RECORD

F. R. Fosberg
field book no. 63

no. 42181 - 42511

(Specimens) Virginia

Collection and Field Note Book

No. 63

(Sept. 30, 1961 - June 26, 1962)

(42181 - 42511)

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DR. R. F. FOSBERG

Mrs. David Ord Alexander

2017 QUE STREET, N. W.

WASHINGTON 9, D. C.

Dear Dr. Fosberg,

Here are the mpas, traced from the big air photo map and reduced. Approximate boundaries of the reserve are marked with broken line.

On my original map, I shaded the forested area. Unfortunately, the shading was completely lost in the reproductions. Only the borderline of them came out. On one of your maps, I've indicated this area. I've also put red X's at the pond and one or two other places so that you can orient yourself more quickly.

I hope the maps are ~~xxx~~ useful. I've got more if you have need for them.

Hope to see you Sunday. I may not be able to get away before Sunday morning myself, but will try to phone you when my plans are definite.

Sincerely,

Joelyn Alexander

F. R. Fosberg
field book no. 63
no. 42181 - 42511

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A BOORUM & PEASE PRODUCT

1961 Virginia Shen. Nat. Park 1

Sept. 30 - between Pinnacles
Overlook and m.p. 36 -

Fairly level to gently
sloping rocky place -
large colony of *Osmunda*
claytoniana. Fertile fronds
rare, fronds mostly
dying, as though
they had been lightly
frozen.

Sept. 30 Jewel Hollow
Overlook. Rocky knob
with *Quercus rubra*,
Carya sp. *Lilium americanum*
var. *neglectum*.

Polypodium on rocks,
also abundant *Sedum*
telephium, rather
attenuated because shaded.

2

1961 Virginia

Salute
types

42181

4

Sept. 30 - Thornton River,
just inside Park Boundary
above Perryville
Broussonetia papyrifera (L.) Vent.
forming a thicket in
second growth woods.

Sept. 30 about 1/2 mi. w. of
Pinnacles Overlook on
Skyline Drive
in woods on ~~flat~~ nearly
flat very rocky ground.

2 82

Thelypteris noveboracensis
common

4 83

Osmunda claytoniana
abundant locally

2 84

Solidago
occasional

Sept 30 - near milepost 47
on Skyline Drive, ~~east~~ south
slope of Hawksbill
in small wet marshy
seeps above drive, open.

1 85

Spiranthes cernua
abundant in this one spot,
not seen outside the wet ground

1 86

Liparis
occasional

4 87

Hydrocotyle americana L.
common

3 88

Carex?
abundant

Shenandoah National Park 3

small trees 5-8 m. tall,
sterile.

rhizome creeping, fronds erect.

rosettes of almost
erect fronds, now mostly
dead or almost so,
fertile fronds rare.
rays yellow.

3500'

1070 m

erect, flowers white,
odorless, glistening
around orifice, in four
somewhat spiral rows.

main stem erect, but
producing long filiform stolons.
stems very weak

Collected
4

1961 Virginia

- 42189 Crataegus
3 edge of woods, edge of wet ground
3 90 Juncus
common

Sept. 30 - Jewel Hollow
Overlook, Skyline Drive
on shaded, much
trampled rocky ledges

- 3 91 Bidens frondosa
common

- 1 92 Polygonum
occasional

- 4 93 Agrostis
abundant

Oct. 1 - Black Rock Shelter
headw. N. Fork Moccasin R.
~~in deep woods~~
in second growth mixed
oak woods.

- 2 94 Aster
common

- 2 95 Solidago
local on steep ravine wall

- 4 96 Solidago caesia
common on steep ravine walls

- 2 97 fungus
on Solidago caesia

- 1 98 Malaxis unifolia
very rare on rocky slope

- 3 99 Muehlenbergia
occasional along trail

- 42200 Campanula
occasional on steep rocky slope

Shen. Nat. Park

5

shrub 2 m. tall, fruit
scarlet.

825 m
2700'

rays white, disk turning reddish.

flowers yellow

stems scarcely glaucous
flowers bright yellow.

pseudobulb white.

loose tufts, decumbent at base.

procurvate

Label
type 6

1961 Virginia

42201

Liatris

2

occasional on steep rocky slope

1 02

Aureolaria

occasional on steep rocky slope

2 03

Aster

common on steep rocky slope

Oct. 1 - Payne Run, about
1 mile above the Horse Head.

in bare rocky stream bed

3 04

Chelone glabra

~~in~~ in crevices in ^{bed} rock

3 05

Osmunda cinnamomea

in crevices in bedrock

3 06

Thelypteris palustris var. *pubescens*

in crevices in bedrock

3 07

grass

common in crevices in bedrock

2 08

Polygonum

occasional in ~~the~~ gravel

3 09

Commelina communis var.?

common in gravel

1 10

Leersia virginica Willd.

rare in gravel

same - on mossy banks of stream

1 11

Solidago

rare

4 12

Muhlenbergia

common

3 13

(grass)

common

Shen. Nat. Park

7

erect

flowers yellow, throat
and tube filose within.

ray flowers bright lavender,
disc ^{yellow} turning ^{dark} red.

460 m
1500'

many ~~branches~~ stems
from base; flowers white,
faintly fragrant, visited
by bumble-bees.

leaves on sterile short,
conspicuously distichous
flowers white.

stems fleshy, ascending.

ascending

culms and panicle erect.

culms erect, panicles
(or spikes) drooping.

8

1961 Virginia

Oct. 1 - edge of Park along Cimmera
Fire Road, s.w. of Davis Mt.*Solidago*common in fine silty sand
soil in second growth mixed
oak forestOct. 1 Black Rock shelter
headw. of N. Fork Monmouth R.
in thin second growth
forest on steep rocky slope4 15 *Andropogon scoparius* L.
common4 16 *Helianthus*
common2 17 (grass)
common

Shen. Nat. Park

9

erect, flowers bright
yellow.tufts, culms and
inflorescence very erect,
culms wine color.
roots long, fleshy.

Oct. 7 - 1 mi. n. of jct. of
 rt. 29 and rt. 629, on rt. 29, mi. n. of
 Charlottesville, Albemarle Co.

Small group of hills
 with second-growth
 woods, largely pine in
 some parts, mostly P.
 virginiana, some others.

Would be worth investigating

Oct. 7 - rt. 29 patch of woods
 just s. of Rappahannock R.
 good low deciduous forest
 on e. side of road.

Another patch just out
 of Charlottesville ^{by} rt. 29 (250)
 on rt. 29 on s. side.

Oct. 7 - hills south of
 Charlottesville on road to
 Lynchburg (rt. 29) seem to
 be largely of massive
 rather dark granite. Covered
 by a scrubby oak forest.

Hills just south of these
 have more Liriodendron than
 oak - just n. of Hardware River.

South of this hills have
 mosaic of oak, scrub pine,
 tulip, and mixtures.

Nyssa and Cornus are turning
 red - others still green.

Valley in this range
 of hills are generally
 cleared mostly in
 meadow or pasture,
 willows, walnuts,
 Platanus, etc. along
 stream. Lower slopes
 are clearings but being
 strongly invaded by
 pines and other trees
 and shrubs. Upper slopes
 densely wooded with
 tulip and oak.

Covesville.

Area becomes more and
 more wooded southward.

4 mi. n. of Lovingston -
 high wooded hills.
 one on right has a steep
 rock slope where the
 forest is thin and scrubby,
 compared with surrounding
 areas, and changing
 color, where surrounding
 areas are green.

Lovingston.

Tulip shows up as patches
 on hills, no apparent
 meaningful pattern.

Oct. 1 Sweet Briar College
Oak Hickory forest
30-40m tall, but rather
opened up by 1955
hurricane which
knocked down 400+ large
trees.

Opening resulting
from old compost heap-
leaves etc. Large dead
tulip trees. Stopped
dumping and removed
most of scrub about
1 year ago. Paulownia
and Ailanthus seedlings
only, otherwise weed-
Phytolacca, Ambrosia, Erechtites,
Polygonum, etc. etc.
Chenopodium

Trees up to 6 dm. dbh.

Quercus alba

Fagus

Liriodendron (to 34" dbh)

Carya sp.

Nyssa

Magnolia tripetala

Cornus florida

Fraxinus

Acer rubrum

G. falcata

Diospyros

ground covered by
Lonicera with considerable
shrub layer of Cornus,
seedlings of various trees
Lindera, Viburnum prunifolium

A few Medeola, Dioscorea,
Collinsonia, Arisaema,
Epipagus, Euonymus,
Parthenocissus, Michella,
Galium carolinianum,
Botrychium virg. vulgare,
Cimicifuga, Polystichum
lanicula

In thicker areas,
though most trees
are smaller, there is
less, or even no honeysuckle
more native herbs.
Less Rhus tox. also.

Photos of Monotropa uniflora & roses

Across the road from the present
natural area is a more
degraded version of the same
forest, much more damaged
by the hurricane and by
some cutting.

Between this and the lake
is an area of lumbered
young second growth
that is being cut up into
lots for faculty housing.

surrounded by older
Lake quite muddy.
On n. side a ~~large~~ area
of *Pinus virginiana*
Lonicera
Desmodium
Rhus tox.

surrounded by
open *Q. falcata* and
Q. alba tall with
thick scrubby &
scrub forest undergrowth

Open field 25-30 years
ago - 15-20 acres - now
a thick stand of
Pinus very to 8-10 m. t.
Canopy thin but continuous
floor grassy, a little
patchy honeysuckle
Abundant tiny oak
and ^{hickory} seedlings, some
larger *Acer rubrum*
a few spindly
juncos, some small
Cornus, *Prunus serotina*, *Amelanchier*
Several *Holidago*,
Anemone virginiana,
Desmodium sp. *Solanum*
carolinianum,
Pentstemon, *Lamium*,
Polypodium, *Lactuca*,
Helianthus, *Galium*
triflorum, *Chimaphila*

Oct. 8 - Lynchburg - just out
of town on rt. 460 west, a patch
of *Holidago speciosa*. Found
in about 5 counties, called
"bull weed" because bulls can
eat it with no harm, but
it is said to cause abortion
in cows. Experiments carried
out at V.P.I. gave inconclusive
results.

Oct. 8 Blue Ridge Parkway ^{3150'}
road to Hale's Fork - Floyd's Field
Live chestnut tree about 15 cm
dbh. Infected with blight,
some branches dead,
but tree surviving, 8-10 m.
tall. Bark apparently
growing fast enough to
keep ahead of fungus.
Leaves attached by a
skeletonizing larva.
3 or 4 such trees known
near Peaks of Otter.

Gentiana quinquefolia
up to 0.5 m. tall, in thin
woods.

Along the road a distance,
on rt. fork, a large stand of
Petula lenta 10-15 m. tall,
10-15 cm. dbh. 1.5-3 m. apart.
A shrub layer 1-3 (4 m.) of

Prunus serotina, *Acer rubrum*, *Cornus florida*,
a few *Tsuga*, *Quercus prinus*, *Rubus allegheniensis*,
Fraxinus americana, *Quercus rubra* (?), *Liriodendron*,
Pinus strobus (very small, 0.5 m.), *Castanea* sprouts,
Nyssa, *Robinia* (R.)

Quite a few herbs.

Soil fine, dark,
not rocky

Farmer interprets as
stand which came
in after abandonment
of field by man who
had cabin near here.

W B Russell & Robt. Achille Russell
Nature Reserve

Fagus sp. *Acer rubrum*
white & black oak, *Q. prinus*
with *Nyssa*, *Oxydendrum*,
Diospyros, *Liriodendron*,
second growth, mostly
small up to 10-15 cm. but
scattered larger trees up
to 30-40 cm.

Thin shrub layer
of tree seedlings.

Dwarf shrub layer *Vacc. par.* *Gay. laur.*

Thin ground layer
of herbs and seedlings.
Asarum virg. *Stephania*

Large numbers of
large chestnut stump.
Quite a few trees with several
trunks.

Wedge-shaped area of
recently almost clear cut
forest. Almost nothing
left bigger than 6 cm.
Cutting was finished
last year. *Oxydendrum*
very common here. Rather
good cover of blueberries except
on logging roads.

On e. slope. found
Cornus florida and
 less *Oxydendron* in
 second story. *Fagus*.

On flat in thin oak
 woods - *Q. alba*, *Q. coccinea*,
Q. prinus, *Acer rubrum*
 thin *Ericaceae* layer.
Monotropa hypopitys var.
rubra common. None of
 other var. seen.

Oct. 7. Sweet Briar College.

in second growth woods

42218

Lobelia inflata

1

occasional

1

19

Lobelia

Oct. 14 - Bull Neck Run

Rt. 615 + Old Georgetown Pk

✓ Labels
20
typed by
JK

1961 Virginia

Oct. 14 - Yellow Falls, Potomac River

42220 on tiny flood plain, shaded
Aster

✓ 4

Oct. 14 Bullneck Run, Gold
Mine Road, Potomac River.
On eroded, shaded
banks of old road in
deciduous forest on
dissected slope

✓ 2. 21 Solidago caesia
occasional

✓ 1 22 Aster
common

✓ 1 23 Solidago flexicaulis L.

rare

✓ 1 24 Aster

Oct. 14 -

in deciduous forest

✓ 1 25 Aster

rare

✓ 3 26 Aster
common

on edge of eroded road
embankment in pine

forest with heavy deciduous undergrowth

✓ 2 27 Solidago caesia
common

Fairfax Co.

21

rays white, disk reddish

flowers yellow

rays white, disk dull
reddish green.

flowers yellow.

rays lavender, disk
reddish.

rays bright lavender,
disk reddish

rays pale lavender,
disk very pale yellow,
turning reddish

flowers yellow

- 42228 Aster lateriflorus
✓ common
- ✓ 29 Aster lateriflorus
common on base of embankment
- ✓ 30 Aster
- ✓ { 31 Aster
✓ { 32 "
✓ { 33 "
✓ { 34 "
✓ { 35 "
✓ { 36 "
✓ { 37 "
common
- ✓ 38 Aster
occasional
- ✓ 39 Aster
occasional
- ✓ 40 Prenanthes, Serpentina Pursh ^{Det. D. Bell}
rare along road ^{Q. H. H. H.}

rays white, disk red

rays white, disk ~~red~~
yellow turning red.
plant 1 m. tall divaricately
branched.

rays bright lavender,
disk reddish.

rays lavender, disk
turning red.

rays purple, disk
deep brick red.

rays lavender, disk
turning red.

erect plant, 1.3 m. tall,
upper third paniculate
with ascending branches,
clusters of heads ~~nodes~~
pendent.

Oct. 15 - Dulles Airport,
Chantilly

road along south side
perpendicular to Rt. 50.

Planted grass on strip
on both sides of road. -
On west end - alfalfa
On east end *Setaria* sp.
with mustard.

Fields away from road
rather brown. Asters
abundant locally.
Solidago mostly past
flowering.

At east end 3 asters -
A. ericoides, *A. pilosus*, and
a broad leaved white one,
growing together.

Just west of this, in
a field at least 4 forms
of white ones, a pale lavender.
More collections than that.

Well west of this, in thin
oak-hickory woods *A. lateriflorus*
rare, another common
somewhat variable, this
possibly 2-3 kinds.

Here in a power line
right of way a tremendous
swarm of hybrids

bet. *A. lateriflorus* and
one or two purple ones.

In less recently disturbed
area the plants are in
tall, lower lvs. mostly
dry. In recently scraped
area plants smaller,
leaves less dry, mostly
still green. Colors vary
from white to mostly
purple.

Oct. 15 - 4.5 mi. n.w. of Kamp,
Washington, about 2 mi
e. s.e. Chantilly

weedy roadside with
abundant *Aster novae-*
Angliae, deep purple, and
A. ericoides, *A. pilosa* and
a rare lavender one.
no very apparent hybridization.

