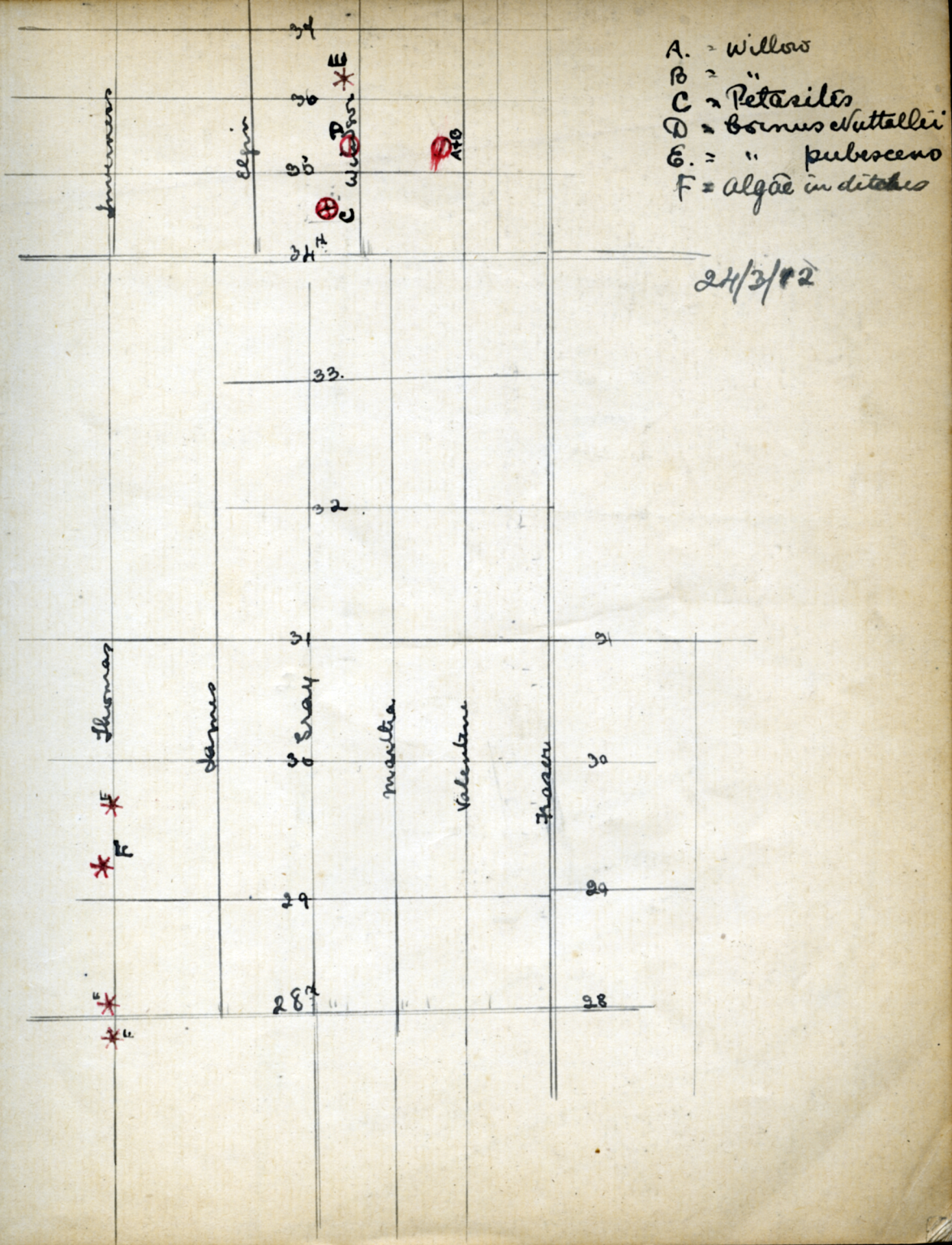
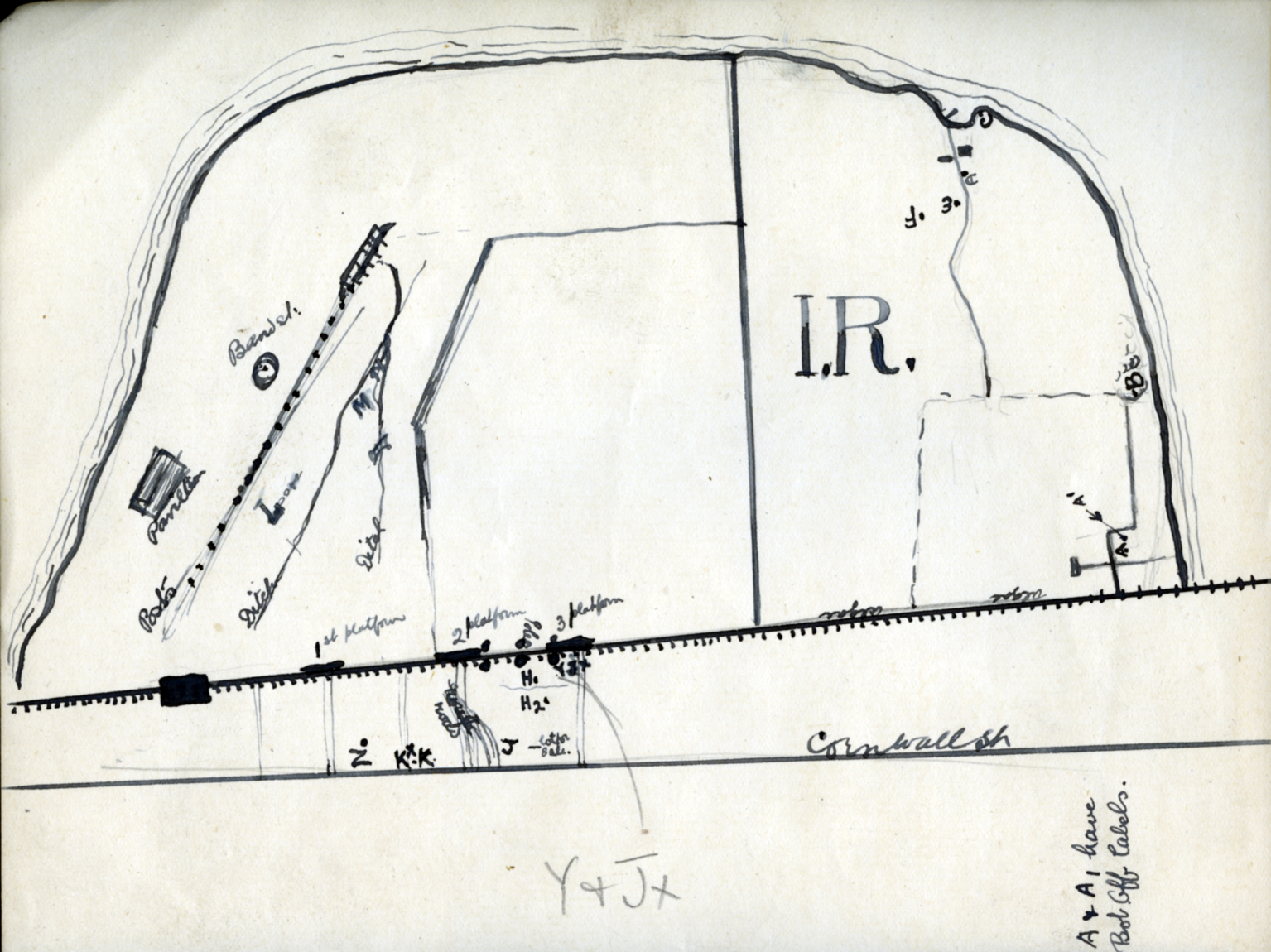
Botany Notes

