you.

FLORA OF BRITISH COLUMBIA.

By

Professor Davidson.

Your Excellency, ladies and gentlemen, I think it is almost a crime to inflict a lecture on an audience in *such* *as* warm weather like this, when one would feel better if one were *than a lecture hall* in some cool place, or where they could get the outer air around them.

It is twenty years since I left Scotland--~~a fact~~ ~~which~~ some of you may recognise ~~from~~ my foreign accent--to study the flora of British Columbia. When I went to British Columbia I was surprised at the large number of *showy* specimens which grew there wild, some of which I was familiar with in the gardens of Scotland and England. I was also surprised to find so many more specimens that I had not seen in *cultivation* gardens, and which I considered should be introduced into our gardens, to help to beautify them. I suggested to the Government that we might establish ~~a~~ *the* nucleus of a botanical garden; ~~and~~ *(1912)* at that time, we had ~~one~~ thousand acres of land in connection with the mental hospital grounds, ~~and~~ *so* I was offered two acres of land *there as* ~~for the~~ *a suitable place* purpose of starting a nucleus for such a "crazy" idea as a botanical garden. *In 1916 the whole collection of approximately 1100 species of native plants was transferred to the University, and formed the U.B.C. Botanical Gardens, the first in Canada.* The subject of the flora of British Columbia is one, I think, which might well be taken up in connection with a

horticultural society. Since I came over to attend the Horticultural Congress and the Botanical Congress in London and Cambridge, I have been surprised how few people knew about the flora of British Columbia, the Western Province of Canada. It is not in what we call America. Many of the members of congresses have referred to me as an American, but I am a British subject, and, as such, claim to have greater freedom than those "across the line": we have freedom to eat what we wish and, ~~what we wish to---~~ but I will leave the rest with you! (Laughter). I came from Vancouver. There are two cities of Vancouver: one in Washington State, America, the other in British Columbia. ^{B.C. owes its existence to} Vancouver ~~really exists because of~~ its flora. Fifty years ago--and I ask you to remember this throughout the lecture--fifty years ago there was no Vancouver. It began as a small logging town almost fifty years ago. A number of ~~the~~ logging towns have been known to continue to grow for about forty years and then suddenly vanish. But Vancouver has grown. It was famous for its fir and cedar. I presume you know those trees: the Douglas fir and the giant cedar. At least you probably know more about those trees than did the Jew who was 'phoning up to enquire about some furs. He said " ^{hear} I think you have some fur?" "Yes". " ^{what price?} How much are they?" "Forty dollars a thousand". "What's that? Fur ~~at~~ at forty dollars a thousand?" "Yes, the very best". "Well, but ~~I never heard of any fur at that price,~~ what kind of

"Gi, oi, send me a thousand,

fur?" "Douglas fir". ^{kind of} I don't know what animal the douglas is, but any kind of fur at forty dollars a thousand is very cheap". (Laughter).

Here (slide) we have shown the Douglas firs and hemlock, and it gives you an idea of the size of the trees ^{found in} ~~that~~ the virgin forests of British Columbia produce. The Giant Cedar is well known as "The tree of life", arbor vitae. It grows, you see, to an enormous height and a great diameter. We have some stumps of this tree which are used as rooms; the stump becoming hollow, a store is set up inside it for the selling of postcards and the taking and developing of photographs. A large part of the success of this lecture depends on the lantern operator, and I am sorry, for your sakes, that these perfectly sharp photographs, so far, are being projected and lighted and focussed so badly.

Here is a Douglas Fir tree being cut down. The trees are of such a size that the methods of logging in British Columbia have to be different from those used in this country. When the tree has been felled ~~on~~ to the ground it is difficult to decide how such a tree should be moved out of the forest. Here you see the ^tSiaka spruce. The three trees I have named, the Douglas fir, the giant cedar, and the spruce have brought fame to British Columbia; and in connection with the War the spruce was used on account of the valuable properties of its wood for aeroplane work.

