VERMILION PASS FIRE STUDY

BOTANY

June and Preliminary

by

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BOTANY

Due to helping the surveyors this month this Botany Report will not be as extensive as usual.

On the surveying crew, we started at the Great Divide and put in a base line on the South side of the road, to almost the end of the burn.

The surveying was slowed down considerably because of the miserable inclimate weather.

While we were surveying I was able to see and classify several species of plants, a list of these plants will appear later in this report. I was also able, in spare time and on off days, to go through the burn to different areas, seeing the general vegetation, and general topographical features of the land. These areas I visited were usually near, close to or on the way to the small mammal trap grids.

The following is the plan of attack of my project which was started on June 24th (the day after I ceased surveying).

Objectives:

To plot the vegetation of the Vermilion Burn and a few outlaying areas on a map and to see if there has been some kind of successional pattern started.

Method:

To classify and count species of plants at the 300 metre grid pins being laid out by the surveyors.

At each pin I use a 2 m radius circle as a plot. In this plot I will count and classify the species of herbaceous plants. A 5 m radius circle will be used for counting the shrubs, tree seedlings and still standing dead trees.

Preliminary Observations:

When I first went out on the 2nd of June the vegetation was very sparse with only a few plants in flower such as Calypso bulbosa, Erythronium grandiflorum, and Ranunculus abortivas. I also found a lot of Fragaria glauca in bloom.

A few days later (at low elevation) I saw two shrubs Potentilla fruiticosa and Arctostaphylos uva-ursi in bloom. After this point I noticed a few plants a day coming into flower, these appearing on a following list, with the first date of sighting. I found that in the open spots such as the avalanche areas, the plants were more mature and were first to bloom. I also notice that the higher you went on the South slope the fewer plants there were out, while the opposite was the case on the North side, more plants of the same species were in bloom the higher I went (within limitations, of course). The South slope also had smaller numbers, different and also less mature plantlife i.e. Balsam root were in full bloom, covering entire slopes on the North side but on the South side they were still in a bud stage and sparse.

A general observation can be made for both areas. A lot of shrubs that were growing up, were at the site of old burnt shrub stubs. These appeared to be growing from pre-fire roots.

I also noticed many lodge-pole pine seedling about 1-4 years old throughout the burn. Few fir seedlings (1-4 years) were seen in the burn, and one 3-4 year seedling was seen at point B-2 (on mammal grid). No attempt has been made as yet to look for any regularity of them. Several spruce seedlings 1-2 years old have been seen a short distance into the burn on the Southwest edge, as yet only one other has been seen in between ASW1 and ASW2 at ASW1(i) (see grid pattern), but no attempt has been made at counting them yet.

The following is a list of species of plants found to date. The date following each is the first sighting of the plant in flower (except where otherwise stated), but this is by no means a reliable indication of the blooming time, because I was mostly preoccupied with surveying and was not in all places of the burn to observe this. It also needs to be remembered that flowers bloomed at different times in the various parts of the burn.

Common Name	Botanical	Place Found	Date
Calypso Venus Slipper	Calypso bulbosa	Camp & Burn	June 1
Glacier Lily	Erythronium grandiflorum	Stanley Glacier & Avalanche	2
Small Flower Buttercup	Ranunculus abortivas	Avalanche	3
Willow (3 species)	Salix ssp.	River, Burn	3
Meadow Rue	Thalictrum occidentale	Avalanche	3
Wild Strawberry	Fragaria glauca	River	4
Cinquefoil (not in bloom)	Potentilla	River	4
Mealberry (Bearberry)	Arctostaphylos uva-ursi	River	4
Western Spring Beauty	Claytonia lanceolata	Avalanche	5
Mountain Forget-me-not	Myosotis alpestris	Avalanche	5
White Spirea	Spirea bilulifota	Avalanche	5
Wood Rose	Rosa gymno carpi	Avalanche	5
Alpine Anemone	Anemone drummondii	Creek (wooded)	5
Labrador Tea	Ledum groenlandicum	Divide	6
Balsam Root	Balsamorhiza sagittata	Whole burn	7
Indian Paintbrush	Castellea sp.	Edge of burn	7
Columbia Clematia	Clematis columbiana	Avalanche	15
Sask. Service Berry	Amelanchier alnifolia	Avalanche	15

Common Name	Botanical	Place Found	Date
Small Flowered Rocket	Erysimum inconspicuum	Avalanche	15
	Pedicularis sp.	Avalanche	15
	Draba ssp.	Avalanche	15
Nelson Larkspur	Delphinium nelsonii	Avalanche, unburned and burned	15
Wild	Aralia nudicaulis	End	18
Mountain Alder		End	18
Alpin timothy (not in bloom)		Bench M22	18
Dogwood (Bunchberry)	Cornus canadensis	BM 50	19
Butter cup			20
Shrub Bench	Betula glendulosa		20
Columbine			20
Yarrow	Achillea mutipolia	BM 69	22
	Geranium sp.		22
Bog-laurel	Kalmia Polifolia		15-27
Dandelion		Throughout Burn	
Common Fireweed (not in bloom)	Epilobium angustifolum	Throughout Burn	15-
Anemone	Anemone Narcissi flora	8,000 ft.	

Following is an indication of reporting for different plots. This is first a sample and in no way is a real situation.

I take a 4 m string, staking it at points A & B with the centre (2 m) at the bench mark, the same being done at C & D. This gives you a circle with a radius of 2 m and dividing it into 4 sections.

After splitting this circle into sections I count the flowers of one species in each section i.e. 38B - 27B - 32B - OB would mean that starting at the first section.(1/4) there are 38 Balsam roots, 27 in section 2, 32 in section 3 and none in section 4. This is done for all major species and then a detail is done on each section i.e. 1/4 8 dogwood, 1 chandralabra 1% peat 75% cover means that there are 8 dogwood plants, one chandralabra 1% land cover is peat moss and that 75% of the section is covered, all in section 1.

In addition, I note many standing trees and how many logs have fallen, as well as their species. This method is also applied to the 5 m plot except that I count the standing trees, shrubs, seedlings and fallen logs.

If I notice any change in vegetation between plots or a more general feature than in plot, I also state this.

These plots are put on a grid system that is layed out by the surveyors. By agreement with the surveyors we set up the following code.

The base line is A and every offset is a number. The offset going up from the divide is the 0 line and every thing West is marked W and East E, so the point indicated (P) would be CNW2. The same is done for the South side. This code is used as the index for my plots.

I've set out a few plots and collected the data, but no more can be done for a few days, because the surveyors want to change the pins by a few meters. The major work on this will start on July 1st, when the surveyors have got a substantial distance ahead of me.

Two evaporimeters have been picked up and will be set up on the first day back (July 1) another one is still being waited for. I'm also waiting for the mounting cards, for the herbarium collection and glue, and if possible the 35 mm camera is needed if pictures are still desired.

On going out to the pin plot, I've decided to change the plotting slightly. Since at each pin it has been trampled by surveyors I'm plotting each plot 5 m North of the surveying pin. The first section of data will therefore be described in July's report, because the first 5 plots have to be redone.