by D. D.


A. = Willow
B = "
C = Petasites
D = Bonus Nuttallii
E. = " pubescens
F = Algae in ditches
24/3/12
34
35
36
Elgin
Thames
Wharncliffe
A40
33.
32
31
Thames
Avon
Maryhill
Valentine
Thames
30
29
28
F
E


I.R.
Bank of
Ditch
Ditch
1st platform
2 platform
3 platform
H.
H2
Cornwall St
Y + J x
A + A1 have
Bob Off labels.

A. 15 yds W. of sidewalk to Indian's house & about 6 yds from fence. = It is a low shrub with erect branches, rather thick

B. is a low spreading tree or large bushy shrub. apparently 2 trees but evidently springing from 1 root. At date of collecting the catkins 2 2/3/12 the twigs were very brittle at the lowest node

C. A small compact tree with short branchlets & crowded habit, possibly due to exposure. The catkins being of a dark appearance due to dark grey woolly hairs not white "wool" like B. and A.

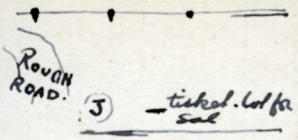
D a fairly tall lax tree quite near foot-path on left side, at back of Indians house (about perhaps 20 or 30 paces)?

E. Ditto a little further south along the foot path from D. but on Right side say 2 steps off the path. Only a few steps from D. - Brittle -

(F. Not brittle at 1st node; situated 16 steps West of E. (just behind a vine maple) one branch is bent & broken

H. standing in Water about 30 or 40 paces west of the 3rd platform-from-Kits-beach-etc. almost opposite the 2nd pole W. of the platform, Erect strong branches bushy shrub

H2 similar habit & mode of branching. 20-25 paces S of H.

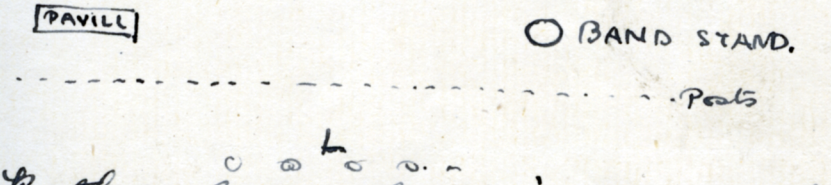
J. 

has two bark blazes on it left a paper with J on it, which may be off on return to examine it.