Here is a log of spruce , and when this tree has been felled the problem is to get this wood out of the forest. I have put the problem up to some of the people here and asked them to say how they would do it. One man's suggestion was that he would get a row of men alongside, one side, with crowbars. The result of that, of course, would be that all the crowbars would go into the ground but the log would remain where it was.

This slide shows you how the logs are removed after felling; they are seized with a chain attached to a donkey engine; the chain comes up the cable and it picks up the logs as if they were no heavier than my pointer, and in that way they are put on to the wagons which are waiting near the donkey engine. In this way the logs are brought out and put on the waggons, and a train of these waggons is taken to the coast. Here you see the logging train. The waggons are brought along, and the logs are thrown into the sea, and they build up a raft or "boom", and that boom is towed many miles along the coast to the sawmills. Here is the tug, and the raft is being taken to the sawmills. There are many sawmills in Vancouver.

Here is the incinerator, where the rubbish is burned. There is much good firewood burned here, but some of it is kept for people to use for firewood.

Here you see the booms waiting outside to be taken

up. Here you see the lumber is being cut and shaped. Then it is taken to other parts, sometimes to boats, sometimes to other towns along the coast.

This shows the method of handling the wood. After the wood is cut it is put into piles. There they use particular trucks which ^{do} straggle over each wood pile and lift up the whole pile, and it is then carried along. It is lifted bundle by bundle, and this crane will lift the bundle and put it on a truck. When the trucks are depositing a load there are two rollers, which ^{allow the} look like ^{load} logs, to slide off at the back all in one heap.

This is what is left in the forest after the good wood has been taken out. Many of those trees which you now see are better than the trees which are being cut down in the forests of Great Britain today. Many of them are 14 to 16 inches in diameter, and they are left to rot and burn, and are a menace owing to the distribution of fungi and the wood diseases due to them, and to insect pests. And we sometimes hear it stated that ~~re-~~generation in a natural way is very abundant in British Columbia, and it is true. But we usually find that within five to fifteen years after an area has been logged over, the lumber region will burn, and there will be fire through that. The longer that is taking place, the more trees are destroyed. All the young growth is in that way burned off, and the result is that there is a great

area void and waste for many years.

This is how the land was when they commenced to establish Vancouver. The stumps of trees which had been missed, or the fixed stumps which had been left, had to be blown out. Here is a view showing the blasting, and here is a house going up. In two weeks time you would probably find a house in the place where the stump was. Sometimes we have accidents, a ^{root} ~~tree~~ will, in the course of being ^{blown out} felled, come down through the roof of a house; but that is a detail!

Here is Vancouver City, a view taken from one of the high buildings. It is Vancouver as it appears to-day.

This shows Vancouver taken from an aeroplane; it shows the inlet and the mountains which we have right at our door. In one day we can ferry across here and take a trip up to a height of 5,000 or 6,000 feet, and can get back the same day. And here are the adjacent mountains on the other side. It is a very good centre for botanising.

Here is a view looking South from the opposite side taken from an aeroplane. It is 10 miles long by 4 miles wide. Fifty years ago this was all forest, similar to what I showed you in one of the early slides. There are now in it about a quarter of a million people.

But, being a logging town composed of houses and people may not mean that Vancouver is a city. We often judge a place to be a city or not by how the people spend their leisure, and I think it is a pretty good way of judging a city. If you have museums, horticultural societies, parks, gardens and other organizations for the intellectual uplift of the people, you can have a pretty good idea that it has passed the logging town stage.

This shows one of the scenes in Stanley Park, which is a natural reserve of a thousand acres; and this is the entrance to it, which has been beautified to some extent just at the entrance; and you see the change from the purely formal into the wild condition behind, where we have many of the original trees of British Columbia.

Here is another of the parks, where the band plays and the people assemble; in the Summer time when we have days like this you will find the place crowded.

This, an unsatisfactory presentation, is to show you one of the organizations we have: The Natural History Society, which is composed largely of parents, teachers and their pupils. In the Summer we go out every two or three weeks, on excursions to study the native flora chiefly, and the insects and birds that are associated with this. Many of the people connected with the Society are now growing native plants in

their gardens. So that we see, in British Columbia, more of our native plants than is the case in this country.