Labels
typed
42241-
42294

Oct. 15 - 2 mi. e.s.e. of
Chantilly

~~weedy~~ weedy roadside

42241 *Aster pilosus* Willd. (interm. var. *pilosus* -
common var. *demotus*) det. L.H. Shinnars

42 *Aster novae-angliae* L. OK. Shinnars
abundant locally

2 43 *Aster ~~ericoides~~ pilosus* Willd. var.
common *demotus* Blake det. Shinnars rare

2 44 *Aster prenanthoides* Willd. det. Shinnars
rare

2 45 *Aster pilosus* Willd. (intermediate
common var. *pilosus* - var. *demotus* det. L.H. Shinnars

2 46 *Aster novae-angliae* L. det. L.B. Shinnars
abundant locally

1 47 *Aster ericoides*
common

Oct. 15 - s.e. side of
Duller Airport, Chantilly

4 48 *Aster undulatus* L. det. L.B. Shinnars
common in thin oak-hickory wood

same - in ^{weedy} power-line right-of-way

1 49 *Aster*

3+2 50 *Aster undulatus* L. det. L.B. Shinnars

2 51 *Aster* " " " " "

1 52 *Aster*

1 53 *Aster*

1 54 *Aster*

1 55 *Aster*

1+1 56 *Aster*

1 57 *Aster lateriflorus*

1 58 *Aster*

390'

120 m

rays white, disk yellow,
turning slightly reddish.

rays deep violet;
branched at base, ^{plisose} tangled.
rays white, disk red.

rays pale lavender,
disk turning reddish.

rays white disk
turning reddish.

branched at base;
rays faded, brown.

rays white, disk yellow,
turning reddish.

rays lavender

rays deep lavender

rays lavender

rays lavender

rays lavender

rays lavender

rays pinkish lavender.

rays deep lavender

rays white

rays lavender

- 42259 Aster
 1 60 Aster
 1 61 aster
 4 62 Aster ^{undulatus L., det. L.H. Shinnars} on bare ground
 1 63 Aster
 1 64 Aster
 1 65 Aster
 1 66 Aster
 1 67 Aster lateriflorus
 1 68 Aster lateriflorus
 1 69 Aster
 1 70 Aster lateriflorus
 x23 71 Aster undulatus L., det. L.H. Shinnars
 1 72 Aster lateriflorus
 1 73 Aster
 x1 2 74 Aster lateriflorus (L.) Britton det. L.H. Shinnars
 1 75 Aster lateriflorus
 1 76 Aster

Oct. 15 ^{s.e. side} Dulles Airport,
 Chantilly, east end
 in abandoned cultivated field

- 2 77 ~~Aster serotinus~~
 pilosus Willd. var. demotus Blake
 annuus (L.) Pers.
 x1 78 Erigeron strigosus occasional
 1 x1 79 Erigeron strigosus
~~80 Erigeron~~
 3 80 Aster pilosus Willd. (intermediate
 common var. pilosus - var.
 demotus
 3 81 Acalypha
 on disturbed ground
 2 82 Acalypha
 on disturbed ground
 2 83 Acalypha
 on disturbed ground

- rays lavender
 rays lavender
 rays lavender
 rays lavender
 rays lavender
 rays lavender
 rays bright lavender
 rays white
 rays white
 rays lavender
 rays white
 rays lavender
 rays white
 rays bright ~~purple~~ deep lavender
 rays white
 rays white
 rays pale lavender

det. L.H. Shinnars

det. L.H. Shinnars
 " "

det. L.H. Shinnars

- rays white, disk
 yellow, turning reddish.
 rays white, disk yellow.
 rays white, disk yellow.
 rays white, disk yellow,
 turning red.
 leaves somewhat venulose,
 bracts green.
 bracts green
 bracts reddish

42281 *Aster lateriflorus* X *vimineus*?
occasional

in ~~another~~ ^{abandoned field} field

3 85 *Aster pilosus* Willd. var. *demotus*
common Blake

3 86 *Aster pilosus* Willd var. *pilosus*
common

4 87 *Aster vimineus* Lam. det. L.H. Shinnery
common

1 88 *Aster*

2 89 *Aster simplex* Willd. var. *simplex*
rare

in ~~another~~ ^{abandoned field} field

4 90 *Aster ~~saevius~~ pilosus* Willd.
common var. *demotus* Blake

3 91 *Aster pilosus* Willd. var. *pilosus*
occasional (injured)

2 92 *Aster pilosus* Willd var. *pilosus*
~~common~~ rare

93

abundant on roadside

1 93 *Setaria viridis*

2 94 *Digitaria*

42295 - 42297
Ost. 30 - fleshy hollow

95 *Quercus*

in tall dense second growth
of tulip, sweet gum, etc.
in bottom land

det. L.H. Shinnery rays white, disk
turning reddish.

det. L.H. Shinnery

rays white, disk turning
reddish.

"

rays white, disk reddish.

rays white, disk
reddish.

det. L.H. Shinnery

rays white
rays white, disk
yellowish, turning red.

det. L.H. Shinnery

rays white, disk yellow
turning reddish.

det. L.H. Shinnery

rays white, disk red.

" "

single stem, with
long ascending branches.

racemes purplish

leaf sample from marked
sapling #1, about in its
5th year, 5 1/2' tall. 5 leaves
from terminal whorls
of lateral branches,
3 from terminal whorl
of leader.

42296

Quercus

1

same

1

97

Quercus alba?

same

leaves from 1 year seedling ^{the same}
 marked #2. + ^{another} seedling ^{marked} separately

leaves from 1 year
 seedling marked #3

34 1961 District of Columbia

Nov. 15 Washington
near Capitol

- ✓ 1 42298 *Quercus rubra*
street tree
✓ 1 99 *Osmanthus*
ornamental planting

Nov. 30 - Bethesda

- 142300 *Vaccinium atrococcum* (Gray) Heller
Montgomery Co.
in scrubby pine woods

35

straight well formed tree;
leaves changing to brown.
shrub, dark green;
flowers white, very fragrant.

arching shrub 2 m. tall,
main stem at least 4 m. long.

Dec. 9 Weems Creek reserve. -

Annapolis

Deciduous forest of
oaks, some tulip,

± 30 m.

Very open second story
of *Cornus* and occasional
Ilex opaca

a 2 m. layer, less open,
of *Ilex* and a few *Acer*
rubrum, *Prunus serotina*,

Heavy layer of leaves
and a few low-bush
Vacciniums.

This on relatively
flat terrace

steep slopes down
to creek with similar
but somewhat lower
forest, incl. a few *Pinus*
virginiana.

Moss abundant on
slope. Locally abundant
new seedlings 1 m. tall
on this slope. Not much
Ilex here.

strip of marsh along
margin of creek perhaps
10-15 m. wide. *Spartina*?
Typha (little)
Panicum virgatum at upper edge.
A tall *Rosa* with straight
prickle.

Large ravine through
center - tulip common.
Ilex common. Some *Lonicera japonica*
Polystichum ac. on sides.

Several smaller ravines

Many fallen trees
esp. in central part.
Rubus phoenicolasius?

Here a patch where all
large trees are down
possibly from 1938 hurricane.
Sprouts, *Paulownia*, etc.
to 6-8 m. tall. Much
Lonicera, etc. Many
rotting logs.

Ilex very dense locally.
locally almost none.

Occ. tiny plants of *Hedera*
on highest hill.

Forest on Annaboles end is younger. A few rotting stumps.

Much less Mex here.

Dec. 20 - Baltimore Parkway just out of Washington.

Interesting pine woods that should be looked at.

Pt. 9 east of

Dec. 22 - Englishtown, N.J.

Soil is pale sand, approaching Lakewood type. General vegetation is deciduous, largely oak, tangled with Smilax.

Very slightly higher spots have patches of pine (*P. rigida*), rather open, with irregular shrub layer of *Kalmia angustifolia*. Some *Smilax glauca*. Open places covered by pine needles and a layer of *Polytrichum*, *Leucobryum*(?) and *Cladonia*. *Betula populifolia* common. None of characteristic pine barren species present. Pines have a curious habit of sending out creeping branches at the ground surface.

Hill
is grassy
with
patches
of oak
woods.

For about 15 mile south the country is about the same, except that occasionally there are fairly large farming areas.

Then there is some pine forest. A low hill has been cut away, mostly for road material. The cut shows very irregular cross bedding, unconformities, iron deposits, both consolidated and unconsolidated, and a gray podzol layer a few inches thick on or just under the surface. In this are localized peat humps and lenses. The general color of this cut is varying shades of orange-brown.

The texture is a variable mixture of sand and small gravel - pebbles mostly 1-2 cm. up to 4 cm but rarely. One rounded quartz boulder about 25 cm. long seen. Most of pebbles quartz. Some fragments of ironstone.

Across road is a semi-open forest of oaks, a few pine saplings, a dwarf scrub under layer of *Vaccinium*, *Gaylussacia*, etc. Tangled *Smilax*.

Just n. of intersection of
Rt. 9 & 470 - Open pine with
a shrub layer 2 m. tall
of *Quercus ilicifolia*
(photos). Some larger oaks.
A dwarf shrub layer
of *Vaccinium*, etc. very
well developed.

White sand.

This generally on low
ground. On slightly higher
ground the larger oaks become
more numerous, the bear
oak layer becomes very
sparse, also the *Vaccinium*
layer.

Along the edge of the road
are prostrate pines such
as are common on "The Plains".
The young shoots have the
"bracts" developed into needles
and fascicles of needles lacking.

North of here toward Lakehurst
is an area of burned over
pine barrens on and around
a low hill of white sand.
The pines are injured to
various extents - mostly
are recovering. Other woody
plants eliminated, except
for dwarf scrub of
Calamia angustifolia,
Hudsonia, etc in mosaic.

on hill is a low scrub,
between the sparse pine,
of *Quercus ilicifolia*.
Hudsonia and *Pisidanthus*
common. (Photos)

A bit farther on, flat
ground with open pine
and a solid layer of
Quercus ilicifolia 1-1.5
m. tall (photos) on one
side of road, irregular
mostly young, almost
closed pine with taller
Q. ilicifolia on other side (photo)

South of Lakehurst on
Rt. 539 a low area has
some fair *Chamaecyparis*
swamps. (Photos). Openings
have *Carex* tufts, *Sphagnum*
and *Vaccinium macrocarpon*.
Much *Ilex glabra*. Probably
headwaters of n. branch Cedar Cr.

Farther south, on slightly
higher ground - fairly
dense pine forest with
a 2-3 m. tall layer of
scrubby oaks. Forest 10-15 m.
tall, (photos), almost closed.
Prob. in Greenwood Forest.

South of Warren Grove
is a large area of "Plains"
with a closed stand of

Pinus ~~rigida~~ *rigida* about 1 m.
tall, with some dwarfed
Quercus marilandica
scattered *Kalmia latifolia*,
some *Hudsonia* and *Arctostaphylos*.
Patches of *Chamaecyparis*
in the distance.

Dec. 31 - auto trip, Denver -
Rocky Flats via Golden.
Conspicuous tree in
outskirts of Denver is
Populus sargentii.

Green Mt. - a low
mesa to left, above
Federal Center. Grassy,
with very thin scrub
on steeper places. Patches
of snow in depressions and
on steep places.

Hills around Golden
bare and grassy, patches
of thin brush, scattered
pines on upper slopes.
Forest locally on ^{higher} ~~tops~~
tops - *Pinus ponderosa*.

North & South Mesas
Golden, have caps of
tertiary volcanics which
form fluted or columnar
cliffs around tops.

The Hogback, a sharp
narrow ridge formed
by steeply tilted beds
of sandstone. Has
clay between the beds
that is mined for Coors
pottery works.

Grassy hills north of Golden have abundant acaulescent caespitose *Agave*.

Rocky flats area - shaly soil and stony soil sites of Branson et al 1941.

Stony site is a grassy flat with a gravel ~~with~~ fine gray material in interstices.

A rich grassland vegetation with *Andropogon gerardi*, *A. scoparius*, *Opuntia rafinesquei*, etc. Old "mima mounds" with *Bromus tectorum* dominant. These very flat, total relief about

(first 2 photos are general views incl. a mound.)

The grass has been grazed very closely. 3 photos fairly close (2-3 m.) of general veg. then 2 of mound veg.)

(3 more of general veg.)

(2 of soil exposures at edge of m.)

The fine material on top, 3 dm. of soil is fine sand or sandy loam, dark gray. A reddish clay is beneath this - all rocks filled.

This is all on a level terrace at foot of mts, perhaps remnant of an old alluvial fan.

Pine seedlings colonizing part of this close to base of mts.

Coal Creek - open stands of small pines 4-8 m. clear to base of steeper slopes here, varying to grass without trees in small patches.

In Coal Creek Canyon snow on south wall, none on north. Forest varies to closed, and trees to 15 m. tall.

Populus along stream banks in bottom.

Up a bit are jagged rock cliffs, vertically jointed masses of granite with fewer, smaller trees. Upward the pines give way in part to other evergreens, esp. on s. side.

Then canyon widens out still very rocky. Cottonwoods become more abundant. Considerable low shrubby veg. as well as grass in areas between trees.

Forest becomes better, canyon quite wide and shallow. Small patches of snow in forest on n. side, ground covered on south. Forest mostly pine but some blue spruce & *Pseudotsuga*, *Pinus contorta* becomes common as road emerges on plateau. Mostly an open to closed forest of *Pinus ponderosa* with scattered shrubs, but locally replaced by *P. contorta*. Lots of *Arctostaphylos*, prostrate juniper. A little aspen locally.

Enter Roosevelt Nat. For. Some *Pinus flexilis*, mostly *P. contorta* near first crest. Exfoliating granite.

Several views westward and several of small pines on granite ridge. Mostly *P. contorta*, both close and in distance.

Above Pinecliffe - open to closed forest of *Pinus contorta*, trees to 10-15 m, 15-20 cm dbh., with some spruce, aspen in clearings and riverine bottoms.

Enter Boulder Co. at Pinecliffe.

Spruce becomes more abundant, locally dominant in canyon bottoms and on s. sides. almost all scrubby pine on n. sides of canyons.

Then some spruce even on south facing slopes. Patches of aspen, prob. sites of fires.

Snow general but very thin.

Slender closed *Pinus contorta* forest on south sides, more open and scrubby on n. side.

Snow thicker some on trees, as we go westward.

Beyond Forty Peak Obs.

Broad valley, plateau-like, with mainly lodge pole pine but with patches of aspen, locally fairly abundant.

Rocky canyon with open scrubby pine on rocky walls.

Blackhawk, Central City Hills riddled with mines. Vegetation here more cottonwood & aspen than pine & spruce. Hill to north of C.C. & B.H. is grassy with only a few scattered trees.

n. fork
Clear Cr. Canyon below very rocky with open scrubby pine. Some areas a scrubby grassy veg. est. on s. w. & s. facing slopes.

Lower down the difference bet. the two sides very striking on n. side a thin grassy scrub and on s. side an open scrubby pine forest.

Lower down both sides have open scrub, with open forest on upper slopes on s. side.

Crossed to main Clear Creek Can. Deep rocky gorge with patches of brush a few trees on ledges. Slopes have ~~thin~~ ^{spruce} forest.

Beaver Brook Cr. generally open to closed rather low forest (pine) occurring thin places or even grassy places.

Bergen Park - flat broad valley bottom with scattered pines and patches of vines.

in Our Lands - with in 1960-61 - article by man from D & M office Jail, on kibulbas of grassland in lava beds of Oregon.

Evergreen - and southward - rolling to hilly ground with open forest to park-land and grass, extends south along shallow valleys. Shrubs along stream courses.

North fork of South Platte River s. of Mt. Logan. Mosaic of sparse scrub and open scrubby pine forest on north side (s. slope of Mt. Logan). S. side mostly spruce forest,

some patches of aspen.

Along toward South Park
Aspen becomes dominant -
matrix of pure aspen
with patches of conifers
(series of photos at mouth
end of South Park,
also Kodachromes by air)

South Park is a great
flat treeless valley
surrounded by wooded
mts. Two low ridges
in it are wooded.

On hills to north of
S.P. a mosaic of aspen
and grassland - somewhat
topographically related - like
aspen parkland of north.

High range to west -
Park Range - enormous
area above timberline

South part of South
Park, s. of Weston Ranch & of Farplay
low relief feature with
trees in grassland.

Curious pattern of aspen
on lower slopes.

(photos both n.e. and w.)

Flat country grassy
some grass on hills.

South toward Salida
flat area, sparse patches

of shrubs in low
spot. South fork of
South Platte. Low
sparse ~~st~~ scrub
in places.

South of Trout Creek
Pass the park land or
open grassland gradually
winches out, slopes become
steeper, covered by open
pine forest.

Lower down the south
and west facing slopes
are covered by piñon
scrub forest, with
gradual addition
downward, of juniper.
on north facing slope
and in ravines piñon
ponderosa and shrubs
come down lower, but
then give way to piñon.

Much *Chrysothamnus*,
Cercocarpus in open
spaces between trees.

Arkansas Valley -
Buena Vista

Open piñon juniper
scrub on slopes, grassland
on flatter areas.

(photos of grave inside
and outside of fence, & also of piñon)

Outside fence -
Bouteloua gracilis, *Sporobolus*
 sp. *Chrysothamnus*,
Eriogonum, *Artemisia frigida*,
Eriogonum spp., *Senecio*
of riddellii, *Salsola kali*, *Aster* sp.?

Inside of fence almost
 pure stand of *Bouteloua*
 but ~~so~~ grazed very close,
 scattered *Chrysothamnus*.

Along Arkansas River
 is scrub of *Salix* (?) etc. +
 some *Populus*, gallery in
 grassy flats.

Lower down the pinyon
 extends ~~at~~ over the fans
 and flats.

Then open grass with
 scattered cottonwoods
 and cottonwood ~~at~~ gallery.
 Hills with pinyon-juniper.

Below Salida canyon
 narrows - truncated spurs
 are rather bare on north side.
 Pinyon-juniper general
 otherwise except for talus.

Well down the Arkansas
 the valley narrows to a
 canyon, with pinyon on
 upper slopes, dry ~~sites~~ in

dry rocky bottoms,
 with stunted juniper,
Opuntia arborescens,
Quercus gambelii, etc.
 The *Quercus* retains its
 dry leaves.

This extends for some
 distance. Then it opens
 out, becomes partially
 grassy.

Road goes up out of
 canyon onto a terrace
 that is mostly grassy,
 with scattered *Yucca*,
 pinyon. Rather thick
 pinyon on slopes
 and hills. A very
 bare steep slope
 to north.

Juniper extends
 up onto blaine well
 a little pinyon-
 esp. on sandstone knobs.

Artemisia tridentata,
 a very small depressed
 form, on slopes of knobs.
 2 mi. W. of Florence jet.

Jan. 1 - Colorado Springs
to Ute Pass - Lake George.