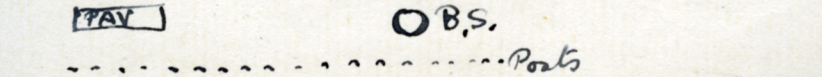
J.x very like J. and found under the 3rd platform W. of Ketsilans beach platforms

K is evidently S. sitchensis, found between 2nd & 3rd platforms on South side of the block & nr the margin of the bog. very erect thin virgate branches.

Kx just to the West of K a few paces

L 

Rather large shrubs in swampy ground, have very pubescent branches of dark brown hairs. the twigs lower down tend to have fewer hairs & green bark, some of the bud scales a densely pilose & dark brown almost black while others are reddish brown & almost totally glabrous & shining

M. 

Notes on Erythroniums from New Westminster

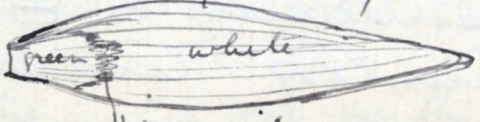
Specimen with white percianth, spreading, tending Brecan
slightly over 1 foot in height with two entire
elliptic-lanceolate leaves 6-7 inches long, acute,
2-3 inches broad narrowed below to form a
kind of winged petiole, one leafe slightly
higher than the other & completely sheathing
at the very base.

The main veins have a whitish
appearance, with more or less transverse
bars of similarly whitish epiderm. leaving
squarish to pentagonal patches of green
on, many of these patches are splatches of brown
evidently in epidermal cells. The splatches
are irregular in shape & size & distribution
sometimes more on one side of the midrib
than on the other.

Scape about 11 inches long.

Sepals quite easily distinguishable from
the petals - indeed well marked.

Lanceolate, under surface has a green
area towards base extending to about 1/4
length of sepal - the margin of green area
is brownish - probably due to the orange band
showing from the upper side. The base or point
of attachment of the sepal is about 8 mm. broad.



(under surface of sepal)

1 3/4 inches long. x
1/2 " broad

the upper surface differs in the green area at base being paler – yellowish green & the 7–9 veins showing as conspicuous green lines on this part the green area is bordered by an irregular zig-zag or finely serrated line of orange-brown, which quickly fades off into the white through a lemon yellow margin outside the brown, a little to the inside of this brown border is a very faint yellow band parallel to the brown one

Petals at first sight similar to the sepals. conspicuous differing by having a decided midrib & the brown border at base is more roughly serrated. The base of the petals is curious – having a short claw with a corona-like formation where the limb turns off at right angles from it



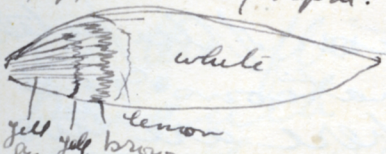
Stamens in two whorls.

filaments similar in form & length (narrowly lanceolate acuminate flattened (ciliate)
Anthers of outer stamens 13 mm long & not fully matured, while anthers of inner stamens are from 8–9 mm long when fully dehisced, quadrilocular.

Stigma lobes 7 mm long – linear
" trifid (divergent) style 12 mm long

note when stamens dehisce they become shorter by a few mm.

The shade of white is not quite a snow white, but seems like ivory white (that is it seems to have a faint yellowish green tinge through it. — not creamy white, neither is it the cold green white.)



= E. gigantea (Lindley) used by Piper
E. grandiflorum albiflorum.

Specimen with pink flower

has a tendency to be glaucous, which is best seen at base of leaf which is similar in shape - rather smaller - to that of former specimen described.

Whole plant is smaller - less than a foot high - Scape 9".

The white streaks on the epiderm seems to arise like pinnate veins which arch & fuse with each other having large polygonal irregular sized areas of green, but in specimen supplied no trace of brown appears.

The flower as in the former specimen is nodding, but the perianth is strongly ~~recurved~~ reflexed from apex for 1/10 — not revolute margin the sepals even more so than the petals.

The same distinction between sepals & petals holds good with regard to the midrib of darker pink & the different in the border where here

is chrome yellow instead of orange-brown the base of sepals & petals is of a translucent white against which the greenish veins stand out well.

Here the corona-like portion of the petals is conspicuously due to Enations & not to transverse chorisis. There are two conspicuous Enations on the centre of each petal & a smaller auricular each side so that the petal seems to have 4 teeth around the base of the stamens

The outer filaments are about 4 mms shorter than the inner which are about 17 mm in length.

Before the anthers dehisce they are 10 mm. long & after dehiscence about 6 mm. a dehisced anther regains its former size & appearance by touching it with warm water.

Style 10-11 mms long, stigma lobes 2 mms-2.5 mm long.

