# RECORD

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

Collection and Field Note Book

No. 63

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

(42181 ------ 42511)

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,

Jocelyn Alexander

F. R. Fosberg
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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 drying as though they had been lightly frozen.

Sept. 30 Jewel Hollow Overlook. Rocky Knob with Quercus rubra, Carya sp. Tilia americana var. neglecta.
Polypodium on rocks, also abundant Sedum telephioides, rather attenuated because shaded.

1961 Virginia

Labels typed

Sept. 30 - Thornton River, just inside Park Boundary above Henryville

| | | | |
|---|---|---|---|
| 4 | 81 | Broussonetia papyrifera (L) Vent. forming a thicket in second growth woods. | small trees 5-8 m. tall, sterile. |

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 | rhizome creeping, fronds erect. |
| 4 | 83 | Osmunda claytoniana abundant locally | rosettes of almost erect fronds, now mostly dead or almost so, — fertile fronds rare. rays yellow. |
| 2 | 84 | Solidago occasional | |

//

Sept 30 - near milepost 47 on Skyline Drive, ~~east~~ south slopes of Hawksbill — 3500' — 1070 m

in small wet marshy seep above drive, open.

| | | | |
|---|---|---|---|
| 1 | 85 | Spiranthes cernua abundant in this one spot, not seen outside the wet ground | erect, flowers white, odorless, glistening around orifice, in four somewhat spiral rows. |
| 1 | 86 | Liparis occasional | |
| 4 | 87 | Hydrocotyle americana L. common | main stem erect, but — producing long filiform stolons. stems very weak |
| 3 | 88 | Carex? abundant | |

Catalogued

1961 Virginia

| | | | |
|---|---|---|---|
| 4x189a | | Crataegus | |
| 3 | | edge of woods, edge of wet grass | |
| 3 | 90 | Juncus | |
| | | common | |
| | | Sept. 30 – Jewel Hollow Overlook, Skyline Drive on shaded, mucky trampled rocky ledge | |
| 3 | 91 | Bidens frondosa | |
| | | common | |
| 1 | 92 | Polygonum | |
| | | occasional | |
| 4 | 93 | Agrostis | |
| | | abundant | |
| | | Oct. 1 – Black Rock Shelter headw. N. Fork Moormans R. ~~in deep woods~~ in second growth mixed oak woods. | 825 m 2700' |
| 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 | Muhlenbergia | |
| | | occasional along Trail | |
| 4 2200 | | Campanula | |
| 1 | | occasional on steep rocky slope | |



Shen. Nat. Park

| | |
|---|---|
| shrub 2 m. tall, fruit scarlet. | |
| rays white, disk turning reddish. | |
| flowers yellow | |
| stems scarcely glaucous flowers bright yellow. | |
| pseudobulb white. | |
| loose tufts, decumbent at base. | |
| procumbent | |

1961 Virginia



| | | | |
|---|---|---|---|
| 4 | 2201 | Liatris<br>occasional on steep rocky slope | erect |
| 1 | 02 | Aureolaria<br>occasional on steep rocky slop | flowers yellow, throat and tube filose within. |
| 2 | 03 | Aster<br>common on steep rocky slope | ray flowers bright lavender, disk yellow turning dark red. |
| | | Oct. 1 – Payne Run, about 1 mile above the Horse Head. in bare rocky stream bed | 460 m 1500' |
| 3 | 04 | Chelone glabra<br>~~[illegible]~~ in crevices in bed rock | many ~~branches~~ stems from base; flowers white, faintly fragrant, visited by bumble-bees. |
| 3 | 05 | Osmunda cinnamomea<br>in crevices in bedrock | |
| 3 | 06 | Thelypteris palustris var. pubescens<br>in crevices in bedrock | |
| 3 | 07 | grass<br>common in crevices in bedrock | leaves on sterile shoots conspicuously distichous flowers white. |
| 2 | 08 | Polygonum<br>occasional in ~~[illegible]~~ gravel | stems fleshy, ascending. |
| 3 | 09 | Commelina communis var.?<br>common in gravel | |
| 1 | 10 | Leersia virginica Willd.<br>rare in gravel | ascending |
| | | same – on mossy banks of stream | |
| 1 | 11 | Solidago<br>rare | |
| 4 | 12 | Muhlenbergia<br>common | culms and panicle erect. |
| 3 | 13 | (grass)<br>common | culms erect, panicles (a spike) drooping. |