Mesas with scattered
pines, small patches of
Quercus gambellii, scattered
Cercocarpus. Garden of the Gods (photos)

Ute Pass - thin scrub
mostly *Cercocarpus* and
Quercus, scattered pines
on both sides of canyon.
Upward more and more
forest, first pines, then
largely spruce.

Cascade - above this
scrub on south facing
slopes, forest on north.
(photos - 3-4 mi. above Cascade
on hwy. ~~R~~ oak-cercocarpus
scrub).

Just above here photo
of ridge showing north and
south exposures - Green
Mountain Falls. Forest
on n. slope is mixed pine
+ spruce (*P. ponderosa*).

A little above this
the forest comes down on both
slopes and only the flat
bottom is grassy. Scrub
only in small patches.

Hills on north have flat
grassy tops. Woodland Park.
View of Pikes Peak.

Above here very shallow
valleys - bottoms grassy,
hills with *Pinus* wood.
Open forest (9000'±), some
areas of spruce. Then
an open rolling grassy
plateau, scattered
patches of spruce + pine.
Divide, Colo. 9500'±
(2 photos across plateau
to west.)

Down slight slope the
spruce forest becomes
more and more prominent
in forest grass mosaic.
Some pines.

Country rock is
a coarse pinkish, weathering
granite. 3 photos of
an outcrop of this with
grass and open pine forest.

6 mi. below Lake George on
South Branch of South
Platte R. (Sportsman's Paradise)
± 8500'. (Stabler Cabin)

Steep cliffs and talus
covered by *Pinus ponderosa*
+ slender *Juniperus* sp., mostly
pine, open forest. 10-15 m. tall.
Shrubs of *Ribes*, *Jamnesia*?, etc.
(photos, perhaps 6).

Valley open, grassy.
Slopes on other side open woods.
Yucca abundant on talus of
Pikes Peak granite

3 mi. S.E. of Florissant -
spruce forest on granite
knob 2 photos showing
closed and open spruce
forest. This is dominant
at this altitude. Some
grass + small patches
and clumps of aspen.
Pine in ~~some~~ drier spots,
open or sparse or scattered.

Jan. 2 - Air trip Denver - Kansas City.
East of Denver - very flat
grassy plains. Traversed by
meandering streams and
stream beds - water frozen
where present.

This soon gives way to
cultivation on an extensive
scale, probably wheat.

Dry stream beds, very
few trees, at first no
gallery wood, then a very
little, deciduous. Trees

around some house sites,
occasional corals. Open
forest in bottom land of
a sizeable braided stream
bed, dry except for frozen
stretches of water. Patches
of open forest (Populus?) along
streams but very rare.
Some relief incised into
plain slightly increasing

eastward. In areas of
relief the cultivation
seems to give way to pasture.
Ponds formed by dammed
ravines occasional.

Road pattern square
or rectangular but
interrupted by stream
drainages.

In distance to north
a larger river bottom,
probably the South Platte,
seems to have some forest
but not clearly visible.

Then an area with
patches of rather ill-
defined barchan dunes,
aligned N.W. - S.E.,
mostly apparently bound
by vegetation, but with
some blow-outs. ending
at a river or stream bed
trending slightly N. of E.
or E., not meandering.

South of this a belt of
moderate relief, cut in
a very flat ^{cultivated} plain and
draining into the stream.
Next stream south is
dammed to form a
large reservoir (frozen).
Some open forest along
these river bottoms.

This near Colo. - Kansas border.

This plains country is of alternating bands, trending somewhat s.w.-n.e., of flat land and gentle relief. The relief is of ravine systems along closely meandering streams. The ravines are mostly at right angles to the general course of the stream.

Between these systems the ground is flat, cultivated, but with numerous scattered small depressions, roughly circular, apparently dry at this season, showing as darker gray circular spots in the gray brown cultivated fields. Distribution of these is not at all regular.

Eastward some fields are slightly greenish. The field size becomes smaller, shapes more frequently rectangular than square.

Gully systems become more extensive in relation to the flat interfluvies, cultivation tends more to intrude into the ~~relief~~ dissected areas. The dissection mostly very gentle.

Forest still confined to a few of the larger stream bottoms where it forms a sparse interrupted gallery. A few small planted patches. Gallery and patches become more frequent eastward. Several reservoirs, one or two quite large. One or two towns, perfect rectangular arrangement.

Stream systems become larger, much more complex, main streams farther apart, relief close to main streams much more pronounced. Ponds abundant, formed by damming ravines.

The perfectly level interfluvies have mostly disappeared and with them the small circular depressions.

Know to north but along course none.

Fairly regular ~~of~~ but narrow gallery wood along most of the streams except the smaller ones.

The cultivation is now more in the bottom land than on the interfluvies, which are more dissected. Main streams conspicuously meandering in flat flood plains, lined with very narrow gallery. Many complicated sloughs and oxbows. Main rivers trending southeast now.

Salina, Kansas. (turned ^{some} to left).

Low hilly areas between ~~the~~ river drainages.

Much custom cultivation where there is any relief.

Thin snow now.

Gallery forest more pronounced.

Junction of several rivers to form a large one flowing

n.e. Large city at jet. (Manhattan?).

Prominent low hills on both sides of broad river bottom land.

A curiously straight flood plain cut through the hills on north side, entering from n.w., with low bluffs truncating hills on either side of it.

Main river turns somewhat to s.e.

Gallery forest not at all uniformly distributed in streams of equal magnitude, but becoming more prevalent.

Terrain generally rolling, mostly contour cultivated, toward Kansas City.

Some small patches of woods on hills between streams, becoming more and more prominent northward. Central parts of ravine systems tending to be wooded, gallery extending into ravines.

Jan. 7 - Roaches Run

Rather few ducks, mostly pintails and baldpates, a few mallards.

More gulls ~~are~~ than ducks. Mostly ring-bills, a few herring gulls. Larger brown ones with dark tips to bill - herring gull females??

Some oil seum on shore in small peninsulas.

Jan. 10 - Deeply Hollow

Several inches of fine dry powdery snow.

1 evening grosbeak came to feeding station for a few minutes in forenoon.

Form without yellow on head, as in Audubon plate 424. (One seen in early spring several years ago).

Jan. 14 - same

2 photos of *Rubus cf. argutus* scrub.

Jan. 14 - 1.5 mi. beyond

Centerville, near Rocky Run

patch of closed forest

of *Pinus virginiana*

about 15 m. tall, 10-20 cm. dbh

mostly 5-5 m. apart.

a scattering of *Liriodendron* about same height.

A sparse understory of rather suppressed *Juniperus* ^{virg.} and occasional *Cornus florida* 4-6 m. tall, the *Juniperus* mostly quite slender and many of them bent down almost or quite to ground at tips by recent snow. Some of these seem dead, a few still erect and apparently unharmed.

Very sparse shrub layer mostly of ^{young} *Acer rubrum*, young *Cornus florida*, *Prunus* sp., *Quercus* spp., *Fraxinus* sp. (n.).

Thin tangles of *Lonicera japonica* cover greater part of area, climbing somewhat into trees.

- a *Pinus virginiana*
- vc *Juniperus virginiana*
- o *Liriodendron*
- o *Quercus maclandica*?
- a *Lonicera japonica*
- o *Cornus florida*
- i *Lonicera* sp.
- vc *Acer rubrum*
- ~ *Ulmus* sp.

- 1 *Acer negundo*?
- 1 *Prunus serotina*?
- 2 *Corylus* (sp.)
- 2 *Ilex opaca*
- 1 *Polystichum acrostichoides*

many fallen pines,
probably blown down,
not very large ones.

Some of larger pines
are "wolf trees".

42301

✓ 1

rare in *Pinus virginiana* forest

Jan. 14 - 2 photos of rows of
junipers in fields -
on new hwy. beyond first
overpass. 1/4 mi. w. of Bull Run

Jan. 14 - 2 photos of invasion
of old field by junipers
at Manassas Rd. intersection
with new hwy.

Large junipers at
edge, with pines, in
second photo.

This was probably
a pasture with scattered
Pinus virginiana, and
a rather open stand of
young junipers, planted
by birds. Seedlings of
pine, from the older trees,
grew up and overtopped
the juniper.

shrub 3 m. tall, sparsely
branched, ^{young} stems green.

Jan. 14 - cut banks along
new highway -

- (1.) *Phleum* dominant
0.1 mi scattered plants of
e of *Lepedeza striata*,
Man. Rd. *Rumex cf. obtusifolius*
Cichorium intybus
Coryza canadensis, etc.

- 0.5 mi ² grass, prob. planted,
incl *Bromus* sp. very
e of little *Phleum*
Bull Run scattered plants of *Lepedeza*.

- 0.6 mi about same,
e. of slightly more
Run *Phleum*
2 photos.

No woody plants seen on any of
cuts e. of Manassas road.

Jan. 21 - Wilkat Mt. Farm -
House built in 1972

Around pond - *Andropogon virginicus* is dominant but cover not complete.

Rock outcrop with *Larmelia* colonies, *Cornus florida*, rather open.

Some areas of scrubby wood overgrown by grape vines.

Around small pond as a number of ruins of buildings.

Beyond this some fairly extensive patches of pine. Large *Equisetum* ~~*strevatum*~~ *complanatum* colony under vines.

Chimaphila in hardwood forest or greenstone on slopes

Photos of old chestnut logs & schist (or conglomerate) on slope in deciduous woods. - last of mossy surface of rock.

Feb 10. Shenandoah Valley
.6 mi. n. of Melrose Museum & Cedar pt.
3.2 mi n. of Harrisonburg Bypass.

Gentle slope w. of highway completely covered by an open stand of *Juniperus virginiana* varying from 45 cm to 2.5 (3) m. tall, varying locally in density from touching to as much as 3-4 m. apart. No obvious breakdown into size classes.

The field is perhaps 20 acres or more, and so far as can be seen by casual examination the cedars are approximately the same size and density over whole field.

Trees of medium hgt/width ratio, no conspicuous variation. A few scattered very broad large trees along one side.

Between trees a sparse stand of *Andropogon virginicus*, *Danens*, *Aster ericoides*, *Hypericum* sp. (Mourous.) (no deciduous shrubs or seedlings)

Limestone slope, some small exposures at surface.

Hanging cocoons very abundant on cedars.

Feb. 10 - Harrisonburg

back of Eastern Mennonite
College -Strike slope of hard
limestone ridge -Old field land with
thin andropogon virginicus
sparse stand of Juniperus
of all sizes up to 8 m.Small Gleditsia and
a few Viburnum prunifolium.a dense thicket of
Ailanthus, a very
few large oaks, hickories,
Fraxinus,

quite a few Cercis

On north half the Juniperus
becomes very scarce, but
slope becomes covered by
an almost closed thicket
a scrubforest of Amelanchier,
Ailanthus, Gleditsia, Prunus,

a few crows

a mockingbird

several killdeer

Over 100 ravens flying n.e.
over valley. Some discussion
over whether they are crows or
ravens, but notes were nearer those
of ravens.

Ulmus,

4-8 m. tall, 3-5 (10) cm. dbh.

A well developed but
irregular shrub layer
of Lymnaea carbo abiculus.A few patches of Lonicera
japonica.At this end the slope is
a staircase of limestone ledges.A large part of the
slope forms the drainage
basin of a small ravine
in which is a stream
fed by a perennial spring.Across a shallow valley
is a gentle hill, dip slope,
of limestone, heavily
pastured, with scattered
but abundant small
cedars.Feb. 11 - south of North River, Anne
Arundel Md.

Abandoned Naval Academy Dairy.

Old fields and hedgerows
with Sarcobatus, Celtis, much
Cornus; Rhus toxicodendron,
Lonicera japonica, etc.

Very large Rhus typhina.

Platanus, Liriodendron,
Prunus serotina, etc.

Feb. 17 - Between Centreville
and Gainesville, on new
interstate highway segment.

Several patches of
young *Pinus virginiana*,
seedlings 1 m. ± tall, showed
a substantial percentage
of dead trees. One such
patch is at the Gainesville
end of the segment. Not
examined except from car.

exposure of Calvert formation.
Large area of marsh
bet. Coin Island and shore.

Much wave erosion at
foot of cliffs. Trees
fallen by dozens.

A small bay is cut
off by a bar, forming
a pond, with small
outlet. Much *Baccharis*.

Dr. C. P. King
2115 R. St. N.W.
Washington 7, D.C.

Mar. 4 ^{near Farmington} ^{neck} ^{Cumberland} ^{Wharf}
bet. Rhode R. & West R.
incl. High I. Flat I. &
Huckleberry I. Corn I.

Peninsula with
tulip, oak, red maple
woods, scattered fair
size holly. Tangles
of *Smilax*, *Rubus*, etc.

Somewhat grazed.

Bosin's Bluff - apparently
an old burial ground.
a bluff about 40' high,
Indian thing wash out

Much, young *Pinus* ^{rather open} ^{in undergrowth}
Patch of honeysuckle back
of house and toward land.

Thickets of *Liquidambar*
some *Paulownia*.

Old ruins of mansion
Tangled *Rubus phoenicolasius*.

Small cattail marsh
with low beach ridge.
Juncus around edge.
Low bluff with a small

Old Miss Nancy Murray (93 years old) says That when her great great grandfather acquired the place, about 200 years ago, it was in rather poor condition. He spread 100 ~~loads~~ loads a year of black soil and 100 loads of manure on the field for some years and had a very substantial increase in production of both wheat and tobacco.

Originally smaller acreage than now.

Big house burned some years ago. Barns and other farm buildings in poor shape. One empty house, one occupied by a couple who are cousin and husband, of Miss Calhoun. Very pleasant woman.

Evidently the two old ladies are much loved by the people in the area.

Tenant farmer farms the place. They have some cattle on it.

Aquatic vegetation has been increasing the last several years, acc. Dr. King. Comes & goes acc. Miss Murray.

Many raccoon tracks along shore between Murray Wharf and house. Miss Calhoun says she tamed a number of them, but that there are now gone. Said to be several deer on the place. They said that this morning there were over 30 swans on the water. I saw a hundred or so ducks, many gulls. Also a rabbit and many small birds. Miss Murray saw a blue grosbeak once; not long ago she saw a bald eagle sitting in a tree, watching the osprey nest. ~~She~~ Dr. King says he has seen the eagle steal fish from the ospreys. Miss Murray says, once she saw an eagle swimming in the water near one of the islands. Her father rowed out to where it came ashore - it was too soaked to fly, had a very large eel, apparently too big to lift out of the water.

The farm is about 600 acres - a peninsula of sandy to clayey sediments, with a very intricate coastline indented by ~~deep~~ branching creeks, dissected in parts into rounded hills and ravines with a relief of perhaps 10-15 m.

17-18 cultivated fields, some lying fallow, occupy half or more of the place. The peninsulas, margins of creeks, some areas between fields densely wooded. The coast on which the house is situated has a strip of old growth but much disturbed forest. One *Quercus alba* 4-5' d b h.

Marshes at heads of creeks and creek branches.

The ladies say there is only one good beach - on photo appear to be two, on opposite horns of semicircular bay.

Fallow fields have considerable *Andropogon virginicus*.

The forest along the side near the house has considerable *Juniperus japonica* and similar.

Kalmia on slump slopes near old wharf. Said to be *Epigaea*, *Liatis*, *Podophyllum*, *Hepatica*, ~~but rather~~ *Aquilegia*, but rather few other wild flowers.

Some of the woods appear on photos very dense, even, fine textured, as though it were young *Pinus* - perhaps young *Liquidambar*.

They say they had 3 acres of *Pinus* burned by careless picnickers.

Islands are wooded, especially the two large ones. A wild relict reported blooming in August on Huckleberry Island.

A Mr. Fitzpatrick (?) owns a ~~nearly~~ ^{nearly} place. A Mr. Forest apparently the adjacent one.

March 11 - Ivy Neck Farm,
Cumberland

Many cardinals.

One flicker.

vultures eating a dead opossum.

Flocks of ducks offshore.

Great blue heron.

Many small birds.

Many cardinals
around house, come right
up to window sill.

Miss Murray says that
ground-hogs and skunks,
now common, were not
known there 25 years or
so ago. Also says that
there is a belief that the
ground hogs follow the
skunks and use their burrows.

Back of farm house
a marshy field with
juncus, *Panicum virgatum*,
invaded by *Liquidambar*
from a young forest
nearby.

Soil in road greenish gray
with much shell.
glauconite.

Circular pond at end of
road, in field.

Fence row with striped
juniper, sweet gum, *Machonia*,
Rosa (multiflora?), *Viburnum* sp.,
Lonicera japonica, etc.

Semicircular bay bounded
by low cliff about 3-4 m.
lower 1/3 Calvert formation, upper
2/3 of greenish brown soil
with oyster shells,
narrow beach, some
erosion in process.
Some slumping of pieces
of soil. Little vegetation
on cliff face.

The adjacent field
heavily grazed, mixture
of grasses with scattered
tufts of *Andropogon virginicus*.

Second fence row with
Juniperus, Celtis, Robinia,
Maclura, Lonicera.

Along top of cliff
scattered Maclura
of all sizes. Viburnum.
Diospyros, Malus.
Robinia (a crispa?)

Back of beach on ^{land Point} it, hard
horn of Bay, a flat and
then a patch of wood of
Ulmus, Celtis, Maclura,
Liquidambar, Prunus serotina,
Quercus falcata,

Flat back of beach
zoned - Spartina patens
about 15-18 m. on low sand
ridge. Then lower ground
with Panicum virgatum
with much Baccharis,
esp. around pumphery.