Filaments of inner stamens broader than outer filaments; they have a ridge like a midrib— the outer ones have not this ridge

Besides the pale magenta pink color this differs from last by having the perianth segments more narrowly lanceolate-acuminate

the stamens are more erect (surrounding the style) than the stamens of last described species.

As the flr dries or withers, the perianth segments roll backward from the apex to the base, forming 2 or 3 distinct turns, making it almost impossible to make a herbarium specimen with the parts extended, after the flr loses part of its turgescence.

The Yellow flowered specimen

has 2 large unmottled leaves lanceolate to Elliptic-oblong apex acute – obtuse with a marked callosity at the apex, base tapering gradually & may or may not ~~form~~ a broadly winged petiole. i.e. it may be sessile with a narrow part of ~~leaf~~ blade somewhat resembling a stalk or by the still narrower part of the blade forming apparently a winged petiole. Blade 5" x 3" stalk 2½" longer.

over 1 foot high,

Scape 9" to base of 1st pedunce.

Has 2 flrs. outer surface of Per. segs. greenish yellow. (yellow predominating)

Segs. lanceolate

Sepals 32 mm x 10. lanceolate

Petals 32 " " x 10-11 ovate " ~~acuminate~~



sepals



Petals

No tendency to recurve

midribs of petals present but not so conspicuous as in the previous 2.

no transverse bars of colour at base of Per. segs. but diffusing from the bright yellow into a greenish base.

The petals have 2 delp. Emarginations which project above like 2 teeth and as the petals have two small auricles which sit up in a similar fashion round the bases of the filaments there seems to be 4 teeth — these are quite Conspicuous

Filaments 14 mms long, the outer ones about 1 mm shorter (slightly flattened narrowly linear)

Anthers before dehiscence 14 mms long
after " 8 mm.

Style 12 mms long.

Stigma — trilobed. lobes 1 mm long.

from Sth Vanc. 29th Aug. 1908 Beck.

	Acer circinatum	Acer macrophyllum
Branches before leaves appear	Red – Reddish brown	Green – Greenish brown
Leaves	usually 7 lobed almost glabrous above margin not ciliate slightly villous below eglandular base of young petioles glabrous shallow sinus lobes coarsely doubly-serrate	usually 5 lobed glandular pubescent above margin ciliate hirsute on the veins below & glandular base of young petioles glandular deep sinus lobes 3-5 lobed cleft entire

* repeat fresh specs

Collection 3/4/12 Mr. J. A. Zeit.

* No 1 - Like Hieracium (insufficient to work out) *

* No 2 " Thalictrum (could see no carpels) *

* No 3 Ranunculus (Achenes flat glabrous
Douglasii stems sparsely hirsute pubescent —
glabrous) Petals very small
leaves very hairy beneath
slightly above.

No 4 like Lathyrus maritimus — style
* hairy along the inner side. Mr. Leichtlin
require more specimens from ground good for

No 5 like Clematis with hairy styles
~~Probably~~ (Geum circinatum) =
Geum triflorum (Purs)

*No 6 ~~Possibly~~ Geum triflorum (Rush)

No 7. Lupinius (desire fresher specimens
rivularis (Doug) & more leaves (basal & height of plant)
acc. to Piper)

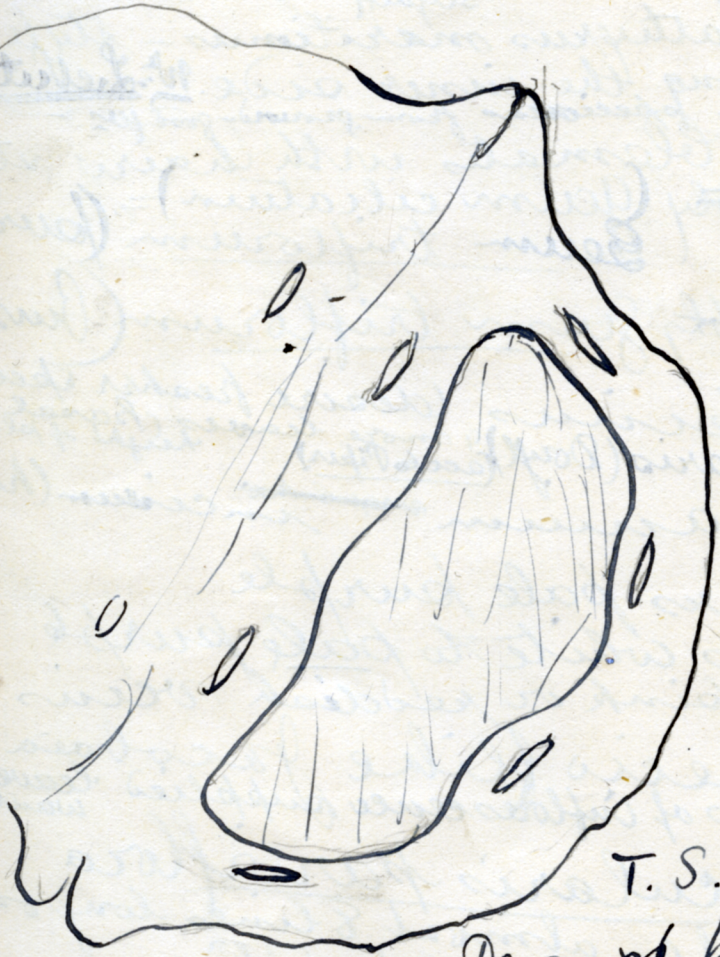
No 8 Geranium ~~sanguineum~~ incisum (Hook)
anthers pale purple
petals white to pale purple
with pink or reddish veins

*No 9. Senecio (like Jacobaea
(only tops of inflorescence supplied leaves wanted)

No 10. Pedicularis parviflora
corolla almost 8 lines long on
a good developed fl.