Lacuna typed

Oct. 1 - edge of Park along Lima Fire Road, s.w. of Davis Mt.

4 2 2 14 Solidago
6 common in fine silty sand soil in second growth mixed oak forest

Oct. 1 Black Rock Shelter head w. of N. Fork Moormans R. in thin second growth forest on steep rocky slope

4 15 Andropogon scoparius L. — tufts, culms and inflorescence very erect, culms wine color.
common

4 16 Helianthus — roots long, fleshy.
common

2 17 (grass)
common



erect, flowers bright yellow.

1961 Virginia

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 Rivanna R.
good low deciduous forest on e. side of road.

Another patch just out of Charlottesville "bypass" (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 hardwoods than oaks – 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.



Valleys in this range of hills are generally cleared, mostly in meadow or pasture, willows, walnut, 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 oaks.
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, when surrounding areas are green.
Lovingston.
Tulip shows up as patches on hills, no apparent meaningful pattern.

Oct. 1 Lovett Brian College
Oak Hickory forest
30-35 m tall, but rather
opened up by 1955
hurricane which
knocked down 400+ large
trees.

Opening resulting
from old compost heap-
leaveset. Large dead
tulip trees. Stopped
dumping and removed
most of rubbish about
1 year ago. Paulownia
and Ailanthus seedlings
only, otherwise weed.
Phytolacca, Ambrosia, Euphorbia
Polygonum, etc. etc.
Chenopodium
Trees up to 6 dm. dbh.
Quercus alba
Fagus
Liriodendron (to 34" dbh)
Carya spp.
Nyssa
Magnolia tripetala
Cornus florida
Fraxinus
Acer rubrum
Q. falcata
Diospyros



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

A few Medeola, Diervilla,
Collinsonia, Amsonia,
Epifagus, Symphoricarpos,
Parthenocissus, Mitella,
Galium circaezans,
Botrychium virg. Woodwardia,
Cimicifuga, Polystichum
Asperula
In thicker areas,
through most trees
are smaller, there is
less, or even no honeysuckle
more native herbs.
Less Rhus tox. also.

photos of Monotropa uniflora f. roseo

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 bumbered
young second growth
that is being cut up into
lots for faculty housing.

surrounded by alder
Lake quite muddy.
On N. side a ~~[illegible]~~ area
of Pinus virginiana
Lonicera
Desmodium
Rhus tox.

surrounded by
open Q. falcata and
Q. alba tall with
thick shrubby &
semi-forest undergrowth

Open field 25-30 years
ago - 15-20 acres - now
a thick stand of
Pinus virg. to 8-10 m. t.
canopy thin but continuous
flora grassy, a little
patchy honeysuckle
Abundant tiny oak
seedlings and hickory, some
larger Acer rubrum
a few spindly
juniperus, some small
cornus, Prunus serotina, Amelanchier
Several Solidagos,
Anemone virginiana
Desmodium sp. Solanum
carolinianum
Parthenocissus. Sanicula
Polystichum, Lactuca,
Helianthus, Galium
triflorum, Chimaphila



Oct. 8 - Lynchburg - just out
of town on rt. 460 west, a patch
of Solidago 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 3 Blue Ridge Parkway 31 50'
road to Hale's Fork - Floyd & 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 attacked by a
skeletonizing larva.
30 or 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
Betula lenta 10-15 m. tall,
10-15 cm. dbh. 1.5-3 m apart.
u 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

Trees interlocks & stand which cuts. in after abandonment of field by man who had cabin near here.