Here we have the yellow arum, sometimes called the "skunk cabbage". But it is not a cabbage. The odour is somewhat like that of garlic; still, people do not call garlic "skunk onions". It is of the family of the Eastern ^{"cabbage"} skunk, but it is really a different plant. The flower is that of a large arum, and I think it is cultivated in some gardens in this country as a bog plant. With us it is too common to be considered worth cultivating. The odour, I think, is largely on account of the mode of ^{pollination} inflorescence. In most of the inflorescences we find a yellow dusting with pollen.

This picture was intended to show ^{Linnaea} the ~~linneus~~, the twin flower. It is the only plant named after Linneus.

This is the spikenard, a natural plant, and this was photographed by the seashore. It responds very well to cultivation. When taken in, these spikes become much larger, and it is a splendid plant for spring flowering.

This is the S. Racemosus. ^{aster} We have found twenty species of this. Many of our horticulturists at flower shows are taken with this wild one when cultivated. This is the second year, a plant taken from outside the place and put in a garden and grown. In the second year it becomes a mass of flower like this.

This is the June berry. It can be trained as either a shrub or a tree. When trained as a tree we can gain berries from it afterwards. The Indians eat the fruits of those trees.

Here is a dogwood; it is the best of the flowering dogwoods, but is not very well known in horticulture, as it is apparently half-hardy when out of its own country. For a short distance in the district North of Vancouver this is very abundant. It is a magnificent tree, 60 or more feet in height, and it consists of a mass of those flowers. It can be grown as a shrub or as a tree, and is a magnificent plant. I understand that in the South of England it is half-hardy.

The red-berry elder is fairly common along the coast, and it is fairly common here, in this country. There is the redberry, the blueberry, and the blackberry. You see the pyramidal inflorescence. This elder, with the maple as a background, is beautiful for landscape planting.

This plant is one which is popularly known here as ~~Spiraea~~ ^{as Holodiscus} ~~rhoea~~. ^{we} You can see the distinguishing ~~hollow~~ discs. I have been pleased to see how often that is planted in gardens here. You will know it by the next slide, and this shows how it grows by the side of the sea. We call it "Ocean spray" because it is very common along the bluffs by the seashore. Here are plenty of creamy-white flowers as they grow by the margin of the woodlands.

In British Columbia we have four or five different kinds of mistletoe; here is one of them growing on the hemlock spruce. It is different from the English kind. It has no leaves, nothing but a cluster of berries. You know why we call it English mistletoe, because the Scotch can get on well without it, and it is cheaper! The method of dispersal of this mistletoe is very interesting. The berries, when ripe, have a kind of fermentation going on, and eventually they explode and are turned inside out, and the contents are driven ^{shot} 40 to 60 feet in the air. And if these contents happen to alight on a young twig of this year's growth, this will be a certain centre of infection; you will find a series of new growths there. There may be a new growth in three, four, even seven years growing on the older twigs. They are injurious, and stunt the branch.

This Natural History Society that I have spoken about arranges a camp every year, and at that time we go for two weeks into the mountains, either in the interior or on the coast. I ask you now to come up to some of the camps. There are a series of camping regulations for camping members. All the ladies must use camping suits and breeches or knickers, nailed boots, and use alpensocks^t and so on, and we have to have some guarantee as to their physical fitness. The numbers camping are limited to no more than fifty at a time, and they are nearly all teachers

or those engaged in school work; some students, some in university work. You will see the hotel behind. We send two men two or three days in advance to erect the necessary small village of tents; here you see a teacher of botany in one of the high schools. He does not wear this beard when he is in Vancouver; that is grown while camping as a protection against mosquitoes.

Here you see a camp in the Botanical Gardens. As I say, these two or three go a short time before, with pack horses, and take our food supplies into the camp. We arrive with the main party three or four days later, and find the tents up and the baggage inside the tents.