No 11

Eriophorum ~~Heracleoides~~ Androsaceum !



T. S. ovary of 16.

Drawn by
Camera lucida

6/7/12

No 12 Oxytropis
Comes nearest O. Lamberti var sericea
but No 12 has Primrose yellow flrs while O. Lamb. acc
* to Baily is Purple – violet & Sedy says also occasionally Wh.
desire complete plants and fruits

No 13 Habenaria leucostachys
~~(to be copperes)~~.

No 14 Streptopus amplexifolius

No 15 Lilium Columbianum

No 16 Peucedanum leiocarpum?

No 17 Castilleja miniata? or
Castilleja Lukeodii!
(desire the base of stems and roots too!)

No 18. Aquilegia Formosa.

No 19 Leaves of an Umbellifer
(Please send flowers and
ripe fruits of same)

No 20 Valeriana sitchensis

No 21 Lonicera involucrata

No 22 Ribes Hudsonianum!
Desire flrs and ripe fruits)

Plants from J. A. Leit - 11th July 1912

24 Epilobium angustifolium
25 Achillea millefolium
26 Allium cernuum
27 Shepherdia argentea (Nutt)
28 Crataegus Douglasii
29 Juniperus communis
30 " scopulorum.
31 Shepherdia Canadensis.
32 Amelanchier alnifolia (in fr)
33 Cornus stolonifera (see to Gray & Hooker!)
34 Ribes cereum (Douglas)
35 Acer glabrum
36 ~~wanting~~ Betula occidentalis
37 Prunus ~~demissa~~ (send a few ripe fruits)
cerasus?
38 A glaucous willow fls & fr wanted.
39 Artemisia tridentata
40 Composite leaves rather gone & fls in poor condition

41 Composite – so far gone as to begin to show mould.

42 Eriogonum speciosus

43 Spiraea corymbosa = (S. betulifolia) each ovary has 4–5 ovules & not likely to be a 1 seeded achene ∴ not Spiraea discolor

44 Eriogonum heracleoides

45 Probably Linum Lewisii (wanted specimens in flower & ripe fruit)

46 Saillardia (Possibly but rather far gone to make out)

47 Agrostemma Githago ? Ay Githago

48 ~~Polygonum convolvulus~~ ~~Polygonum aviculare~~ on

49 Tobacco plant – Absolutely useless mouldy & decaying.

50 Blitum capitatum

51 Polygonum aviculare

Plants from 31/8/12

N. C. A Cornish

Trail, British Columbia

---

(1) Lupinus Burkei? Retained in herb.
wanted fruits & complete plants

(2) Valeriana sitchensis

(3) (~~Aster integrifolius~~)?
or Erigeron palegineous
with glandular pubescent involucre
fruits ± hirsute
Leaves not auricled
Cauline = sessile — clasping
Lower, = gradually narrowed downwards from Oblanceolate acute.
almost glabrous above
Puberulent beneath
Stem, pubescent — hirsute
Bracts of involucre narrow lanceol — linear

Retained per herbarium

(4) Goodyera Menziesii

(5) Vibernum pauciflorum

(6) Spiraea Menziesii

(7) Adiantum pedatum

(8) Habenaria gracilis

(9) Comarum palustre

10/ Cornus Canadensis

(11) Vaccinium microphyllum?