W B Russell & Robt. Achille Russell Nature Reserve

Fagus gr. 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 Vac. pa. Gay. bac.

Thin ground layer of herbs and seedlings.

Dsanum vir. Thelypteris

Large number of large chestnut stumps. 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 s. slope found
Cornus florida and
less Oxydendrum in
second story. Fagus.

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

Oct. 7. Sweet Briar College.

in second growth woods
42218 Lobelia inflata
" occasional
" 19 Lobelia

Oct. 14 - Bull Neck Run

Rt. 615 + Old Georgetown Pike

✓ Labels typed by MK.

1961 Virginia

Oct. 14 - Yellow Falls, Potomac River

on tiny flood plain, shaded

4 2 220 Aster — rays white, disk reddish

✓ 4

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

✓ 2 21 Solidago caesia — flowers ~~rays~~ yellow
occasional

✓ 1 22 Aster — rays white, disk dull reddish green.
common

✓ 1 23 Solidago flexicaulis L. — flowers yellow.
rare

✓ 1 24 Aster — rays lavender, disk reddish.

Oct. 14 -

in deciduous forest

✓ 1 25 Aster — rays bright lavender, disk reddish
rare

✓ 3 26 Aster — rays pale lavender, disk very pale yellow, turning reddish
common

on edge of eroded road embankment in pine forest with heavy deciduous undergrowth

✓ 2 27 Solidago caesia — flowers yellow
common

42228 Aster lateriflorus — rays white, disk red
16 common

12 29 Aster lateriflorus — rays white, disk ~~red~~ yellow turning red. plant 1 m. tall divaricately branched.
common on base of embankment

1 30 Aster — rays bright lavender, disk reddish.

31 Aster — rays lavender, disk turning red.
32 ..
33 ..
34 ..
35 ..
36 ..
37 ..
common

1 38 Aster — rays purple, disk deep brick red.
occasional

12 39 Aster — rays lavender, disk turning red.
occasional

1 40 Prenanthes serpentaria Pursh — erect plant, 1.3 m. tall, upper third paniculate with ascending branches, clusters of heads ~~node~~ pendent.
Det. D. Bell & A. Hendle
rare along road

1960 Virginia

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 leafed 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 this oak-hickory woods A. lateriflorus var. 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 more 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. w. n.w. of Kamp Washington, about 2 mi e. s.e. Chantilly

weedy roadside with abundant Aster novae-anglicae, deep purple, and A. ericoides, A. pilosus and a rare lavender one.
No very apparent hybridization.

Labels typed 42241-42294

Oct. 15 - 2 mi. e.s.e. of Chantilly — 390' 120 m

~~open~~ weedy roadside

| | | | |
|---|---|---|---|
| 42241 | | Aster pilosus Willd. (intern. var. pilosus - var. demotus) det. L. H. Shinners | rays white, disk yellow, turning slightly reddish. |
| 4 | 42 | Aster novae-angliae L. OK. Shinners | rays deep violet; branched at base, plus many tangled |
| | | abundant locally | |
| 2 | 43 | Aster ~~ericoides~~ pilosus Willd. var. demotus Blake det. Shinners | rays white, disk red. |
| | | common | |
| 2 | 44 | Aster prenanthoides Willd. det. Shinners | rays pale lavender, disk turning reddish. |
| | | rare | |
| 2 | 45 | Aster pilosus Willd. (intermediate var. pilosus - var. demotus det. L. H. Shinners | rays white disk turning reddish. |
| | | common | |
| 2 | 46 | Aster novae-angliae L. det. L. B. Shinners | branched at base; rays faded, brown. |
| | | abundant locally | |
| 1 | 47 | Aster ericoides | rays white, disk yellow, turning reddish. |
| | | common | |