Here you see a party in front of the camping ground, and here is one assembled at a height of 5,100 feet, which was our lowest altitude for the next two weeks. Twenty years ago, when I first went to British Columbia, this region (Map) was unknown and unimportant, there was no suggestion of anything, with the exception of this mountain here, which had been named Mount Garibaldi, and the name was given to it without it having been properly investigated or surveyed. It could be seen from the sea and was then given the name. We started in 1911-12, and for a number of years afterwards we explored this whole region. Here is Garibaldi Park Reserve; it is set aside as a park of 600 square miles. The blue coloring indicates the area of glaciers and snowfields. Garibaldi

Lake is ~~3 1/2~~ ^{3 1/2} miles by 1 mile. All the region I show you on this map we explored, not only topographically, but also botanically. A few weeks before I left, the Government sent me this copy of a map showing the topographical survey done by the regular surveying staff, and I was interested to see the mountain here, 8,200 feet high, named "Mount Davidson". Here you see the mountain, with the glacier in front of it. I was the first to get near that; I was only a mile from it, and it had taken me half a day to get there, because the pinnacles you see were like icicles inverted, each icicle 10 feet long by 8 feet in diameter.

Here is the appearance of the white rhododendron as we see it in Sub-Alpine regions, that is to say at 3,500 to 4,500 feet altitude. It is deciduous. Sometimes it is called ~~keristrum~~ ^{azaleastrum}. It is different from the other species of rhododendron, the Rhododendron Californicum, which we find in the mountains which arise from the ~~Saskatchewan~~ ^{Skagit} Valley. We have many hundreds of these planted, and this tall, straggly appearance is the appearance which you see in the open woodlands. We have gone for half a day with the packhorses among rhododendrons ~~16~~ to ~~18~~ feet high. Many of the little glades alongside the trails show banks of orchids or of anemones; marsh marigolds are also seen, masses of them, especially along the tributaries of some of the main creeks. There is the ~~beretrium~~ ^{Geranium} viride, with the ~~orgeron~~ ^{Eryngium}, little hummocks of heather. Here you

see the pink heather, the ~~theodora~~ *herpetiformis*. It is different from that which you see on the heaths of this country, but I believe this variety is found in the South of England. This which I show you now is associated with regions of perpetual snow. And these mountain asters are very beautiful; the so-called meadows are covered with them; what you often call the ^{alb} uplands.

Here is the kind of view which we have from our camping ground, showing, in the background, one of the ^{dominant} Dominion peaks. These slopes are covered by many species of flowers; I collected 384 different species on the slopes and the meadows during our collecting trips.

Here you see our party setting out for the day. We leave at about nine o'clock in the morning, and return at about five in the evening. Here is the creek along the banks of which we camped. This is the *mimulus*, and we have the *saxafragis*, and here are pink and crimson ones. And you see also masses of golden *mimulus Alpina*, and here is a patch of golden-yellow, and that was the reason this creek was named *Mimulus Creek*. Here is the *Mimulus Lewisii*. It is of a rich velvety crimson, but when it is found in the valleys it is found to have turned to a pale magenta pink; it loses the intensity of the colouring seen in the Alpine regions. Here

are the banks with the flower as we see it. We find ^{have} ~~named~~ that many of the peaks, ridges and lakes ~~are named~~ after plants, and from seeing these pictures you will be able to guess why.

Here we have the white heather growing at the edge of the Sub-Alpine woodlands. And here we enter into a purely Alpine region; it is after we have left the timber line below us. And here is a close-up view of the white heather. And here is the "Indian paint-brush", the Castilia. We have many kinds of those; they are pale yellow, almost white; they are also scarlet and dark crimson. The whole slopes of the mountains are covered with those, millions of them. They are very difficult to transplant, but we are always taking the young plants and moving them into the gardens, and it is usually a few years before we get them properly established.