At distal end more
Spartina patens.

In rubbish on beach
are small flies, in spite
of a bitter cold wind.

Reat outcrops along
~~Rhode~~ River ^{south} of ^{land} Point.

Back of marsh on
~~Rhode~~ River, ~~south~~ of land Point,
open thickets, Quercus
falcata, Ilex opaca, Baccharis,
Rosa, Diospyros, Viburnum,
Old stumps with woodpecker
holes.

Small pond cut off
by beach ridge.

along ~~Rhode~~ River ~~south~~ a
low cliff, 3 m., cut in a
soft, very curiously mottled
sandstone. Mottling
result of brecciation
and root casts.

Back of this, fenced off
from open pasture, is
low, semi-open thicket
of Ulmus, Maclura, Juniperus,
Myrica, Liquidambar,
locally tangled with Lonicera.
Composition varies locally.
In open areas much grass.
Tendency to be marshy.
Apocynum cannabinum.

One or two small Pinus
virginiana.

Taller woods away from
pasture, mostly Liquidambar.
Occasional Pinus virginiana.

This place with much
of *Rhus copallina*, *Myrica*

Farther along ~~the~~ ^{Rhode} River
shore, another point

Then a forest of *Pinus*
taeda 20-30 m. tall, 10-25 cm.
dbh. 1.5-5 m. apart.

planted
25 years
app.

This a plantation, as it is
in rows. Much *Lonicera*
climbing about half way
up the trees.

Considerable litter 5-10 cm.
but little humus accumula-
tion.

A few *Cornus Florida*,
more abundant farther on,
some *Liquidambar* saplings,
in undergrowth. but
very sparse. Little under-
growth.

This extends almost
to end of the peninsula on
~~Rhode River~~ ^{side}, on ~~the~~ ^{both} sides
much interrupted by
areas of deciduous forest,
this very, with *Lonicera*,
Vitis, *Campsi*, etc. *Rhus tox.* similar.
Small flat of *Spartina*
at tip of peninsula.

Edges of ^{point} Creek marshy,
with much *Baccharis*,
Panicum virgatum

2 m. escarpment bet
marsh and woods. corner

Woods of *Ulmus*, *Maclura*,
large patch of *Ailanthus*, ^{Quercus}
Opening, tangled with *Pinus*,
Rubus argutus + *R. phoenicodermis*.
R. idaeus (or *R. occidentalis*?)

Salt marsh inlets
extending in from ^{cheston} Creek.
lined by deciduous woods.
Locally large *Ilex*
and *Juncus* in
deciduous wood.

All this wood much
opened up by cattle.

On upstream edge of
Pinus taeda plantation is
an area of mixed *P. virginiana*
and *Liquidambar*, etc.
Considerable *Ilex opaca* in
undergrowth here.

Then the pine drops out,
and woods are mostly
Liquidambar, *Ulmus*, *Quercus*,
Undergrowth largely *Viburnum*

Patch of *Juncus*
at head of one salt marsh
inlet, extending to pasture.

This near where corner
of woods extends into field.
Margin of deciduous wood
largely *Liquidambar* extends up creek
from here.

March 18 - Lamont Sanctuary,
just at N.Y.-N.J. line on
Hudson Palisades.

Ravine with mixed
hemlock-hardwoods -
Acer rubrum, *A. nigrum*
Quercus alba, *Q. velutina*
Betula lenta *Fagus*
Cornus florida, *Liriodendron*
Fraxinus sp. *Q. prinus*.
Q. rubra, *Q. coccinea*

Very flood plains
are covered in spring with
"toothwort".

A little *Pinus strobus*,
but very little.

Old shack was recently
burned.

Very narrow strip at
bottom of cliffs! not part
of sanctuary).

Dryopteris marginalis
abundant at tops of cliffs
Polypodium vulgare.

Tsuga in places
dominant, in places
almost absent, more
generally forms an
irregular second story.

Among shrubs several
Viburnum, *Kalmia* (n.)
Vitis sp. *Lindera*.

Herbs - *Deschampsia*,
Mitchella, *Danthonia*,
Coropholis, *Polystichum acrostichoides*
U.S.C.G.S. benchmark, 1930
on top of cliff at view point.
Very little hemlock on the
top of the ridge - This mostly
a rather scrubby dense
forest of *Fraxinus*, oaks,
generally same composition
as in ravine, but dwarfed
by exposure, shallow soil, etc.

Ravine cuts through
the palisades.

Many trees down because
of storms. Much young
growth, apparently because
of storm damage, giving
an appearance of second growth.
Some old dead chestnuts.

Woods of very mixed age
on back slope from rim of
palisades into ^{ravine} ravine.
Much dead chestnut.

1962 New York

Some fire scars - charred stumps, etc.

Moss generally abundant, but very few lichens - a few thin crustose ones. Scarcely any on trees. Some on fallen logs in ravines.

Some moss accumulation in hemlock groves.

In ravine, hemlock seems to be replacing the hardwoods.

The branch stream sometimes dries in summer, though *Fontinalis* is common, so probably not dry for long.

Chrysosplenium in stream. (Certainly near southern limit.). Large stand where stream is braided, under hemlocks.

Almost no hemlock on top along highway.

Large trees in ravine and sheltered places.

Liter uses the area for about 2 field trips a year for his ecology course. No one else in Botany Dept. would likely be interested except Dansereau.

Apparently no one in Zoology Dept. is at all interested in ecology except Dr. Moore, who seems to be working some on frogs.

Problems will be, I think, to persuade Columbia Univ. to accept the area, and to arrange for observatory people to act as custodians.

Whole area is fenced, except along cliffs. Gates intact, but locks missing or broken (into Interstate Park!).

There is a Rockland County College that might be interested - 2 year college.

Columbia Univ. College of Education - has it a nature study or biology dept.?

1962 New York

March 18 - Larchmont, ^{Premium} Mill Pond

An estuary cut off from L.I. Sound by a beach bar.

Walled on almost all sides. A bit of rocky shore.

Large places come right down to the wall.

A few rocks, but mostly is tidewater - not private property.

As many as 3000 birds seen on pond at once.

Pond probably 50 acres.

Some thickets & marshes at head of estuary. *Phragmites* & *Panicum virgatum* marshes, some *Spartina patens*.

The marshes are quite ramified, bordered in places by low wooded bluffs. There has been dumping on some sides. One area has been filled in by refuse and will be made into a park.

Ownership very complicated. Three jurisdictions - Larchmont, New Rochelle, Mamaroneck.

Some parts in public ownership, many private owners. Some development going on.

Some filled areas with *Aster*, *Panicum*, etc.

Old Reservoir - walled up all around. One side a wooded slope belonging to Larchmont Village, this running down to a narrow strip of woods running across the village - originally reserved for a freeway, but not used for this.

Ideal for a nature path.

One wide place of about 42 acres, beech maple with scattered large oaks. ^{Platanus} Much young growth - maple, beech, black birch, mostly outcrops of Manhattan schist. Small creek.

Young trees of beech, maple, birch, sassafras, etc. ^{hundreds}

Otter Creek - a salt marsh with a tidal estuary. *Spartina patens* marsh surrounded by *Panicum virgatum* & *Phragmites*.

Deep mud filled with clam shells. Very considerable tidal range, creek deeply incised, 1.5 m. visible at low tide.

Hammocks Area - estuary with *Phragmites* marshes.

some filled in marsh
intended for a park.
Some Spartina marsh.
This on mud filled with
clam shells. Incised channel

Nursery area -
filled. 10 acres is being
considered for park.

Duck Pond - a wide place
in the lake R. originally
set aside for spreading out
flood water. Many ducks
stop here, though it is
developed to edges.

Mar. 24 - Wildcat Mt. -

Entered through gate just back of main house.

Some small patches of *Lonicera japp.* near entrance in brushy forest.

Trail down moderate slope of broken greenstone. 1 juniper on it. Considerable *Cornus florida*. A patch of trees have been cut, apparently several years ago. Spectacular growth of a white *Polystichum* (?) on stumps and trunks. These mostly oaks.

As soon as trail curves to right the forest is larger - mostly oaks - incl. *Quercus prinus*, *Q. coccinea*, *Q. rubra*?, *Q. muhlenbergii* ??, *Q. alba*.

Some dead chestnut, mostly fallen, some hollow stumps and snags. One large standing chestnut skeleton on rt. of trail.

To right here a considerable admixture of scrub pine. Some *Liriodendron* and *Cercis* here. Recognizable herbs *Chimaphila maculata*,

Anemone virginica
Polystichum acrostichoides
Goodyera pubescens,
Antennaria plantaginifolia,
(*parlinii*),
Vigorously sprouting chestnut buds.
Many pine twigs clipped off (by squirrels?) still green.
Where there is an admixture of pine and tulip the oaks are neither large nor abundant. A little below the large chestnut tulip becomes dominant - mostly not large - one tree on rt. of trail about 3 dm. dbh.

Below intersection of trail with jeep road is flowing spring and pump house. Large clump of *Polypodium vulgare* on rock. Scattered clump on other rock to left of jeep rd.

Below road and to left of pump house is almost pure tulip forest.

Down road from this a patch dominantly *Pinus virginiana*. Several freshly broken limbs and one tree broken off about 2 m. up - still green, probably

from the heavy snow several weeks ago. Some small patches of snow still on ground.

The pines are mostly *P. virginiana*, but there are a few *P. rigida* among them.

Chimaphila maculata is common in pine woods.

In edges of pine wood are *Quercus alba*, *Q. prinus*, *Q. rubra*, *Q. coccinea*.

~~Some~~ Prominent shrub larger of *Vaccinium* sp. corymb. and young *Cornus florida*, rather irregularly distributed.

Distribution of pines is rather patchy on the lower slopes. Patch of honeysuckle along road. Another larger one where road flattens out. Here the forest is very low and open. A very large *Lindera* bush to left of road in honeysuckle.

Fairly large flat area, apparently a terrace with scrubby woods, mostly deciduous, largely choked with *Lonicera*. A large patch of *Vinca* minor

completely carpeting an area of 25 m. sq.

Allium vineale in open spots in thin woods.

Walked a compass line 20° e. of n. from the *Vinca* patch, across country toward an open area.

Honeysuckle locally forming tangles. Forest mostly deciduous, very scrubby, oaks, *Cornus*, *Cercis*, tulip, *Robinia*? (rabbit droppings).

Asplenium platyneuron common.

Cornus locally dominant. Some patches of small pine.

Small patch of *Lycopodium complanatum* in pine patch.

Crossed brook.

Platanus trees in flat valley bottom.

Just beyond, a beautiful patch of *Lycopodium complanatum* in tulip wood at edge of pine wood.

Thick but low pine wood. Litter and humus thin. Small tufts of *Cladonia*.

"Wet trees common.

The pine is on a low ridge. In valley on other side is deciduous wood. Sassafras sapling, Liriodendron, oaks, Ulmus, Celtis, Cercis.

Another brook.

Then another in a small ravine. Polystichum on sides of ravine.

Asplenium platyneuron.

Ulmus fulva, Liriodendron, Fraxinus, Cornus florida, Juniperus (small), Rhus typhina, Platanus, Rhus glabra, Viburnum sp.

The south facing slope below the boundary fence is scrubby forest of Pinus virginiana, Juniperus, Cornus florida, Cercis, etc.

Cornus abundant along fence. Vitis sp.

Low Juniperus tipped by snow.

Followed the fence line up a hundred m. or so. Other side is a clear strip, then pine forest.

Then followed a course 120° e. of n. back across the valley.

Rather thin woods

mixed pine, Cornus, Carya? Sassafras, on slope.

In bottom of basin with small stream, Liriodendron, Cercis, a few oaks, locally patches of springy & marshy ground, with much Allium vineale, patches of honeysuckle, Fraxinus.

On the slope just above here, where it becomes rocky again, is a forest of large oaks and tulips. Some Carya. Trees to 5 dm. dbh.

Thin shrub layer of Vaccinium corymbosum, a few small Acer rubrum, Cornus, Vitis.

A broad leaved glaucous Carex (cf. lasiocarpa?) common on rocky parts of slope.

Large knob of rock with luxuriant Polypodium. From here on left about 250 m. is a large house.

Changed course to 70° e. of s. over large exposure of rock. Still through oak forest, largely

mill
house

Quercus prinus, ~~rather~~
gentle slope. *Chimaphila*
Turkey vulture, crows. ^{max.}

After about 75 m. a fence
running about south.

Turned along fence.

Fence not in good
condition. Small oak
forest, with scattered
pine on slopes below.

Some distance along
fence are large rock
outcrops, a wet seepy
place. Fair forest of
oaks, ash, tulip, etc.

A red cabin on other side
of fence. A spring below it.
Large *Platanus* above
spring. An old road
comes in to the cabin
from the n.e.

Following this through
young forest of tulips, etc.
about 200-300 m. to a graded
but muddy road. Turned
sharp right, back 20° w of s.
Old raccoon track is mud
of road. Dog tracks.

Road runs through open
scrub forest, largely
tulip, some small pine,
Rhus glabra, *Cornus*.

Considerable *Andropogon*
in places forming a closed
grass layer.

another road ~~at~~ ^{near} ridge top
100 m. above. rabbit.

Lower road runs to dump,
then an open gate into
denser woods, and road
runs down hill, 200 m. to
trunk pump house.

Forest on slope above
road, north of Pump
house, largely young
tulip, up to 30 m. tall
and 25 cm. dbh.

Went directly up slope
from road, back to
trunk pump house.

From hill north of this a
view of the north part of
preserve - lake, Crawford
house.

A belt of pine goes up
over hill west of lake,
sharply set off from
deciduous forest on both
sides.

Large pine patch on
top of hill north of lake.

Above lake is an open
field on slope below
forest. Has been terraced.

Henry Kaltenbach
Rt. 17
Warrenton, Va.

Mar. 30 - Broadhill Beach,
near mouth of Delaware Bay
Rather little visible
damage to beach houses,
even those only a few
yards back of top of
beach. Houses about
25 yards back from
high tide mark, 50 yds
from tide mark at 11 a.m.

Low dunes here, where
there are no houses, bound
by grasses, about 1 m. ~~at~~
high; low wave-cut cliff
showing dune cut about
half way back. Back of
this low scrub of *Prunus*
maritima, *Myrica* cf. *cerifera*
scattered *Juniperus virginiana*
about 4 m. tall. This extends
back 100-200 m. to the edge
of the salt marsh. The
substratum is of low irregular
dunes and shallow depressions.

Bulldozers are piling
sand up in front of the houses
also some sand being dug
out of houses.

Along road across marshes
even well back from dune
ridge debris caught in
bushes and on barbed wire
up to 2 m. 63 inches above ground.

On beach ^{ridge} are a few
Albizia julibrissin, *Populus*
sp. and *Prunus serotina*
up to 5 m.

In marsh well back
a single seedling
Pinus taeda 1.5 m. tall
seems dying or dead.

Debris thrown up in
fields 1-2 miles inland, well
back of first patches
of *Pinus taeda*, half way
back to hwy. 14.

Along hwy. 14 are patches
of *Pinus taeda* with
considerable hardwoods.
Much debris in marshes
along Broadhill River.

A number of vultures
near Belltown.

Near Rehoboth, fair
size patches of woods,
with varying proportions
of *Pinus taeda*, some
dominantly *P. taeda*. Some
young plantations of pine.

Dewey Beach - young
Pinus taeda 200 m. back
of beach is mostly dead.
Along st. 14. Much
evidence of inundation.
Ilex and *Juniperus* not
much affected.

South along barrier bar

the dunes have been rather flattened out. Small pine grove on low dune ridge on both sides of hwy. about 1 m. s. of Dewey Beach. Trees browned but not dead. In and around pines are thickets of *Parosela maritima*, *Ilex glabra*, *Baccharis*.

Ilex seriously affected by salt. (?) Much debris up to at least 1.5 m. above sand level.

On sea side trees are buried at base by sand brought in by storm. Much more browned toward sea.

Along beach, at mid tide, a wide low berm, with a shallow channel 2-3 m. wide behind it. One stump showing ~~in shallow~~ at edge of water in front of berm, many in channel behind it. (photo)

Cut top off stump on sea side - *Pinus*, for sample. Cut chips from 14 of stumps on channel side - all pine.

5 km up beach from here a peat exposure in front of stumps. Took sample of

this peat. Here the stumps of another forest. of 50 stumps looked at 9 were *Juniperus*, 41 pine.

Small sample of peat from top of root platform on a pine stump well below high tide level. The top of this peat is 12" below mean h.t.

4 photos of patch of pine and *Ilex* showing browning from storm.

Woody vegetation generally on landward side of old dune ridge.

One tiny scrap of a dune 3-4 m. high, bound by *Andropogon* sp., *Ammophila* sp.?, *Solidago sempervirens*, *Hudsonia tomentosa* (n), etc. Seaward side of it cut off. Cornelia took photos.

At Rehoboth sand to depth of 3 m. was removed from beach back to perhaps 25-30 m.

Pines back several hundred m., or even more, show strong signs of browning. On highest area 5-10 m., just north of

Rehoboth the browning of needles, distally, is severe; also on lower ground back of remains of dune ridge. Dunes in many places spread into forest by storm, much sand crossed road. The trees in lowland here have been flooded. Have been getting browner each week since storm.

Flat about 300 m. back of dune ridge -
 holly woods, trees to 3 dm. dbh. 10-15 m. high spaced 2-6 m. canopy almost closed. Trees look rather brown but inner bark alive.