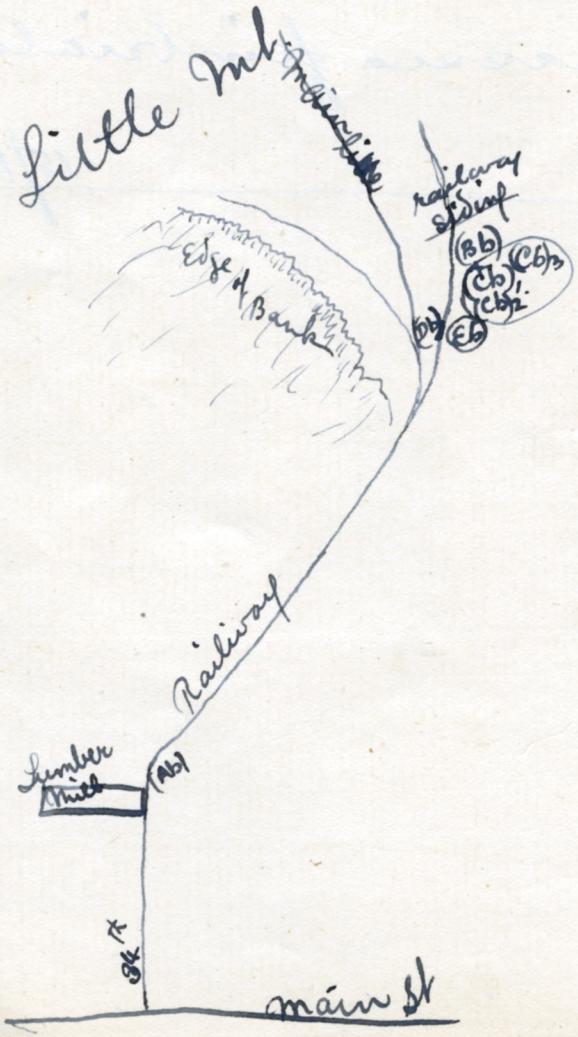
(12) Rhododendron albiflorum

(13) Viola Retained Rowellii ? require complete specimens

(14) Corydalis aurea (Retained)

(15) Parnassia fimbriata

15/10/12


Little Mt
railway siding
(Bb)
(Cb)
(Cb½)
(Cb½)
(Eb)
(Db)
Edge of Bank
Railway
Lumber Yard
(Ab)
main St

Willows collected on 19/10/12

(Ab) Large broad leaved willow with slightly cordate-auricled leaves, in corner of bush just opposite the Lumber mill on Little Mountain, before the railway turns the corner. Almost at edge of road on the north side.

(Bb) Two twigs off the same tree to show variation. One shows absolutely no stipules and the leaves rusty beneath, the other shows well developed stipules and white beneath. The former was of course older than the latter (see Map)

(Cb)$_1$ Taken for S. Scouleriana diseased Puccinia or Eurods

(Cb)$_2$ Taken for Same as (Cb)$_2$ from similar tree

(Cb$_3$) Ditto from another tree

(Db) Found between main line & siding, with erysiphe on leaves (S. Scouleriana)

(Eb) To show variation of Oblong & ob-lanceolate leaves on same twigs taken for S. Scouleriana

(Fb) Salix lasiandra 30 1/2 aven. on road to 34 1/2 from 29 1/2

Hemitome 1855

Pleurocosfore 1868

13

Notes on Newberrya from Grouse Mountain N. Vanc.

15/8/13.

Examination of flowers of three plants showed :-

Plant	Flower No.	Bracts	Sepals			petals	Stam.	Placentæ
			Calyx	Ant	Post			
One	One	1	2	0	0	4	8	8
	Two	1	2	0	0	4	6	6
	3	1	2	0	0	4	7	7
	4	1	2	0	0	4	5	6
	5	1	2	0	0	4	6	9
	6	1	2	0	0	4	6	7
Two	1	1	2	1	1	4	4	7
	2	1	2	1	0	4	8	8
	3	1	2	1	1	4	8	8
	4	1	2	1	1	4	8	8
	5	1	2	1	1	4	6	7
	6	1	2	0	0	4	8	8
Three	1	1	2	0	0	4	7	7
	2	1	2	0	0	4	7	7
	3	1	2	0	1	4	8	8
	4	1	2	0	0	4	6+2	7
	5	1	2	1	1	4	8	8
	6	1	2	0	0	4	7	7

Alt.	Flower.	Bracts	Sepals			petals	Stam	Placentæ
			Ant.	Ant.	Post			

Fungi from Grouse hut per J Perry

24/10/13

(1) Pileus pale violet (with yellowish-ochro-leucous grounds) brown spores

(2) Waxy white stipe, slight tendency to be flesh-tinted or dull buff. Deliquescent

3 Tending to deliquesce

4 Boletus? light brown - ochrous spores

5 Small - dark brown spores

6 waxy white stipe — white spores

7 small - dried up without shedding spores

8 white spores

9 brown spores

Fungi from Capilano
by D.D. 31/10/13

1 On edge of rotting log by roadside
2 White gills & stipe pink margin, reddish brown centre of pileus
gill runs to stipe (similar 2 Perrys 21)
3 small yellow, curved stalk (waxy appearance, dull)
4 Conical pileus, putty-brown colr, stalk firm
5 on humus soil (firm in texture
6 Hypomycete in Ether - 75% 25% 4% Form
7 Thelephorea? very soft & flabby.
8 Polyporus? white back & front