Here are the cones of ^{Abies lasiocarpa} ~~avies~~ lapicaptra. They are beautiful trees, and are found on the higher slopes. They are the admiration of everyone. It is a tree which, I think, should be cultivated more by horticulturists; it makes a magnificent evergreen. I have one tree in the Botanical Gardens at the University which is 12 years old, and it is only three feet high. It is a beautiful tufted tree. One horticulturist offered me forty dollars for it. It is still growing there.

Most of the trees I show you here belong to the species of Alpine fir, sometimes known as ^{abies} Subalpina. And we have the mountain valerian, the "paint-brush", the arnicas, golden rods, and many varieties of plant growing on these slopes.

Next day we had a snowstorm, and the whole flora was under four inches of wet snow, I did not go up there in the snow. This shows Garibaldi Lake and Mount Garibaldi, and you can see the masses of flowers we have on those uplands. You are wading up to your waist among the flowers: mountain valerian, ^{also known as} ~~and mother's~~ mountain heliotrope, and the lupine, varying from white to pink and blue, all one species, but every conceivable variation. And the lake itself is continually changing colour.

This shows the cones of the white pine, a thick-scaled cone. The birds peck the scales and eat the seed. Here are columbine; you can cut them down with a scythe, they are so abundant. Here is the aquilegi columbine. The level of this lake is 4,600 feet above sea level. This looks like a gentle ^{snow} ~~smooth~~ slope to the lake, but I will show you, presently, a photograph taken to prove that it is not so smooth as it looks in the distance; you are here looking from a few miles away.

Here also are banks of lupin, which we see when we reach an altitude of 6,000 feet. When we get to the other side we see that the trees are much reduced, and higher up there are no trees at all.

This shows the ^{Black Lusk dominant} black dust, the Diamond Peak in that vicinity. Sometimes we arrive in the month of August, and one year there was enough space for our tents, between the snow, and when we left, in the space where the snow was, there was a mass of flowers, because flowers come so quickly after the snow has gone.

Ten years before this photograph was taken the lake extended to the base here, and now it is filling up quickly, and the glacier is pouring silt into the lake. At present there is a mass of willows and other plants, which have established themselves on the silted parts of the bank.

This shows the fruits of the "tow-headed baby", a Western anemone. This photograph was taken to contrast the two slopes. On one of the slopes we have the heather and anemones, and on the other side you have this view; I was standing on the edge of the glacier, looking back, and that gave this view. All these patches are saxifrage, which has leaves like a stone crop. It grows very close to the ice; it is the first plant to grow near glaciers. We took parties

over this many times. Here you see the tongue of the glacier, and here is solid ice. When we got back to this point on to the ice we could travel along. We did not collect plants there. The only plant we see there is the red snow plant.

I show you here the changes. Some wonder whether the glaciers are receding or advancing. Here we have a hanging glacier, a small glacier covered with snow.

We now crossed on to the ^{Coverie} Conny Peak, and later we looked down, and where this glacier had been there was a whole bank of vegetation. Young willows are growing; you see this dense mass of willows growing where the glacier had been.

This shows a snow-slide or avalanche. We found, at the bottom, trees piled up, like matchwood. That sort of occurrence has much to do with bringing the Alpine species into the lowlands. From the botanical point of view this is very interesting, because we have fine specimens of Alpine plants and specimens. Those plants, when they have grown in the lowlands, we should almost certainly name them different species, whether by an expert or otherwise. And I think some of the plants we have in British Columbia, which have been named as different species, will be found, some day, to belong to the same species.

They are merely growing in different environments.

Here is the Douglas Phlox, a beautiful plant which, no doubt, some of you are familiar with. There are places in this region where we have acres of this plant taking the place of grass. At first we stepped between the plants, but afterwards we found them so thick that we had to tread on them, and ultimately we overlooked or ignored them because they were so abundant. And yet a clump like this I show you, bought from a Vancouver nurseryman, would cost fifty cents, a sum of money which could be obtained if you were able to bring them from those Alpine regions. Those regions are protected, and people are not allowed to take roots from that area of 600 square miles.