Pit dug here about 5 m. from nearest tree.
 1"-0" litter - mor.
 0-10" dark gray clay
 10-12" pale fine sand
 12-12.5" dark brown stained layer of sand.
 12.5-? dk gray. brown fine sand
 15" water table in pit after a few minutes. Just perceptibly backish.
 The bases of the tree

4:10 p.m.

begin to spread out into large roots about 20" above water, and fine sand, clay, and needles are piled up a bit about bases.

One of highest rubbish in trees and bushes 67" from ground. Water possibly stood here for a while. Another 75". Just back of former marshes out from Dupont Basin, Henlopen Acres.

At least below 10' contour. Has been drained somewhat by digging of ~~canal~~ Lower and Rehoboth Canal. Is in angle between canal and beach.

Pines mostly *P. taeda*. A very few *P. virginiana*. These from almost dead to green. *P. taeda* mostly rather brown but some still greenish. *Juniperus virg.* common. *J. rigida*, scarcely affected. *Ilex opaca* somewhat affected, rare here.

Other side of canal - Holly Rd. younger than other place. trees mostly 10-15 cm. dbh one wolf tree (*P. taeda*) about 13-14" dbh

~~about~~ - Largely *P. rigida*, some *P. taeda*. 1-3 m. apart rarely 6 m. about ~~2~~ 3-10 m. tall or less.

Dug hole in largest opening 3-4 m. from nearest trees.

1-0" litter + mor

0-2-3 gray brown fine sand

2-3 - lt. gray - brown fine sand mottled with bright red brown and with blackish

Water table about 70" below mineral soil surface.

All largest trees are *P. taeda* maximum *rigida* about 2 dm. which is a wolf tree mostly 1 dm. or less.

Rather few small *P. taeda*. *Taeda* cones unusually small, also the *rigida*. Colls. from wolf trees of both spp. 30' tall.

Dune sand spread landward ~~for~~ in Henlopen Acres in a bedded sheet about 1' thick, with a very level finely rippled surface.

Mar 31 Dewey Beach

Old Cape May formation surface gradually sloping, overlain by dune sand, unconformably.

Uppermost 1-3 dm. of the ~~old~~ material black, highly humic, gradually changing downward to red-brown sand. Upper 1 dm. packed with shells of clams and oysters, not in growth position. (sample) (photos)

several hundred m south is an exposure of very gently dipping ~~black~~ blue clay mottled with red brown (Bag 4) overlying a gray sandy clay (Bag 3). Adjacent to this but contact obscure, is a dipping bed of black sandy peat without shells.

Labels
typed

42302

42303

42302

March 30 - just north of
Rehoboth Beachcommon in pine forest
on sand flat.*Pinus taeda*

03

Pinus rigida

Write labels

42302-3

blank / blank

~~Sergeant~~

write labels

42302-3

blank / blank

~~Sergeant~~

Labels
typed

42302

42303

42302

March 30 - just north of
Rehoboth Beach
common in pine forest
on sand flat.

Pinus taeda

03 Pinus rigida

"wolf" tree, with many dead
lower branches, 35 cm. dbh,

10 m. tall.

10 m. tall
"wolf" tree, 20 cm. dbh, with
many dead lower branches.

Black layer dips more strongly than clay beds. slightly lower but not much, and a pit in the clay ~~at 5 m~~ + does not reach anything except mottled sandy clay.

~~Dark gray~~ Black material fades gradually downward to gray

Pits between clay and black material through sand get in a few inches through the beach sand into a clayey sand perhaps the same as bag 3.

about 1 1/4 mi. n. a stump sample was taken at low tide mark. Top of Root platform is leveled at 7' 2" below high tide line. This stump

is about 900^m seaward of present last pine in the small patch of scrub forest described on p. 100. Last fairly large one, about 4 m. 12 cm dbh leveled at 1 ft. above mean h.t. line.

now has 27" of sand around base, is fairly brown, but not dead. 1.6 mi. s. of Dewey Beach (south stop light).

1/4 - 1/2 mi. n. of this, near south tower, is a small patch of *Pinus rigida* 1-2 m. tall, thickest 8 cm thick above base, top of root platform 4' above ~~high~~ mean h.t.

88.5

61.5 + 3 - 14

20.8 - 21.2 - 3 - 22.0 -

Farthest out fairly large 22.4 *P. echinata* in grass

2.2 mi.
2.7 mi.
Silver Lake.

South of this for some distance sand was carried well across marsh.

Then a stretch still protected by dunes.

Then more sand, lobes of it stretch across road, and where no sand, still ~~best~~ grass, etc. up in bushes to 1 m. or more, showing this much inundation, at least, even though no sand deposited.

At Indian River Inlet some uprooted stumps on beach, and one still in place.

The area of salt-marsh that was more or less protected from sand deposition by some dunes that were not completely removed still was inundated to about 1.5 m. by water, as shown by the debris in the bushes. But little sand or silt was deposited on this. A sample of black muds from here was about 4-5 cm. thick, lying on medium fine sand.

Sample of black soil from forest of *Pinus taeda* (a little *P. rigida*, *Quercus maulandii*, *Q. falcata*, etc.) trees up to 50 ft. tall, 1 ft. dbh. Thick layer of needles. Much honeysuckle.

Cape Henlopen - a hook-shaped cusp projecting northward into the bay.

The dunes along the seaward ~~side~~ have been partially stabilized by snow-fences, etc. so that they still stay, partly stabilized by grass & *Hudsonia*. Behind them in ^{slight} depressions are *Myrica* patches and in deeper depressions patches of salt marsh.

Back of dune belt is a ~~very~~ low pine forest, with open spaces with an irregular ground cover of *Hudsonia* and scattered dwarfed pines 2-3 m. tall, with wide spreading mat-like branches spreading over the ground (like the Hudson Bay spruces). A few small junipers, in clumps, some *Andropogon virg.* & *Panicum virgatum*.

April 14 - Glover - Archbold Park,
above Reservoir Rd., Washington, D.C.

A broad wooded
ravine with a small
stream.

Deciduous woods of

- c-lc Liriodendron
- o Prunus
- la Fagus
- o Quercus alba
- o Quercus prinus
- c-la Platanus occidentalis
- o Quercus coccinea?
- l Pinus virginiana
- l Robinia pseudoacacia
- Quercus rubra?

Understory

- Cornus florida (b)
- Fraxinus americana
- Fagus
- Acer negundo

Shrub layer

- (a) Lindera benzoin
- (o) Hydrangea arborescens
- l Acer negundo
- c Prunus serotina
- l Acer rubrum
- lc Rubus.

Herbs

- c Dentaria laciniata (f.)
- o Arisaema atrorubens (f.)
- lc Podophyllum peltatum
- l Ranunculus ficaria (f.)
- la Claytonia virginiana (f.)
- o-lc Saxifraga virginica (f.)
- o Languinaria canadensis (f.)
- o Thalictrum thalictroides (f.)
- o Ranunculus abortivus (f.)
- a Nepeta hederacfolia (f.)
- c Alliaria (b, f)
- c Allium vineale
- c Viola
- lc Galium aparine
- lc Luzula sp.
- l Dodecatheon meadia (f.)
- Polystichum acrostichoides
- o Galium oblongifolium
- l Stellaria media (f.)
- l Miscanthus sinensis
- Agrimonia
- l Duchesnea indica
- l Ornithogalum
- l Corydalis flavus (f.)
- l Rudbeckia laciniata

Vines

- a Lonicera japonica
- alc Rhus toxicodendron

April 15 Wildcat Mt.
 Watery Mts., near Warrenton
 E. of lake - on old road
 mixed oak forest
 trees to 3 dm dbh. a few
 scattered pines. *P. virginiana*
Liriodendron
Acer rubrum
Quercus prinus
Fagus

Rock outcrops - one
 with *Polypodium*. Most
 with lichens, just
 before small meadow.

On rt. a patch of
 pine near fork.

RT. fork
 Just before wall on left
 rock ledges on rt. with
Polypodium
Dryopteris marginalis
Asplenium ~~anchomanes~~ platyneuron
Hemlock
Arabis
 (st) *Aquilegia*
~~*Anemone*~~ *lanceolata*?
Rosa carolina
Saxifraga virg.
Thalictrum
 on rt. much larger
 rock. Then on left, more
 a *Chimaphila umbellata*

list

- la *Lindera benzoin* (f)
 l *Hemerocallis fulva*
 l *Rubus occidentalis*
 c *Chimaphila maculata*
 ~ *Syringa vulgaris*
 o *Dioscorea* (f)
 la *Polypodium vulgare v. virg.*
 c *Cercis canadensis* (b)
 o *Juniperus virginiana*
 o *Larrea albidum*
 ~ *Obolus virg.* (b)
 o *Goodenia pubescens*
 c *Thalictrum thalictroides* (b)
 o *Dentaria laciniata*
 c *Antennaria plantaginifolia*
 l *Cumula rigandoides*
 l *Monarda uniflora*
 c *Galium obtusifolium*
 l *Polystichum acrostichoides*
 l *Veronica officinalis*
 l *Pyrola rot. arm.*
 ~ *Lamprocarpa canadensis* (f)
 c *Liriodendron tulipifera*
 o *Acer rubrum* (f)
 lc *Fagus grandifolia*
 c *Quercus prinus*
 lc *Dryopteris marginalis*
 lc *Asplenium platyneuron*
 lc *Hemlock*
 lc *Rosa carolina* (f)
 o *Saxifraga virginica*
 lc *Aquilegia canadensis*?
 a *Cornus canadensis*
 la *Pinus virginiana*

on top of hill

a *Pinus virginiana*
forest.

- a *Grinus florida*
~ *Ilex opaca*
Acer rubrum
Fraxinus amer. (in rd.)
Sassafras (in rd.)
Morotropa
Lonicera japonica
Antennaria plantag.
Gordyera pub.
Chimaphila mac.
Cardamine
Chimaphila umb.
Vitis
Polystichum
crows *Ashles. platy*
rabbit *Juniperus virg.*
towhee *Fraxinus*
Eurya sh.

42304 *Cardamine*
very local in *Pinus virginiana*
forest

Apr. 19 - Washington, D.C.

42305

Examined fls. of *Stellaria media* - number of stamens varies from 3 to 5, even on same plant. Styles constantly 3, petals 5.

(list cont.)

- a *Ilex opaca*
o *Fraxinus americana*
ca *Lonicera japonica*
lc *Chimaphila umbellata*

growing in a small clump.
flowers white.

on terrace of grass
at edge of
sidewalk

Apr. 19 - C & O Canal above
and below Chain Bridge

Woods just starting
to leaf out - elms and
boxelder with small
leaves, box elder with
flowers, oaks with young
catkins. *Lonicera*
japonica very abundant,
especially on the higher
side.

Flowers seen (mostly on Chain Br. Flats)

Cardamine sp. (large fl.)

Glechoma hederacea

Lamium sp.

Cerastium sp. (large fl. narrow lobes)

Viola sp.

Mertensia

Phlox divaricata

Senecio sp.

Taraxacum vulgare

Barbarea

Lindera benzoin

Veronica sp.

Amelanchier sp.

Salix sp.

Cercis (buds)

Ager rubrum

Forest in bottomland largely
Platanus, *Acer negundo*, and
Ulmus, some *Mashua*, *Morus*,
Quercus alba, *Liriodendron*,
etc.

birds

Cardinals

Flickers

Crows

Robins

Kingfishers

Purple grackle

Starlings

Phoebes?

Mourning dove

Redwinged blackbirds

House sparrows?

Gulls

Pigeons

Ducks (domestic)

Mockingbird

Chain bridge flats are
now dry, except for a
few puddles and rock
pools, but, judging by
the rubbish caught in
the shrubs, has been
recently inundated to 3 m.
or so.

Many dead small fish,
10-15 cm., some larger, scattered
on flats. Gulls common
over river, but do not
seem to have found the
dead fish.

Apr. 20 - air trip, Washington to Knoxville.

Apr. Knoxville - a large reservoir ^{on course} with a loop-like shape, dark brown water, a stream entering it with a bright yellow-green bloom(?), the green water sharply adjacent to but not mixing with the brown. Another reservoir on course very muddy.

An elongate one in distance to right appears blue, but may be just the distance.

Hills are along course, all very clearly oriented. No sign of green on the deciduous trees. Pine plentiful, both in patches and as scattered trees in deciduous forest. Some may be cedars, rather. Fields mostly green.

From lower altitudes - some tulip trees show green tops. These mostly on lower n.-w. slopes.

Hills are wooded, valleys and lower slopes clear. Soil varies from red to pale tan.

Abundance of pine suggests that these hills are not limestone.

April 21 - ^{1/2 mile out} ~~E. Capital St.~~ Central Ave.

Large swamp along stream - much *Lonicera*.

Erythronium americanum flowering abundantly - evidently 3 clones -

one with all anthers black, subequal.

one, rare, with all anthers yellow, subequal.

one common on e. bank of stream, with anthers medium brown, 3 much better developed, longer.

May 10 - Hellen Creek

Bluff with mixture of hardwoods and hemlock

Back of it a *Pinus virginiana* forest, largely cut, but with one area in good shape.

Sloping up from this a deciduous forest.

At foot of bluff a muddy flat with *Alnus*, *Impatiens*, *Woodwardia*, etc.

At one end of this a marsh.

General List of plants

- Thuja canadensis*
Pinus virginiana
Liriodendron tulipifera
Fagus grandifolia
Acer rubrum
Kalmia latifolia
 b *Viburnum acerifolium*
Quercus marilandica
Ilex opaca
 fl *Vaccinium vacillans*
 fl *Potentilla*
Lechea
 fl *Viola*
 fl *Viola*
Nyssa sylvatica
Smilax glauca
Sassafras albidum
Pinus rigida
Amelanchier
Vaccinium corymbosum?
 3. fr. *Myrica*
 fl *Smilax rotundifolia*
Aralia spinosa
Polystichum acrostichoides
 fl *Cornus florida*
 2 fl *Chimaphila maculata*
Baptisia tinctoria
Quercus prinus
Quercus alba
Quercus coccinea
 fl *Rhododendron nudiflorum*
Carya
Quercus

- fl *Vaccinium stamineum*
Juniperus ~~canadensis~~ virginiana
Quercus balcata?
Andropogon virginicus
Quercus velutina
Prunus
 fl *Robinia pseudo-acacia*
Diospyros virginiana
 b *Vitis labrusca*
Parthenocissus quinquefolia (hairy)
Rhus Toxicodendron
Lonicera japonica
Asplenium platyneuron
Lycopodium complanatum
Achillea millefolium
Magnolia glauca
 fl *Smilacina racemosa*
Dioscorea quaternata
 3 fl *Urtica perfoliata*
Athyrium filix-boemina f. *rubellum*
Osmonda regalis
Dennstaedtia punctilobula
Euonymus
Alnus serrulata
Sambucus canadensis
 b *Medeola virginica*
Viburnum prunifolium
Ilex verticillata?
Rubus argutus?
 b *Juncus effusus*
Oenothera sensibilis
Urtica sessilifolia
Cypripedium acaule
Pteridium aquilinum

Hypericum hypericoides
Mitchella repens
Epipagus virginicus
Osmunda regalis
Eupatorium perfoliatum
 l 26 *Ludwigia alternifolia*
 l 26 *Juncus*
Woodwardia virginica
Carex
Panicum
 fl *Gaylussacia baccata*
Goodyera pubescens
Morus sp.
Campsis radicans
Lindera benzoin
Impatiens sp.
Rosa sp. *palustris*?
Equisetum arvense
Salix sp.
Rumex crispus
Cerastium
Stellaria
Eupatorium
Danthonia spicata
Carex sp.
Botrychium sp.

(To Hellen Creek - turn off
 rt 2 at Apple (Costers
 Rd.) sharp right (not
 on Costers Rd.) go .9 mile -
 Hemlocks on left (just
 before marsh) after
 a number of houses)

Fairly uniform *Pinus virginiana* woods

<i>Acer rubrum</i>	1
<i>Baptisia tinctoria</i>	3
<i>Smilax glauca</i>	4
<i>Pinus virginiana</i>	7
<i>Ilex opaca</i>	8
<i>Sassafras albidum</i>	11
<i>Quercus</i> sp.	12
<i>Chimaphila mac.</i>	16
<i>Quercus prinus</i>	17
<i>Liriodendron tulipifera</i>	21
<i>Carya</i> sp.	25
<i>Amelanchier</i> sp.	41
<i>Fagus grand.</i>	52
<i>Vaccinium vacillans</i>	60
<i>Danthonia spicata</i> ?	62
<i>Prunus serotina</i>	63
<i>Lonicera japonica</i>	64
<i>Tsuga car.</i>	74
<i>Myrica</i> sp.	96
<i>Vaccinium stamineum</i>	114
<i>Monotropa hypopitys</i>	115
<i>Polystichum acrost.</i>	139
<i>Lycopodium compl.</i>	140
<i>Botrychium</i> sp.	145
<i>Rhus tox.</i>	149
<i>Morus</i> sp.?	208
<i>Achillea millefolium</i>	219
<i>Parthenocissus quinq.</i>	229
<i>Goodyera pubescens</i>	272
<i>Rubus</i> sp.	331
<i>Lolida</i> sp.	337
<i>Asplenium platy.</i>	340

<i>Mitchella repens</i>	374
<i>Pterosporus virginicus</i>	417
<i>Cornus florida</i>	419
<i>Carex</i> sp.	501
<i>Robinia ps.</i>	529
<i>Viburnum acer.</i>	575
<i>Vitis</i> sp.	687
<i>Myrica sylvatica</i>	706
<i>Crataegus</i> sp.	738
<i>Viola</i> sp.	934
<i>Campsis rad.</i>	940
<i>Athyrium fil.-fem.</i>	956
	— 1000

On ~~road that turns~~ right fork of road that branches left after St. Johns Church, about 1/2 mile from fork, an osprey has a nest on top of a power line post. When approached it left nest, circled around, protesting, and came back repeatedly. Probably has eggs.