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

| | | | |
|---|---|---|---|
| 4 | 48 | Aster undulatus L. det. L. B. Shinners | |
| | | common in thin oak-hickory wood | |
| | | same - in weedy power-line right-of-way | |
| 1 | 49 | Aster | rays lavender |
| 3+2 | 50 | Aster undulatus L. det. L. B. Shinners | rays deep lavender |
| 2 | 51 | Aster " " " " " " | rays lavender |
| 1 | 52 | Aster | rays lavender |
| 1 | 53 | Aster | rays lavender |
| 1 | 54 | Aster | rays lavender |
| 1 | 55 | Aster | rays pinkish lavender. |
| 1+1 | 56 | Aster | rays deep lavender |
| 1 | 57 | Aster lateriflorus | rays white |
| 1 | 58 | Aster | rays lavender |

| | | | |
|---|---|---|---|
| 1 4 2 | 59 | aster | rays lavender |
| 1 | 60 | aster | rays lavender |
| 1 | 61 | aster | rays lavender |
| 4 | 62 | aster undulatus L. det. L.H. Shinners on bare ground | rays lavender |
| 1 | 63 | aster | rays lavender |
| 1 | 64 | aster | rays lavender |
| 1 | 65 | aster | rays lavender |
| 1 | 66 | aster | rays bright lavender |
| 1 | 67 | aster lateriflorus | rays white |
| 1 | 68 | aster lateriflorus | rays white |
| 1 | 69 | aster | rays lavender |
| 1 | 70 | aster lateriflorus | rays white |
| x 2 3 | 71 | aster undulatus L. det. L.H. Shinners | rays lavender |
| 1 | 72 | aster lateriflorus | rays white |
| 1 | 73 | aster | rays bright ~~purple~~ deep lavender |
| x 2 | 74 | aster lateriflorus (L.) Britton det. L.H. Shinners | rays white |
| 1 | 75 | aster lateriflorus | rays white |
| 1 | 76 | aster | rays pale lavender |
| | | s.e. side Oct. 15 Dulles airport, Chantilly, east end in abandoned cultivated field | |
| 2 | 77 | aster ~~erigeroides~~ spilosus Willd. var. demotus Blake det. L.H. Shinners | rays white, disk yellow, turning reddish. |
| +1 | ~~78~~ | Erigeron annuus (L.) Pers. ~~strigosus~~ " " | rays white, disk yellow. |
| 1 +1 | 79 | Erigeron strigosus maximus | rays white, disk yellow. |
| | ~~80~~ | ~~Erigeron~~ | |
| 3 | 80 | aster pilosus Willd. (intermediate common var. pilosus - var. demotus det. L.H. Shinners | rays white, disk yellow, turning red. |
| 3 | 81 | acalypha on disturbed ground | leaves somewhat venulose, bracts green. |
| 2 | 82 | acalypha on disturbed ground | bracts green |
| 2 | 83 | acalypha on disturbed ground | bracts reddish |

| | | | |
|---|---|---|---|
| 4 | 2289 | Aster lateriflorus X vimineus? occasional | det. L.H. Shinners — rays white, disk turning reddish. |
| | | in [another] abandoned field | |
| 3 | 85 | Aster pilosus Willd. var. demotus Blake common | det. L.H. Shinners — rays white, disk turning reddish. |
| 3 | 86 | Aster pilosus Willd var. pilosus common | " — rays white, disk reddish. |
| 4 | 87 | Aster vimineus Lam. det. L.H. Shinners common | rays white, disk reddish. |
| 1 | 88 | Aster | rays white |
| 2 | 89 | Aster simplex Willd. var. simplex rare | det. L.H. Shinners — rays white, disk yellowish, turning red. |
| | | in [another] abandoned field | |
| 4 | 90 | Aster ~~ericoides~~ pilosus Willd. var. demotus Blake common | det. L.H. Shinners — rays white, disk yellow turning reddish. |
| 3 | 91 | Aster pilosus Willd. var. pilosus occasional (injured) | det. L.H. Shinners — rays white, disk red. |
| 2 | 92 | Aster pilosus Willd var. pilosus ~~common~~ rare | " " — single stem, with long ascending branches. |
| | | abundant on roadside | |
| 1 | 93 | Setaria viridis | |
| 2 | 94 | Digitaria | racemes purplish |
| | | Saturday 42295-42297 Typed Oct. 30 - Sleepy Hollow | |
| 1 | 95 | Quercus in tall dense second growth of tulip, sweet gum, etc. in bottom-land | leaf sample from marked sapling #1, about in its 5th year, 5½' tall. 5 leaves from terminal whorls of lateral branches, 3 from terminal whorl of leader. |