I have only once seen these *pentstemons*; ^{in British gardens} they are charming for rock gardens. The *mensie* is a tufted one, and measures from 8 to 12 inches.

The ~~*Silene acaulis*~~ ^{*Silene acaulis*} varies, in the mountains, from white to carmine pink. The dry ^{belt} region flora is different from that of the coast region. There is a scarcity of trees on the lower ^{slopes} borders, and an abundance on the top. The rainfall there is 20 to 30 inches, compared with Vancouver's 60 to 80 inches a year. The desert appearance shown here, with the sage-brush cactus, milkweed, the yellow pine, combined with other

characteristic dry plants, different from those on the coast. Here is the common sage brush, one very good for rock gardens. The other is not so strong. Here is the milkweed, very rich. When the leaf is broken, a milk flows from it. It is said that an attempt was made to cross this plant with the strawberry, so that we might get strawberries and cream!

Here is the bitter root. Indians make of this root their food. They save the root and throw the skin away. I have seen heaps of those skins, ~~some~~ ^{some} They are 4 feet in diameter, 3 feet in height. The Indians store these by the million. The plant is like a rose on the surface of the ground; it is a very valuable plant. This picture shows how abundant they are; it is of one part of the Dry Belt which I visited. I went in, with an Indian guide, to some of the regions, and while I was there I tried the simple foods which the Indians eat. This picture shows squaws digging the roots. They dig bulbs, tiger lilies, and other flowers. Here you see the erythraneum grandiflorum. These are very abundant in some of the mountain regions. This is 6,400 feet above sea level, in the Dry Belt. You can get trees and plants at a much higher altitude in the interior.

Here is an area which at one time had been dug over by Indians. To make a long story short, I may say that in this region there used to be about 5,000 Indians

assembled for about a month every year. During that month those Indians fed on the roots and bulbs of plants in the district. Therefore I thought the region must be very rich to supply 5,000 Indians for one month every year for maintenance. I visited the region, to see whether their depredations had ruined the place. I found quite the contrary. The digging of the soil is like cultivating a garden, and the Indians regard the earth as their mother; they say that if they take their food from mother earth, mother earth will provide more; and if they do not take their food from mother earth, she will not provide food any more. The places which had been dug over by Indians were the regions most abundant in bulbs and other Indian foods.

Here are dog-tooth lilies and the Spring beauty. You may have heard of Douglas fir sugar, or Douglas fir manna. This is the only photograph of it in existence; it was taken in 1914, and was afterwards copied by other papers all over the world. It is a sugar which the Indian used as food when he could find it. It is only occasionally that the sugar is produced. It tastes like ordinary sugar, but it is a tri-saccharite; it contains 50% of ? melisitos, a special preparation which sells for 68 dollars per pound. Dividing that by 5 gives you the value in English money.

This picture shows that these Indians have an idea about horticultural matters. This Indian makes his own water works; he runs a hosepipe from this over to the vegetable patch. He is not dependent on bitter root, and dog-tooth lilies, he is growing white ^{man's} manna food. This Indian tells me that the white man's food is too weak. There is a pipe coming into his kitchen, attached to a pump and he can bring the water inside the house, ^{to} and the sink, ^a is the outlet, from which ~~it~~ runs into the garden. And he has original ideas, also, with regard to flower beds. Indians are not allowed to be supplied with liquor, but this resourceful Indian has been able to get a supply of gin bottles and other kinds of bottles, which he has used, you see, as an edging for his flower beds.

Here we have the yellow pine of the dry belt, it shows that the yellow pine does not grow in dense forests. And here is the lodge-pole pine, showing the spiral marking of the porcupine. The porcupine winds round a tree and makes a spiral mark on the tree, different from that of the mountain rabbit. When people have had these marks pointed out to them at a distance of 10 or 12 feet from the ground, they ask derisively "What? rabbits climb trees?" But ~~this photograph was taken~~ in the Winter, when snow existed to a depth of ten feet. The rabbit then runs over the snow, and leaves his marks on the trees at that level.