The open areas where the pine was cut are still quite open. Much slash lying in them. Scattered *Quercus velutina* (?) saplings, *Lechea*, *Hypericum hypericoides*, *Pteridium*, etc.

The remaining uncut pine woods have pine up to 20 cm. dbh (most trees larger), and very sparse ground layer of *Chimaphila*, *Vaccinium vacillans*, *Smilax glauca*, seedlings of *Quercus*, *Prunus serotina*, *Pinodendron*, vines of *Rhus toxicodendron* and *Lonicera japonica*. The other plants are either ^{occasional} rare or local. *Polystichum* is rare except for a large colony where it is abundant. *Asplenium* is very local but common where found.

In the head of the main ravine is a spring - surrounded by an old barrel. Ferns are abundant around and below this - *Athyrium*, *Pennstaeidia*, *Polystichum*.

~~May~~ May 10 - Hellen CreekLabels
written

- 42306 *Stellaria*
sandy moist roadside
- 1 07 *Cerastium*
sandy moist roadside
- 1 08 *Oxalis corniculata* L.
sandy moist roadside
- 1 09 *Potentilla*
edge of woods near road
- 1 10 *Viola*
common in woods along
old trail in sandy soil
- 2 11 *Viola cucullata* Ait.
common in wet ravine
bottom
- 1 12 *Juncus*
common in sandy soil
in edge of woods near road.
- 1 13 *Lechea*
occasional in cleared pine
- 2 14 *Gaylussacia baccata*
local in cleared pine woods
- 1 15 *Potentilla*
in eroded ravine in cleared
pine woods
- 2 16 *Vaccinium vacillans*
common in cleared pine woods

2m

diffuse, inflorescence ascending,
flowers white.
ascending; flowers white.

flowers yellow; fruits
pointing upward.
ascending; petals yellow,
scarcely emarginate.
flowers white, slight
black marking on lower petal.
rhizome slender, horizontal.
scapes erect; flowers violet.

10 m

woods

5 m

10 m

shrub 40 cm. tall; flowers
reddish green.
flowers petals yellow,
scarcely emarginate.
shrub 3-4 dm. tall, flowers
reddish green.

May 13 - Wildcat Mt. Preserve

- fl *Vaccinium stamineum*
Castanea dentata
Myrica sylvatica
 fl *Polygonatum biflorum*
Fraxinus americana
Botrychium virginianum
 fl. *Ranunculus abortivus*
 fl *Woolaria perfoliata*
Circaea quadrangulata
 fl *Viburnum acerifolium*
Monotropa uniflora
Polystichum acrostichoides
Dioicetes quaternata
 fl *Galium aparine*
Galium triflorum
Catalpa
Symphoricarpos orbiculatus
 fl *Viburnum prunifolium*
Brunneria papyrifera
Elms occidentalis
 fl *Antennaria parlinii*
Aralia nudicaulis
Rhus glabra
 fl *Thalictrum thalictroides*
 fl *Rhododendron nudiflorum*
Hypoxis aurea
Quercus prinus
 fl *Gaylussacia baccata*
 fl *Viola pedata*
 fl *Antennaria plantaginifolia*
 fl *Saxifraga virginiana*
Woodsia

- fl *Silene caroliniana*
 fl *Fragaria*
 fl *Cynoglossum virginianum*
 fl *Corallorhiza*
 fl *Aquilegia canadensis*
Dryopteris marginalis
 fl *Arisaema atrorubens*
 fl *Comandra umbellata*
 fl *Carex*
 fl *Viola*

May 13 - Wildcat Mt. Preserve,
s.e. of Bethel, 5 mi. n.e. Warrenton
in second-growth hardwood
forest, mostly oak.

r = labels
typed by HK

42317

Comandra umbellata (L.) Nutt.very local, with *Vaccinium*

✓ 1

✓ 1

18

Carex

rare

✓ 1

19

Obolaria virginica L.

very local

✓ 1

20

Cynoglossum virginianum L.

rare

✓ 2

21

Aquilegia canadensis L.

rare

✓ 1

22

Corallorhiza wisteriana Com.

22a

Saxifraga virginiana

✓ 1

23

Silene caroliniana Walt.

rare, on rocks

✓ 2

24

Dentaria laciniata Muhl.

abundant

✓ 2

25

Woodia

very local on rock outcrop

✓ 2

26

Gaylussacia baccata (Wang.) Koch

common locally

✓ 2

27

Vaccinium stamineum L.

common

✓ 2

28

Viola pedata L.locally common; on old almost
obliterated wood road.

✓ 1

29

Antennaria plantaginifolia (L.) Hook.

very local

✓ 1

30

Antennaria plantaginifolia (L.) Hook.

very local

✓ 2

31

Vaccinium vacillans Torr.

very common

~~green~~ flowers white.

glaucous; culms ascending.

plants purplish green;

flowers white.

erect; corolla pale bluish.

sepals and spurs red,

limb of petals yellow.

plant bronze-purple;

lip white with purple

spots.

flowers pink.

erect

shrub 0.5 m. tall; flowers

reddish green.

shrub 0.5 m. tall;

flowers white.

upper petals very dark
purple, lower violet.

stoloniferous; ♂

stoloniferous; ♀

low shrub, 0.3 m. tall; fls. white.

42332
✓ 2 Rhododendron nudiflorum
local (L.) Ton.

✓ 2 33 Thalictrum thalictroides
locally common, on rocks

✓ 2 34 Viola sororia Willd.
common in large grassy
clearing, (also in woods)

✓ 2 35 Viburnum prunifolium L.
occasional

✓ 1 36 Antennaria parlinii Fern.?
~~very~~ occasional in
grassy clearing.

✓ 2 37 Polygonatum biflorum
very local (Walt.) Ell.

✓ 3 38 Utricularia perfoliata L.
abundant

✓ 2 39 Ranunculus abortivus^{L. var.}
common, locally abundant

Labels
typed
42340-42344

Bureau of
May 17, 1962 Public Roads Administration
property, Langley, Fairfax Co.

4 40 Elaeagnus
common locally in
thickets and open woods

2 41 (moss)
abundant on top of quartz ridge, in forest.

1 42 (moss)
same

2 43 Acer nigrum
seedlings and saplings in tall mixed forest

2 44 Morus rubra
one tree seen in mixed forest, understorey

shrub 1 m. tall (others
up to 3 m.); corolla pale
pink with red tube, rather
disagreeably fragrant.
petals white.

petioles erect, white
villous; flowers bright
purple.

shrub 3 m. tall;
flowers white.
scapes erect; leaves
green above.

flowers greenish white,
limb green.
flower straw-colored,
pendent.

abundant plant glossy green;
petals minute, yellow.

shrub 2 m. tall; flowers
yellow, (drooping).

gray-green

saplings 2 + 10 dm.
slender tree 5 m tall.

May 19 - ^{Bureau} Public Roads

~~Adm.~~ Tract, Langley

just n. of CIA Bldg.

+ parking lot, a considerable area of very uneven semi open forest, largely *Pinus virginiana*, some *Robinia*, *Liriodendron*, *Juniperus*, *Sassafras*, etc.

thoroughly tangled with *Lonicera japonica*, *Rhus toxicodendron*, etc. *Vitis* sp.

The pines look very sick - practically all old needles have fallen or dried up. new branchlets 5-15 cm. long are rather twisted and the needles are only 1 cm. or so long.

Seedlings and saplings of *Ailanthus*, *Platanus*, *Sassafras*, *Robinia*,

Fraxinus americana, *Cornus florida*, *Acer rubrum*, *Acer negundo*, *Celtis*, *Rhus typhina*

The open space has a knee deep blanket of *Lonicera* and *Rhus tox.*, with scattered *Rhus typhina*, *Sassafras*, and *Rubus argutus*.

Near PRA lab bldg.

is some open grass on rolling hills, around it more choked tangled scrub forest of *Juniperus*, *Robinia*, *Gleditsia*, *Acer rubrum*, *Acer negundo*, *Pinus virg.*

Back of lab, toward river, forest is still very irregular, partly open. with much more *Cornus florida*, some *Juglans nigra*, considerable *Ostrya umbellata* (?)

Undergrowth much less tangled in thicker parts, still much *Lonicera*. A few *Fagus* seedlings.

Mitchella abundant under pines. *Antennaria*.

Many seedlings & saplings of *Acer*, *Liriodendron*, *Carya*, *Cercis*, *Fraxinus*, *Sassafras*, *Cornus*, *Ulmus*, *Quercus*, *Carpinus*, *Fagus*, *Myrica*, *Prunus*,

in a considerable area of small pines, up to 15 cm dbh, 15 m. tall.

May 20 - same.

Across fence several hundred m. back of lab. bldg. on a knoll is a fine grove of oaks - mostly *Quercus alba* and *Quercus prinus*. ^{a few *Q. velutina*} There are trees ranging from 3 to 11 dm d.b.h. spaced from 4 to 10 m. apart, canopy almost closed - perhaps 5% of ground not covered by shadows with sun almost overhead.

One area on this knoll has only ~~very~~ sparse undergrowth and almost no ground cover. There is an open stand of *Pinus virginiana* saplings 1-3 m. tall, several of them dead.

Under this is a thin uneven stand of seedlings of *Q. prinus*, *Q. velutina*? *Acer rubrum*, *Prunus serotina*, *Fagus*, *Q. alba*, *Carya*, 5-20 cm tall, with *Chimaphila maculata*, *Carex* sp., *Mitchella*.

The seedlings, or at least many of them have enlarged bases as though rabbits had bitten them off a few times. Very little *Lonicera*.

a few seedling pines

This area is at the south end of the n-s. elongate knoll. Scattered quartz pebbles - angular - on surface of ground. Soil is dark gray.

North of this the undergrowth thickens, correlated with a decrease in canopy apparently due to several dead trees. Here is the concrete foundation and basement of a small building perhaps 20x30' or smaller.

Around this a thick stand of saplings of *Cornus florida*, *Acer rubrum*, *Liriodendron*, *Nyssa*, *Pinus*, *Carya* sp., *Sassafras*, 1-4 m. tall.

abundant smaller seedlings of *Q. prinus*, *Cornus*, *Liriodendron*. some *Vaccinium vacillans*.

North of the old building the saplings become taller, to 3-5 m., *Lonicera* becomes abundant.

There is a small patch of dead or dying pines 15+ m. tall.

The ridge becomes narrower, with excellent forest on its east slope.

Beyond the dead pines the oak forest becomes fairly good again on the top, with some *Q. falcata*. Canopy rather open, understory of saplings 2-4 m. tall, not so dense as farther south, well developed but uneven ground layer of *Vaccinium vacillans*, *Gaylussacia baccata*, *Lonicera*, etc. *Hypericum hypericoides*.

A bare quartz knob (under trees) with *Bryum argenteum*? *Polytrichum*?

The gentle west slope from here has smaller forest, but still large, uneven, with *Quercus prinus*, *Q. alba*, *Carya sp.*, *Juniperus*, *Pinus virginiana*, *Q. falcata*,

with a good *Vaccinium* layer, ~~so~~ some *Cornus florida*, *Lasiolepis*, other saplings 2-3 m. tall, rather sparse.

One opening 50 m. across dominated by *Pinus* saplings, 3-5 m. tall.

Below this a rather ~~good~~ forest on a gentle slope. *Quercus prinus*, *Q. alba*, *Q. falcata*, *Q. velutina*, small *Myrica* + *Lasiolepis*, sparse undergrowth mostly *Rhododendron nudiflorum*, locally saplings 2-3 m. of *Liriodendron*, *Nyssa*, *Pinus virginiana*.

Sparse *Vaccinium* layer with *Quercus* + *Carya* seedlings. *Hypoxis*, *Chimaphila*, *ma.* irregular moss layer.

Various other herbs, *as* *Aureolaria* ~~virginiana~~ cf. *virginiana*.

Considerable extent of this westward, canopy improving, less saplings, more *Vaccinium* and azalea, scattered *Kalmia latifolia*, some *Gaylussacia*.

many small pine saplings (coll. trunk of pine sapling ± 1 m. tall for ~~the~~ ring count). (this - about 1 cm. thick, has about 15 rings)

N. w. of ~~the~~ north end of hill is tall forest of *Quercus alba*, *Liriodendron*, *Q. falcata*, *Carya sp.*, *as* *Fagus*.

with about 30% canopy
and trees to 3 (6) dm dbh.
a fairly dense layer
2-5 m high of *Cornus*,
with some *Carpinus*,
Juniperus, *Liriodendron*,
~~one *Fagus*~~, *Lindera*

rather dense ground
layer of *Lonicera*, *Vaccinium*,
Hepatica, *Mitchella*,
Solidago caesia, *Hypoxis*,
Galium triflorum, may apple,
Parthenocissus, *Antennaria*,
Horacium venosum, *Carex*,
Desmodium, *Stellaria*
pubera, etc. and
seedlings of oaks,
Corylus, *Prunus*, etc.

This comes down to
a deep ravine with
pools of water.

On other side seen
very large *Liriodendron*
and *Juglans* but
mostly dense tangle
such as seen yesterday.

Variations in the oak
woods described above
extend around the north
end of the hill and
down to a small stream
just S. of Parkview
fence.

Undergrowth along
the stream is richer.
Forest has *Platanus*.
Asimina is common,
also *Ulmus*. A tiny
substantial concrete
bldg. along stream - roof
is good.

Survey line, apparently
for a power line, cut across
along stream - stakes
have "V-E-P Pole" etc.

On bank here above stream
and old road are *Adiantum*
pedatum and *Polystichum*.
Cernomoria, *Thelypteris*
hexagonoptera.

Above this on east
slope of ridge is fine
tall, rather open
forest of oaks, hickory,
tulip, with a rather
thick shrub layer
2-5 m. tall, of *Cornus*,
Fagus, *Carya*, *Acer rubrum*.

with a good ground
layer of *Desmodium*,
Viola, *Panicum* some
but not much *Lonicera*.
Woolaria, *Solidago*, *Stellaria*
pubera, *Dentaria*, *Mitchella*.

Smilacina, etc.

Dioscorea villosa (rare)

Up the hill some *Vaccinium viburnum* *acutifolium*, ground layer rapidly becomes sparser. also shrub layer. some *ryalea*.

The top of the ridge at this end is a crest of quartz outcrop - ~~with~~ with a steep slope for about 50' to east, gentle slope to west.

Here the ridge is wooded - large *Quercus prinus*. loose shrub layer of *Rhod. nud.* etc. and a taller open layer 5-6 m. of *Cornus*. ground layer very sparse.

Down part way on east slope, just below steepest part, the forest is ~~very~~ dense, canopy at least 90% with *Fagus*, *Liriodendron*, *Ailanthus*, *Quercus* small *Morus rubra*,

Thin *Lonicera* ground cover with seedlings of *Q. prinus*, *F. racemosa*, *Ailanthus*, *Fagus*, etc. ^{over} ^{negligible} ^{seedlings} some native herbs. *Botrychium* ^{virg.} Fairly good *Cornus* layer 3-6 m. tall.

Many large fallen and rotted chestnut trunks.

Asimina & *Ulmus fulva* to 5 m. tall becoming common south. *Acer nigrum* saplings, 1-1.5 m. tall. *Lonicera* become much less southward. *Lindera*, *Asimina*, *atropurpurea*, *Circaea*, *Podophyllum*, *Pantherocissus*, *Polygonatum*, *Botrychium*, *Dentaria*, all become common. *Dioscorea quaternata*.

This entire area, from about 200 m. back of the BPR lab, ~~to~~ to the parkway land, would make a very interesting natural area. The remainder would be good for a picnic ground and camp ground.

May 20 - Weems Creek Reserve
mixed oak forest, varying
to dominantly tulip

Species observed

- a *Vaccinium vacillans* (7. p.)
a *Lonicera japonica*
Fraxinus americana
a *Thuja toxiocodendron* (fl)
a *Cornus florida* u
o *Vitis*
o *Quercus prinus* c
c *Ilex opaca* u, 2 (fl)
c *Parthenocissus quinquefolia* q
o *Polygonatum biflorum*
o *Eunonymus americanus* (fl)
c *Viburnum acerifolium* (fl)
c *Amelanchier*
c *Podophyllum peltatum* q (fl)
c *Carya*
a *Liriodendron tulipiferum* c (fl)
Robinia pseudo-acacia
n *Quercus alba* c
Vaccinium cf. corymbosum
Smilax cf. herbacea (fl)
Smilacina racemosa q (fl)
Quercus velutina
Acer rubrum
Amelanchier canadensis?
Polystichum acrostichoides
Sassafras albidum
Desmodium nudiflorum
Lycopodium lucidulum q
Mitchella repens - q
Viburnum dentatum s (2)

Quercus balcata c
Fagus grandifolia s
Kalmia latifolia s

- ela *Hedera helix* q (2)
l - *Utricularia perfoliata*
o *Prunus serotina*
o *Prunus avium*?
n *Amelanchier arbores*
n *Lambucus canadensis*
n *Morus nigra*?
o *Lindera benzoin*
n *Quercus coccinea*
lo *Nyssa sylvatica* (2)

On upper part of west knoll is mixed oak forest fairly mature, with an understory of *Cornus* and *Ilex*, fairly prominent. Ground cover of *Lonicera* with many other things, not very dense. Much *Rhus toxicodendron*.