July 6th 1914

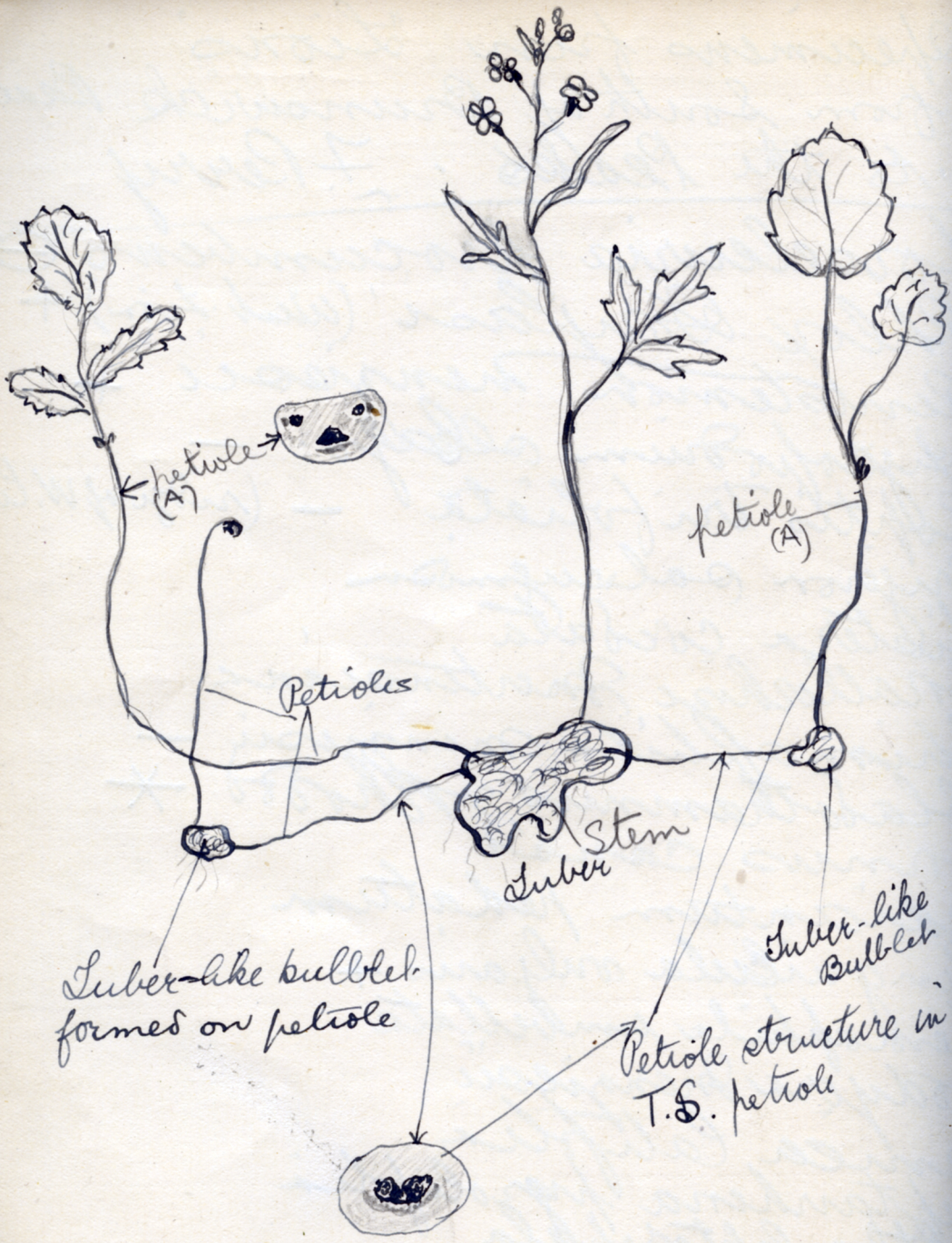
Examined some fls. of Rhodod. albiflorum from Dome, brought in by Mr Perry. The flowers all showed spots on some of the petals the 3 anterior petals always being yellow spotted; in a few, 4 petals were similarly col'd & in some the fifth one was, but to a less extent. Specimens were preserved for herbarium.

Plants from Ucluelet J.S. Daly
10/7/14

Trientalis latifolia (sea level - 100 ft +)
Pinguicula vulgaris (swamps - 50 ft +)
Drosera rotundifolia (" " +)
Carex sitchensis " 50 +
Streptopus amplexifolius (" " +)
Polystichum Scouleri (shore +)

Specimens from "Lion"
from South of Brunswick Beach
E. to the Peaks. F. Perry

Loiseleuria procumbens ⊖
Phlox Douglasii (west slope) +
Pentstemon menziesii +
Lycopodium alpo. —
Coptis trifoliata — (ridge of W. Lion)
Erigeron salsuginosus
Listera cordata
Orallorhiza Mertensiana
Chimaphila menziesii —
Cladothamnus ~~Rhodod~~ ✳
Cornus canad
Adiantum pedatum
Pinguicula vulgaris +
Chimaphila umbellata
Goodyera menziesii
Agnica Cailfolia
Leptarrhena pyrolifolia
Caltha leptosepala
Slaux maritima
Rubus pedatus


petiole (A)
petiole (A)
Petioles
Stem
Tuber
Tuber-like bulblet formed on petiole
Tuber-like Bulblet
Petiole structure in T.S. petiole