Ceanothus
Here we have two species of *Ceanothus*, one of which, the *velutinus sanguineus*, has a velvety leaf, and the flower has a very strong perfume, too strong to be pleasant at close quarters but when wafted across air on a warm afternoon it is very pleasant.

Rhus
Here is the ~~russ~~ or sumac. The C.P.R. porter will tell you this is "burning bush". *In the autumn* When these ~~flowers~~ are *the leaves become* scarlet they are a very intense scarlet. Between Summer and Autumn the colours change *blue in summer* from coppery green, through different bronzes and browns, to a *fiery* coppery scarlet. The only objection to *Rhus* ~~them~~ *it* is that ~~they~~ are liable to send out suckers.

This poplar shows a different species to ours. We find this usually in clay soil, and generally associated with some of the lady's slipper orchids. In some parts we have the yellow lady's slipper; this is a flower with beautiful white and purple veins.

In the Dry Belt also we find phlox. Some of these colours have been prepared by taking a coloured chart and going into the mountain regions. I take the Ridgway's chart, which has a thousand different kinds of name colours, and I take the colours according to the chart, and when the slides are being coloured I can check up with my official colouring.

Here is a dwarf species, the polmonium or Jacob's ladder, which is growing at an altitude of 6,400 feet.

While I am botanising I am not merely looking at flowers. One lady said to me "It is nice to be a botanist, to go out picking flowers ". I am not just picking flowers and putting them into my button-hole; I am making notes of environment, soil conditions, and so on, and I have records of the different habitats and different plant associations. I collect specimens for the herbarium, though twenty years ago we had no specimens of any kind which grew in British Columbia. But we now have a herbarium of 18,000 sheets.

Here is a primitive way of drying sheets in the sunshine. And you see the Botanical Garden behind our tent. A little patch is dug up, and we go out in different directions each day and bring in some roots to transplant in the gardens. They are put here and are attended to every morning, sometimes in the evening, and at the end of two weeks they are taken up, with their labels, and are packed in paper and boxes, and taken by pack horses, then by train and boat to botanical gardens and shown there. So we can show the people in Vancouver Alpine plants growing, instead of merely dried specimens.

At the University we have plots of botanical gardens; here is a portion which was visited a few years ago. We are thus able to see, in one afternoon, many more plants of British Columbia than could have been seen after a great deal of travelling in former times. We have most

of the native trees and shrubs, and here we have herbaceous plants. We have also a pond for aquatics.

This slide shows the University of British Columbia; the photograph was taken before everything was finished up. It shows the location of the University site, with the sea and the mountains as background. I show you the Botanical Gardens and the horticultural orchards, the science building and library, the administrative building, the auditorium, the arts building, the building for heating and electrical power and hydraulics. Here is a building of white granite like Aberdeen granite, my native city, so I feel quite at home there.

Here you see the horticultural experimental plots, showing the work done by members of the staff in selecting and improving varieties. Some of the varieties are cultivated here on a large scale. Here are chicken houses and houses for pigs; they have houses for nearly everything there, except the professors! ^{Library} Room is left for extensions, in long wings and cross wings. If we look out from the library door we get a view of the University campus. You will remember what I said at the beginning, that fifty years ago this was all forest. Today we have cleared the forest, we have built homes and have laid out the City. We have a Horticultural Society, which is affiliated with the Royal Horticultural Society here in London, and we are in touch with what is being done in London; and I think you

will agree that we are not merely an agricultural centre, we are interested in the higher things; and though the slides were not focussed to the best advantage, I hope I have been able to interest you in the flora of British Columbia.

THE CHAIRMAN (Lady Byng): Ladies and gentlemen, I am sure we have been extremely interested in Dr. Davidson's lecture. I wish, of course, that the slides had been ^{shown} better, but, even so, I know they were good enough to make me very home-sick for British Columbia. I am sure you would like to give to Professor Davidson a very hearty vote of thanks.

Carried by acclamation.

PROFESSOR DAVIDSON: Thank you very much.