To the east, in the rather flat, somewhat lower area between the knolls, is an almost pure forest of *Liriodendron*, with a sparse understory of *Cornus* and *Ilex* and a dense ground cover of *Lonicera* and *Psilophyllum*. A few *Carya* and *Quercus* do not reach the canopy. A few do. Some *Rhus toxicodendron*. In one spot *Hedera* is abundant on ground and climbing on tree trunks.

Eastward on the east knoll oaks and hickories also lower, become more abundant, *Liriodendron* less. *Honeysuckle* becomes sparse, as does all ground cover. *Cornus* layer still prominent but little *Ilex*. Much fallen crooked chestnut.

On east end, a patch of *Kalmia*, rather open, and a giant white oak, 4' dbh.

May 20 - W. Sams Creek,

42345

Annapolis

#3345

Thelypteris noveboracensis (L.)

✓ 1

very local in Liriodendron forest

Va

May 26 - Crescent Rocks

✓ 1

46

*Arabis*abundant in crevices
of rock cliffs

Va

May 26 - Story Man Mt.

slope above Skyland

~~47~~ *Rubus* in this low

common forest, mainly oak,

✓ 2

47

Rubus

common

✓ 1

48

common along trail

✓ 3

49

Pedicularis canadensis

very common locally, with #42350

✓ 3

50

Pedicularis canadensis

very common locally, with #42349

✓ 2

51

Rhododendron roseum

common

✓ 1

52

Carex

common

✓ 1

53

Anemone quinquefolia L.

common locally

3

✓ 1

54

Cypripedium calceolus

common locally, with #42355

✓ 1

55

Cypripedium

common locally, with #42356

Nieuw (Nieuw)

Sh, Nat, Pauls

flowers white

on rocky soil.

galea maroon, lower lip yellow

galea bronze-yellow, lower
lip yellow.shrub 2 m. tall, flowers
bright pink with red tube,
very fragrant, clove scented.rhizome horizontal, brittle,
white with brownish epidermis;
flowers white.lip large, yellow, petals
+ sepals greenish brown
lip small, yellow,

152

1962 Virginia

May 26 - Stony Man,
just above Skyland*Cypripedium calceolus*
common in large patch
of *Osmunda claytoniana*
Measurement of lip -

1 5/8" IIII

1 6/8" II

1 7/8" II

1 4/8" IIII

1 7/8" IIII

1 2/8" IIII

1 IIII

1 1/8" III

0 7/8" I

There is a general but
by no means constant tendency
for the smaller flowers to
have the brownest sepals
and petals.

The plants are
commonest in the
large colony of

Shenandoah N.P. 153

Osmunda on very gentle
slope, but some are
found in the mixed
ground over above the
edges of this colony.

The plants with
very small lips (about
1 inch) have little fluting,
tend to have brown
sepals and petals. They
look rather distinct
but there is no break
in any of the characters
observed.

The leaves of the
red (and black?) oaks
on the mountain are
not fully expanded
yet.

Prunus virginiana is
in full flower.

On the cliff, the
Saxifraga is mostly
not even showing buds
yet, but one or two plants
are ready to flower.

In a rather shaded
vertical ravine on
the north or northwest slope
are quite a few plants
of *Lycopodium selago*.

154

1962

Virginia

42356

Carex

✓ 1

common

✓ 1

57

Viola

occasional

✓ 1

58

Ranunculus

common

✓ 1

59

Lilene

locally common

✓ 1

60

Carex

locally common

✓ 1

61

Viola

occasional

✓ 3

62

Ranunculus

common

May 27 - Big Meadows

✓ 1

63

Sesale cereale

around building in new camp ground

✓ 2

64

Callitriche

in newly excavated ditch
in edge of swamp, in very
shallow water on gravel bottom.

✓ 3

65

Callitriche

in newly ~~excavated~~ excavated
ditch in edge of swamp,
in very shallow water
on mud bottom.

✓ 2

66

Rhododendron nudiflorum

occasional in mixed
woods, principally Quercus
and Betula. (with #42367)

✓ 2

67

Rhododendron roseum

common in mixed woods, principally
Quercus and Betula (with #42366)

Shenandoah Nat. Park 155

flowers yellow

calyx reddish green;
petals pink.leaves gray-green;
flowers purple
roots slender; petals
yellow, glossy.

erect, somewhat glaucous.

shrub 1.5 m. tall; flowers
white with pink tube,
~~and~~ stamens and style,
rather unpleasantly fragrant.
shrub 1.5 m. tall, flowers
bright pink, tube, stamens and style
deeper pink; deliciously clove scented.

(5/1/62)

These plants are var.
fratens below the
fruiting parts but
more appressed in
the fruiting portion.

Crescent Rock —
the part most to
the south has a
fine display of
Phlox subulata and
Arabis.

May 27 Lewis Spring Falls
Trail below Big Meadows Lodge

Cypripedium calceolus
~~the~~ length of lip

1"

1 1/8"

1 3/8"

clump
with
many

1st
flower
open

Mixed oak forest

Trillium grandiflorum (fl)

Lycopodium complanatum

Zizia aurea (fl)

Geranium maculatum (fl)

Cypripedium calceolus (fl)

(sepals + petals maroon)

Adiantum pedatum

Thelypteris lachnanopteris

Silene caroliniana (fl)

Goodenia sp.

(coriaceous) (below trail)

Stellaria pubera (fl)

Pedicularis canadensis (fl)

(both forms)

Hedysarum caeruleum (fl)

Vaccinium vacillans (fl)

Dipsosaurus quaternata (fl - b)

Thalictrum dioicum? (fl)

Smilacina racemosa (fl)

Rhododendron roseum (fl)

Zizia aptera (fl)

Menziesia pilosa (fl)

Ranunculus? yellow (fl)

Hamamelis virginiana

Polypodium vulgare

Pseudolaenidia? (yellow fl) (fl)

Saxifraga virginica (fl)

Viburnum acerifolium (b)

Physocarpus opulifolius (b)

Ledum telephioide

Robonia pseudoacacia (fl)

Acer spicatum (fl)

Arisaema atrovirens (fl)

Thalictrum polygamum (fl)
Veronica oppositifolia
Ranunculus abortivus (fl)
Epithema hypophyllum (fl)
Vaccinium canadense (fl)
Vaccinium stamineum (fl)
Saxifraga alba (fl)
Sanguinaria canadensis (fr)

Rubus occidentalis (fl)
Rhus toxicodendron (fl)
Sagittaria nigrifolia (fl)
Ribes
Hydrangea arborescens (b)
Viburnum acerifolium (fl)
Falcaria latifolia (b)
Asclepias quadrifolia (b)
Parthenium integrifolium (b)
Hypochaeris glabra (fl)
Sedum (b) (fl)
Cornus florida (fl)
 (about past)
Rubus ch. tinctorius (fl)
Fragaria (fl)
Spiraea betulaeifolia (b)
Faylissacis bacata (fl)
Artemisia (fl)
Opuntia perfoliata (fl)
Pteridium aquilinum
Polystichum acrostichoides
Baptisia tinctoria
Acer pennsylvanicum (fl)
Aralia

Cypripedium calceolus
 on appal. Tr. bet
 Lewis Spring + Big Meadows
 (1899 Flood Mark)

1/2 fl

1 fl

07/2

Trail around the swamp:-

Senecio aureus (fl)
Triglochin (fl)
Thalictrum polygamum (fl)
Anemone quinquefolia (fl)
Ranunculus (fl)
Vaccinium vacillans (fl)
Geranium maculatum (fl)
Cornus foemina (b)
Potentilla canadensis (fl)
Antennaria plantaginifolia (fl)
Hedysotis caerulea (fl)
Yonkaria sessilifolia (fl)
Vaccinium stamineum (fl)
Rumex acetosella (fl)
Stellaria pubera (fl)
Xenobia ligustrina (b)
Hieracium pratense (b)
Yonkaria perfoliata (fl)
Trillium grandiflorum (fl)
Silene caroliniana (fl)
Osmunda claytoniana

Zizia aptera (fl)
Caltha palustris (fl)

Chamaephila maculata (b)
~~Maianthemum~~ *muscatellum* (b)
Arisaema atrorubens fl
Viola erucifolia (fl)
Stellaria pubera (fl)
Rhod. nudiflorum (fl)
Rhod. roseum (fl)
Hedysotis caerulea (fl)
Geranium mac. (fl)
Fragaria virgin. (fl)
Senecio aureus (fl)
Prunus virginiana (4 fl)
Cynoglossum officinale (fl)
Smilacina racemosa (fl)
Trillium grandifl. (fl)
Maianthemum canad. (fl)
Popula rot. v. amer. fl
Mitchella repens

Quercus ilicifolia (rare)
Zizia aptera (fl)
Luzula mult. (fl)
Vaccinium stamineum (fl)
Vacc. vacillans (fl)
Lycopodium complanatum fl
Lycopodium obscurum

May 27
same - around edges of swamp

42368

Viola

✓1

muddy marshy open place

✓1

69 Ranunculus

moist but not wet ground
under trees

✓1

70 Viola

moist but not wet, semi-shaded
ground

✓1

71 Carex

moist but not wet, semi-shaded ground

✓1

72 Salix

moist but not wet
shrubby ground

✓2

73 Quercus alba

moist but not wet ground

✓2

74 Quercus velutina

moist but not wet ground

✓1

75 Lonicera dioica f. dasygyna (Rehder) Penn.

open shrubby moist ground

✓2

76 Antennaria plantaginifolia

moist meadow

✓1

77 Viola emarginata

occasional in moist meadows

✓2

78 Saxifraga pennsylvanica L.

rare in moist ground
among low bushes.

✓1

79 Pyrus coronaria L.

occasional in thickets

✓2

80 Vaccinium vacillans Torr.

very common

✓1

81 Luzula

common in grassy meadow

flowers purple, lateral
petals bearded at base.
— roots very slightly
fleshy; petals yellow, glossy.

flowers deep purple,
lateral petals bearded.

shrub 1 m. tall.

small tree.

small tree, 10 m. tall,
— spreading crown.
twining up through
bushes.

flowers purple, center
white, ~~lateral~~ lateral
petals bearded at base.

petals white

shrub 3 m. tall, twigs
— spinescent flowers pink.
low bush, ~~30 cm.~~ 30 cm. tall,
leaves glaucous beneath, corolla
pale green.

42332 *Rhododendron roseum*
occasional

✓1 83 *Prunus serotina*
occasional

✓1 84 *Maianthemum canadense*
common in moist shaded ground

✓1 85 *Viola papilionacea* f. *albiflora* group
local in cleared muddy place

✓1 86 *Poa*
in cleared muddy place

✓2 87 *Viola cucullata*
common in cleared muddy place

✓1 88 *Crataegus*
abundant, forming thickets

May 27 - trail from Big Meadows
to Lewis Spring Falls

in second-growth mixed oak
woods on rocky soil

✓1 89 *Penstemon obovatus* Muhl.
occasional

✓1 90 *Asclepias*
rocky place

✓1 91 *Osmorhiza claytonii*
rocky talus

✓2 92 *Carex*
~~rocky~~ on rock outcrops

✓1 93 *Vaccinium angustifolium*
very local on rocky slope

✓1 94 *Antennaria*
occasional

✓1 95 *Ribes*
at foot of rock cliff

shrub 2 m. tall; flowers
bright pink, tubes,
stamens and style deeper,
deliciously clove-scented.
— small tree; flowers
white.

— flowers white.

flowers very pale lavender,
with somewhat darker
center.

shrub 4 m. tall;
petals white, anthers purple.

— ligules and disk rich
lemon or butter yellow.

flowers white.

caespitose.

1-2 dm tall; fruit immature.

shrub .7 m. tall, fruit immature.

166

1962 Virginia

42396 *Ribes*

✓1 on talus at base of cliff

✓1 97 *Carex*
on rock ledge

May 27 Lewis Spring Falls

✓1 98 *Woodsia* cf. *obtusa* (Spreng.) Laro.
in rock crevices✓1 99 *Polygonatum biflorum*
in rock crevices42400 *Thelypteris dryopteris* (L.) Presl. ex Rydb.
✓1 very local in oak woods✓1 01 *Pyrus melanocarpa*
on rocky ledges✓1 02 *Prunus pennsylvanica* L. f.
on talus of bouldersMay 27 - north entrance to
Park, s. of Front Royal
deciduous woods✓2 03 *Celtis occidentalis*✓3 04 *Rosa multiflora* var.
in edge of forest, climbing
in trees✓3 05 *Rosa multiflora*
in edge of woods, climbing in trees✓2 06 *Prunus cerasus* L. ?
in edge of woods

Shen. Nat. Park

167

slender shrub 0.5 m. tall,
fruit immature.- plant tufted, culms
spreading, leaves glaucous.flowers whitish with
green tips

low shrub; flowers white,

shrub 1 m. tall

shrub 1.5 m. tall.

flowers double, white.

flowers single, pinkish
white.

- small tree, fruit immature.

May 30 - Wildest Mountain

Plants seen on trail back of house

Hemlock (fl.)*Hedysotis purpurea* (fl.)*Senecio aureus* (fl.)*Rhus Toxic**Botrychium virginicum**Asplenium platyneuron**Utricularia perfoliata* (fl.)*Rubus* (fl.)*Lychnis* (fl.)*Asclepias* (fl.)*Galium aparine* (fl.)

Wooded trail back of house, down to wood road and to right along road. Mixed forest, oak and tulip, rather degraded.

"Seventeen-year locusts" very common, 2 species present, judging by sound they make. Henry Dybas is studying them at Gainesville and says there are 3 species, of which 2 usually occur together, in different combinations in different habitats.

May 30 - Wildcat Mountain
2 mi. n.w. of Bethel, 5 mi. n.w.
of Warrenton
in second-growth hardwood
forest on ~~the~~ west slope.

✓ 42407 *Antennaria parlinii* Fern.
✓ 1 occasional along trail

✓ 1 08 *Galium aparine* L.
rare

✓ 2 09 *Uvularia perfoliata*
common

~~10~~

✓ 2 10 *Potentilla canadensis*
common in semi-open places

✓ 2 11 *Carex*
common

✓ 2 12 *Asclepias*
very local in open trail

✓ 2 13 *Hedysotis purpurea* var. *purpurea*
common, especially in trail,
but also in forest.

✓ 1 14 *Rubus flagellaris* Willd. <sup>Det. K. S. Peltner
31 July 1996</sup>
common, especially
along trail

✓ 2 15 *Silene*
local in trail in open

✓ 1 16 *Galium aparine* L.
rare in trail

June 4

~~May 15~~ - Washington, DC.

✓ 1 17 *Cornus mas*
planted near Library of Congress

... on above.

Rexia

Thodore F. Bland

Mrs. Theodore F. Bland

Joselyn Bland

Jenna Ford

Anahony Ford

run
long
rule
red,

ng &
ellows,
marginate.

vender,

vender.

flowers

white.

recumbent.

shrub 3 m. tall, densely branched.
fruit green.

Theodore F. Bland

Theodore

Dennis

Mrs. Theodore F. Bland

Jonnie Bland

Irene Ford

Anthony Ford

May 30 - Wildcat Mountain

2 mi. n.w. of Bethel, 5 mi. n.w.

of Warrenton

in second-growth hardwood

forest on ~~the~~ west slope.

✓ 42407

Antennaria parlinii Fern.

✓ 1

occasional along trail

✓ 1

08

Galium aparine L.

rare

✓ 2

09

Utricularia perfoliata

common

~~10~~

✓ 2

10

Potentilla canadensis

common in semi-open places

✓ 2

11

Carex

common

✓ 2

12

Asclepias

very local in open trail

✓ 2

13

Hedysotis purpurea var. *purpurea*

common, especially in trail

but also in forest

✓ 1

14

Rubus flagellaris Willd. ^{Det. K. H. Miller}

common, especially

along trail

✓ 2

15

Silene

local in trail in open

✓ 1

16

Galium aparine L.

rare in trail

June 4

~~May 15~~ - Washington, DC.

✓ 1

17

Cornus mas

planted near Library of Congress

leaves bright green above.

weakly ascending.

~~thick~~ root crown
deeply buried, stolons
white, slender; capsule
immature, 3-lobed,
lobes bifid.

stems ascending to
erect, flowers yellow,
petals somewhat emarginate.

small loose tufts, culms
ascending.

flowers pale lavender,
crown white.

flowers deep lavender.

stems trailing; flowers
white.

erect, corolla white.

recumbent.

shrub 3 m. tall, densely branched.
fruit green.

June 2 - Wabash bottom land
above Rochester, Tall forest

Q. macrocarpa
Q. nigra
Gleditsia
Alnus
Q. palustris
Juglans cinerea
Platanus
Acer saccharinum
Celtis (nuttall)
Carya illinoensis
Betula nigra
Celtis laevigata

On ground

a *Lolidaea* sp.
la *Rhus tox.*
la *Viola cf. polianthes*
la *Cypripedium nummularius*
• *Ruellia*

herb layer almost continuous

Asimina
Celtis occidentalis
Celtis laevigata
Cornus cf. amomum
Fraxinus sp.
Crataegus

shrub layer very sparse.