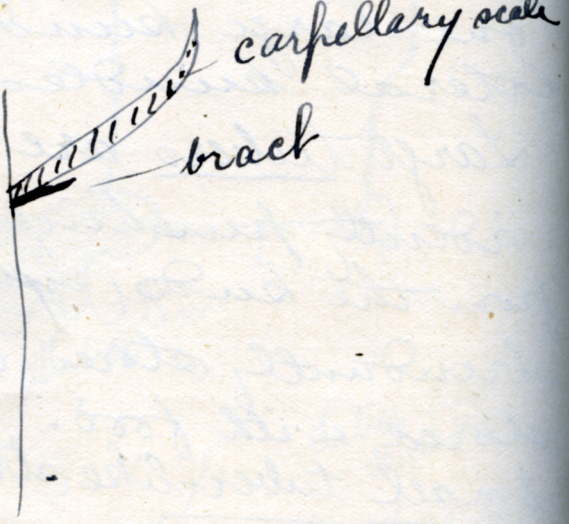
Notes on Dentaria californica

Collected 21/3/16 (J.A. Wallis)
from N. Beach below
"Lookout" Point,
amongst maples

Tuber gave rise to a shoot which bore two leaflets at base of wh. were small leaf buds giving the appearance of shoot being a stem & leaflets true basal leaves. Section of shoot showed true petiole (A) structure — one large bundle and two small lateral bundles.

Large tubers are stems — true tubers evidently pushing out the leaves from the buds (eyes) shows cortex abundantly stored and pith poorly stored with food.

Small tuber-like structures are not really tubers, being formed from the leaf stalk they are comparable to pseudo-bulbs


carpellary scale
bract

Notes on Picea

The so called "flattening" of the upper surface of the leaf is so variable as to be an unreliable character.

The cone characters seem to be quite sufficient and reliable when both the carpellary scales and the bracts are taken into account:—

Keys

A Bracts lanceolate, tapering upwards. *P. sitchensis*

B. Bracts Ovate

(1) Carpellary scales entire. *P. canadensis*

(2) " " erose *P. Engelmanni*

A Carpellary scales entire - *P. canadensis*

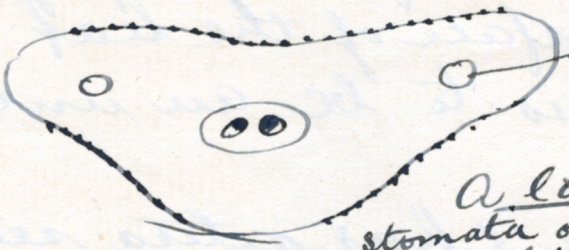
B " " erose

(1) Bracts lanceolate - *P. sitchensis*

(2) " ovate *P. Engelmanni*

Analysis of 3 Br. Columb. species of Picea

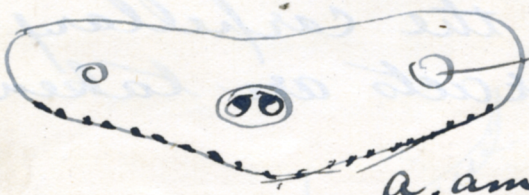
	Canadensis,	Sitchensis	Engelmanni
Carp scales	entire	erose to laciniate	Erose to laciniate
Bracts	erose and ovate	Lanceolate	ovate, erose, tending to be mucronate



resin passages in mesophyll

A. lasiocarpa

stomata on upper & lower epiderms



resin passages in mesophyll

A. amabilis

stomata usually confined to lower epiderm



resin passages in lower epiderm.

A. grandis

no stomata on upper surface.

Notes on Abies lasiocarpa, grandis and amabilis

The puberulence of the cones is not a reliable character to use in distinguishing A. amabilis from A. lasiocarpa; the essential difference seems to lie in the presence or absence of stomata on the upper surface of the leaves; both the above are separated from grandis by the position of the resin passages in the leaves which in the latter are situated immediately under the lower epiderm, and in the former they are in the mesophyll. (see diagrams)

Key

A Resin passages ad. Epiderm — A. grandis

B. Resin passages in mesophyll

(1) Stomata on both surfaces — A. lasiocarpa

(2) " only on lower " — A. amabilis



See. S. S. Sharp's "Notes on Determination of Rocky Mt. Conifers" Torreya Vol 15. No 1 Jan. 1915

Notes on Pinus

In P. ponderosa there are 3 resin passages in the leaf

In P. contorta from Coquitlam 2 resin passages were found in leaf.
In P. contorta from Povary Island no resin passages in the leaf.

In P. "Murrayana" from Okanagan 2 resin passages where found, as indicated by S. Sharp in his diagram
In P. "Murrayana" from Armstrong no resin passages were found in the leaf.

Note on Pseudotsuga

P. Sharp* is correct in his statement that the stomata are in two broad bells composed of closely placed lines. One belt on each side of the midrib which has no stomata



*S. S. Sharp's "Notes on Determination of Rocky Mt. Conifers"
Torreya. Vol 15. No 1 Jan 1915