The elms are dead and dying,
leaving a very uneven forest.

The land ~~is~~ is apparently
subject to floods and
silt deposit. George Fell,
who was here a few
months ago, reported
fresh silt and no herb
layer. Dr. Short, Chicago,
reports, in letter to
Nature Conservancy,
that trees are from 140 to
170 ft. tall. One pin oak
specifically reported as
170 ft. I did not see
any this tall, but
some trees were really
very tall.

Only a very hasty
examination was
possible.

June 2 - Robert Allerton Park,
Monticello

Bottom land swamp
forest along Sangamon
River, flooded with
muddy water. Forest
looks very bad because
of dead and dying elms.
(Said to be from Dutch
elm disease.)

June 4 Hellen Creek Preserve

Cutover pine patch -
bare sandy ground
covered by a layer of moss
2-4 cm. thick, with lichens
of several kinds,
scattered tufts of

c Carex sp. o *Lespedeza* sp.

c Desmodium spp

o Baptisia - *inctoria* (fl)

c Danthonia spicata (fl)

c Panicum sp. (several)

o Lechea sp.

c Andropogon sp.

~ Stylosanthes

with scattered dwarf shrubs

c of Vaccinium ~~can~~ *vaullans*

o Parthenocissus

various seedlings

o Rubus cf. *flacillans*

~ Chimaphila maculata (fl)

strongly invaded by

c Acer rubrum (to 3 m. tall)

c Liriodendron (to 4 m.)

o Robinia (to 3 m.)

c Amelanchier (to 1.5 m.)

c Quercus maclandica (?) (to 1.5 m.)

c Pinus virginiana (to 2.5 m.)

~ Myrica

o Fagus (to 2 m.)

o Aralia spinosa (to 2 m.)

o Rhus copallina (to 1 m.)

o Kalmia latifolia (persisting?)

o Vaccinium corymbosum

lc Carya sp. (to 1 m.)

lc Passiflora albidum

o Ilex opaca

o Prunus serotina (to 1 m.)

~ Quercus prinus (to 1 m.)

~ Quercus coccinea (to 0.5 m.)

~ Viburnum acerifolium

Vegetation generally
very uneven and open.
Pine trunks fairly well
decomposed

general list (from pp. 121-4)

Juncus effusus

Asplenium platyneuron

Vitis aestivalis

Vitis sp.

Cuonimus

Goodlyera pubescens (fl)

Lycopodium complanatum

Campsis

Achillea millefolium (fl)

Apoecynum androsaemifolium

Gaylussacia baccata

Sarcocarpus asteroides

Euphorbia corollata

Vaccinium stanisicum

Smilax glauca

Smilax rotundifolia

Lyssa sylvatica

Veronica officinalis
Krigia virginica
Pyrus
~~*Saururus*~~
Asimina triloba
Diodia teres
Rumex acetosella (fl)
Geranium carolinianum
Bromus japonicus (fl)
Euphorbia hypericifolia
Ambrosia artemisiifolia
Carex lurida (fl)
Trifolium repens (fl)
Oxalis (fl)
Plantago lanceolata (fl)
Rubus sp. argutus
Cirsium ~~altissimum~~ strigosus (fl)
Chrysanthemum leucanthemum
Holcus lanatus (fl) (fl)
Sambucus canadensis (fl)

General area of Appeal -
Lusby & south.

Locally evidence of
17 year cicadas.

~~near~~ No broken twigs
seen near preserve.

Osprey nest deserted

Plants of marsh

Carex lurida (fl)
Juncus effusus (fl)
Galium (fl)
Scurpa (fl)
Panicum 3 spp. (fl)
Sparganium (fl)
Carex (Ovalis) (fl)
Juncus (fl)
Juncus tenuis rel aff. (fl)
Reersia rigida
Saururus cernuus (fl)

perhaps 2 spp. have no
 one individual brown
 yellow bet. eye wing

South of Appeal the cicada
 damage is fairly general.
 Great numbers of holes,
 cast skins, wings
 and a few dead and
 dying cicadas on ground
 and low vegetation. No
 heard singing and
 no very active ones seen.

Asclepias tuberosa
 common, coming into flower.

June 14 - Hellen Creek,

wet woods along roadside
ditch in sandy soil.

42418

Carex

2

occasional at edge of water

2

19

Ilex

occasional in edge of

2

20

Amelanchier

occasional in edge of

1

21

(Juniper)

infecting fruits of Amelanchier

2

22

Salix nigra

occasional

same - roadside

1

23

Geranium carolinianum

uncommon

1

24

Oxalis corniculata L.

common

same - ⁱⁿ marsh along creek

2

25

Carex

occasional

1

26

Juncus

common

1

27

Panicum

common

2

28

Carex lurida

common

1

29

Juncus tenuis Willd.

occasional on sandy shore

1 m

loose tufts, culms ascending,
spikes pendent.

shrub 2 m. tall;

flowers white.

small tree or shrub 3 m.

tall, fruit red, juicy,
pleasantly acid.shrub 3 m. tall;
leaves green beneath.

2

flowers yellow, fruits
erect.

1 m

loose tufts, culms almost
erect, vegetative ~~stems~~
decumbent with erect
branchlets.

culms erect

- 42430 *Panicum*
 2 common in edges of
 2 31 *Scirpus*
 abundant
 2 32 *Sphragnum*
 locally abundant
 1 33 *Juncus effusus*
 locally abundant
 2 34 *Panicum*
 common

- + 35 *Triodanis biflora*
 rare on sandy roadside
 3 35 *Galium tinctorium* L.
 common

- same - ~~sandy~~ sandy roadside
 1 36 *Triodanis biflora*
 rare

same on wooded sloping
 side of ravine.

- 1 37 *Asplenium platyneuron* (L.) Oakes
 locally common
 1 38 *Thelypteris noveboracensis* (L.)
 locally common

- same - ^{sunny} cleared pine woods
 2 39 *Pyrus floribunda* Lindl.
 occasional in edges of
 1 40 *Pteridium aquilinum* var. *latiusculum*
 abundant
 1 41 *Krigia virginica*
 rare

1 m culms erect.

culms erect, very
 sharply ~~erect~~ ^{trigynous}
 erect

culms erect, tute

culms erect, plant
 purple, white reflexed
 hairs at nodes.

flowers deep purple.

stems weak, erect;
 flowers white.

7 m flowers deep purple.

7 m

View. (View. (View.))

10 m

shrub 1.5 m. tall,
 fruit immature.

flower orange

- 42442 (lichen)
 1 terrestrial on decomposing
 pine trash
 1 43 (lichen)
 same
 1 44 (lichen)
 same
 1 45 ^{stet} *Cladonia* ...
 same
 1 46 *Parmelia*
 on fallen twig
 1 47 *Parmelia*
 on erect dead tree trunk
 1 48 *Parmelia*
 same
 2 49 *Gaylussacia frondosa* (L.) 7. & 9.
 occasional in edges of
 1 50 *Panicum*
 occasional
 1 51 *Stylosanthes*
 rare
 1 52 *Panicum*
 occasional
 1 53 *Danthonia spicata*
 common
 1 54 *Lespedeza*
 occasional
 1 55 *Baptisia tinctoria*
 occasional
 1 56 *Rubus*
 occasional
 1 57 *Viburnum acerifolium*
 rare
 1 58 *Vaccinium* cf. *crispatum* (Gray) Heller
 occasional

- shrub 1.5 m. tall,
 glaucous; fruit
 immature.
 erect tufts.
 flowers yellow.
 erect tufts.
 culms ascending.
 stems procumbent; flowers
 lavender.
 stems procumbent
 erect shrub 1.5 m. tall;
 fruit immature
 shrub 1 m. tall, leaves glaucous
 beneath; fruit black.

✓ Labels typed

184

by HK

1942 Maryland - D.C.

same - ~~bottom of~~
moist wooded ravine.

42459 *Athyrium filix-foemina*
f. *rubellum*

side of

1 60 *Lycopodium obscurum*
very local, one ^{small} colony seen in

1 61 *Osmunda cinnamomea* L.
occasional

2 62 *Thelypteris novboracensis*
locally abundant in

~~plants~~

June 15 - Washington, D.C.

in park across from State Dept. Bldg.

✓ 2 63 *Pyrus* (Aronia)
planted

✓ 2 64 *Vaccinium corymbosum*
planted

✓ 2 65 ~~*Crataegus*~~ *Myrica cerifera*
planted

✓ 2 66 *Crataegus*
planted

✓ 2 67 *Pyrus* (Aronia)
planted

~~2 68~~

Calvert Co.

185

6 m.

rachis reddish

(L.) Nieuwl.

shrub 1.5 m. tall;

— fruit immature

shrub 1 m. tall

— fruit immature.

— trimmed shrub 1 m. tall,
(untrimmed ones to 3 m.)

small tree; fruit
immature.

June 24 - Cacapon River
Pemblesy Springs
on ~~the~~ river bar
alms

42468

73 2+1

X1

69

Uniola
local

same - wet mossy
on rocks below spring

X3

70

Myosotis scorpioides L. Det. Peter Hartzler
local 1974

X1

71

Clematis virginica L.
occasional

X2

72

Equisetum hiemale L.
occasional

The gorge is well
wooded, geologically
diverse, with limestone
shale, and sandstone.
Trees seen

la

Pinus strobus

o

Pinus virginiana

o

Tilia americana

o

Quercus rubra

~

Q. muhlenbergii?

c

Acer saccharinum

o

A. nigrum var. *glabrum*

c

A. rubrum

c

Ulmus americanus

o

Ulmus rubra?

c

Cercis canadensis

shrub 3m tall

flower light blue

vine

stiffly erect

c

Ailanthus altissima

o

Fraxinus americana

c

Platanus occidentalis

lc

Liriodendron tulipifera

Hemerocallis fulva common all along

Large flats in

bow of river

great talus slope

and cliffs.

c

Tilia heterophylla

o

Quercus prinus

o

Q. alba

o

Glyssa sylvatica

188 1962 West Virginia

June 24 - Cacapon River
above Falls of the Cacapon
in river-bank forest

X₆ 42473 *Tilia heterophylla*
occasional

X₃ 74 *Catalpa speciosa*
rare, edge of water

X₂ 75 *Oxalis grandis* Small
local on sand banks

X₁ 76 *Ilex*
common in edges

Hampshire Co.

189

small tree; leaves
dull silvery beneath,
badly attacked by tingids;

flowers

partly galled small
tree; flowers very
fragrant, calyx

maroon, corolla white,
throat and ^{inner part of} lower three

lips marked with
network of purple

lower lip also with
two orange spots

fading down to two
folds in throat.

erect; leaves sour;
sterile.

June 26 - Wildcat Mt.

Plants noted:

- t *Lysitris patula* (fl)
 tw *Polygonatum biflorum* (fr)
 t *Dianthus armeria* (fl)
 tw *Danicaula ~~maurandica~~*
 t *Erigeron strigosus* (fl)
 t *Chrysanthemum leucanthemum* (fl)
 t *Allium vineale* (bulb)
 t *Rhus glabra* (fl)
 w *Lysimachia ciliata* (fl)
 wt *Hedysotis purpurea* (fl)
 w *Smilacina racemosa* (fr)
 w *Botrychium virginicum*
 wt *Barbarea vulgaris*? (fr)
 w *Viburnum prunifolium*
 t *Ambrosia artemisiifolia*
 t *Scutellaria* (fl)
 t *Poa compressa*
 wt *Danthonia spicata*
 t *Carex*
 t *Baptisia tinctoria* (fl)
 t *Linum*
 te *Vaccinium ~~vaillans~~* (fr)
 te *Circaea quadrangulata*
 t *Panicum q. boscii*
 t *Panicum linearifolium*
 w *Viburnum acerifolium* (fr)
 w *Percheria americana* (fl)
 w *Asplenium platyneuron*
 w *Chimaphila maculata* (fl)
 w *Polypodium vulgare*
 w *Quercus prinus*

- l w *Carex*
 l w *Languinaia canadensis*
 l w *Chimaphila umbellata* (fl)
 l w *Dennstaedtia punctilobula*
 r w *Asimina triloba*
 o w *Festuca obtusa* (fr)
 o w *Morus*
 r *Borragea officinalis* (fl)
 r *Cryptotaenia canadensis* (fl)
 r *Anemone* (fr)
 r *Pyrus malus*
 r *Aporosa cannabina* (fl)
 r *Asclepias tuberosa* (fr)
 r *Delphinium adjacis* (fl)
 r *Centaurea cyanea* (fl)
 r *Achillea millefolium* (fr)
 r *Rosa carolina* (fl)
 r *Fraxinus americana*
 r *Parthenocissus quinquefolia* (fr)
 r *Asclepias syriaca* (fl)
 r *Melilotus alba* (fl)
 r *Rudbeckia hirta* (fl)
 r *Danica carota* (fl)

Crows
 Indigo bunting
 Eastern kingbird
 Mockingbird
 robin

Lower slopes covered by a mixed oak - hickory-pine wood, trees not very large. Shrub layer rather sparse, locally thick. Ground with slabby rocks, thin accumulation of humus on it. Ground vegetation not very dense, but covering most of ground.

Pine seedlings, locally common, even where shade is dense, but few of them reaching more than 2-4 dm. tall.

In some areas the forest is more pine than hardwood. Here few or no pine seedlings.

~~X2477~~ June 24 - Wildcat Mountain Preserve

X42477 Veronica
in ^{mowed} meadow on top of mountain

same - roadside in woods near old dump

X1 78 Polygonum erectum L.

X1 79 Delphinium ajacis
common

X1 80 Delphinium ajacis
common

X2 81 Borago officinalis L.
very local

flowers lavender.

— plant ascending, ^{somewhat} glaucous.
erect, flowers deep
purple.
— flowers pink.

flowers bright blue.

- ~~42~~ same - in forest
of oaks, hickory, with some pine
- X3 42482 *Dehustaedia punctilobula*
one large colony
- X3 83 *Chimaphila umbellata*
one colony seen
- X1 84 *Sanguinaria canadensis*
very local, in rocky area
- X3 85 *Woodia? obtusa*
rare, on rock ledge
- X3 86 *Polypodium vulgare* var. *virginianum*
common on rocks
- X1 87 *Carex*
rare on ~~rock~~ rocky slope
- X1 88 *Carex*
local on rocky slope
- X1 89 *Asplenium platyneuron* (L.) Oakes
occasional
- X1 90 *Woodia? obtusa* (Spreng.) Torr.
rare on earth slope
- X1 91 *Carex*
occasional
- X1 92 *Heuchera*
near rocks
- X1 93 *Heuchera*
on rock ledge
- X3 94 *Chimaphila maculata*
common generally
- X4 95 *Lysimachia ciliata*
a single rather large colony
- X4 96 *Smilacina racemosa*
common
- X1 97 *Galium circaezans*
occasional

- rhizome buried, fronds
ascending.
- leaves glossy green;
flowers white.
- latex red; leaves
glaucous beneath.
- green, culms spreading.
- leaves very glaucous,
culms spreading.
- fronds erect
- spreading tuft
- scape erect, flowers
cream color.
- scape erect; flowers
cream color.
- leaves dull dark green
with white ^{along veins} ~~lines~~; flowers white.
- rhizomes buried;
- flowers yellow
- stems ascending from
buried rhizome, fruits greenish.

same - along old trail
in second-growth woods.

42498 *Panicum boscii*

X2

rare

X1 99 *Galium circaeazans*
occasional

X2 500 *Panicum*

rare

X2 01 *Scutellaria*

occasional

X2 02 *Hedysotis purpurea*

common

X1 03 *Hedysotis purpurea*

common

X2 04 *Carex*

rare

X1 05 *Poa compressa*

common

X1 06 *Danthonia spicata*

occasional

X2 07 *Ceanothus americanus*

occasional

X4 08 *Geranium maculatum*

occasional

X1 09 *Dianthus armeria*

occasional

X2 10 *Hedysotis purpurea*

common

X1 11 *Fanicula*

occasional

culms erect, arched
at top.

flowers greenish-yellow.

corolla tube white below,
purple above, limb purple.
flowers lavender

flowers lavender

culms spreading

bluish green.

erect, subshrub; flowers
white.

flowers bright
magenta pink.
flower lavender.

198

199

green Pond (at bog)
Kennedy R.
Augusta Co.

Wells Creek

1 mi. off St. at Ferry.
after 4 miles and just past
H. John Church turn ^{left} ~~right~~
after $3\frac{1}{2}$ miles back to ~~right~~
again and travel to stand
next to road ($\frac{6}{10}$ of a mile)
Herdob in sight.

Wells Creek

Turn off Rt. 2 at Lusby.

after 4 miles and just past
St. John's Church turn ^{left} ~~right~~

after $3\frac{1}{2}$ miles keep to ^{left} ~~right~~

again and travel to stand

next to road ($\frac{6}{10}$ of a mile)

Hemlocks in sight.

follow telephone cable
to dead end & back
around barn up
a lane & take cable to
cattle yard then
it into field
and house on left.

UN 7-51593

N. 2
to 214
179 ft. beyond
GP Br. turn left
on 214 st on
46 S. to
Cumberland Rd

green Prof (at boy)

Kennedy R

Augusta Co