1941 Virginia

42296 Quercus
1 same
1 97 Quercus alba?
same



leaves from 1 year seedling (the same) marked #2. + another seedling apparently
leaves from 1 year
seedling marked #3

 1961 District of Columbia

Nov. 15 Washington
near Capitol

✓ 42298 Quercus rubra — straight well formed tree; leaves changing to brown.
✓ 1 street tree

✓ 1 99 Osmanthus — shrub, dark green; flowers white, very fragrant.
ornamental planting

Nov. 30 – Bethesda

Montgomery Co.

142300 Vaccinium atrococcum (Gray) Heller — arching shrub 2 m. tall, main stem at least 4 m. long.
in sandy pine woods

1941 Maryland

Dec. 9 Weems Creek reserve. –
Annapolis
Deciduous forest of
oaks, some tulip.

± 30 m.

Very open second
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
Vaccinums.

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
Pteris 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 jap.
Polystichum acr. on side.

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.

1961 Maryland – New Jersey

Forest on annapolis end is young. a few rotting stumps.
Much less Ilex here.

Dec. 20 – Baltimore Parkway just out of Washington.
Interesting pine woods that should be looked at.

Dec. 22 – Pt. 9 east of 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, Pleurozium(?) 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.



For about 1.5 mile south the country is about the same, except that occasionally there are fairly large farming areas.
Then there is some fine 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 or a just under the surface. In this are localized peat lumps 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. Tangles of Smilax.

Hill is grown with patches of oak woods.

Just n. of intersection of Rt. 9 & 4-70 - 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 Kalmia angustifolia, Hudsonia, etc in mosaic.



On hill is a low scrub between the sparse pine of Quercus ilicifolia. Hudsonia and Lisidanthera 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). Opening have Carex tufts, Sphagnum and Vaccinium macrocarpon. Much Ilex glabra. Probably headw. 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 ~~ex~~ rigida about 1 m. tall, with some dwarfed Quercus marilandica scattered Kalmia latifolia, sm. 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 - 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 Yucca.

Rocky Flats area - shaly soil and stony soil sites of Brannon et al 1961.

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

A rich grassland vegetation with Andropogon gerardi, a sorghastrum, 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 pointing close (2-3 m.) of general veg.
then 2 of mound veg.)
(3 more of general veg.)
(1 2 of soil exposures at edge of mt.)



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

1961 Colorado

Then canyon widens but 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. [illegible]ts of Arctostaphylos, [illegible] prostrate juniper. A[illegible]ttle aspen locally.

Center 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 n. sides. almost all scrubby pine on n. sides of canyons. Then some spruce even on south facing slopes. Patches of aspen, prob. sites of fire.

Snow general but very thin.

Slender closed Pinus contorta forest on south sides, more open and scrubby on n. sid[illegible]

Snow thicker [illegible] some on trees, as [illegible] we go westward.

Beyond Fairy Peak Obs.

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

1961 Colorado

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. fk. clear cr. Canyon below very rocky with open scrubby pine. Some areas a scrubby grassy veg. esp. 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. Real rocky gorge with patches of brush a few trees on ledges. Slopes have ~~pine~~ pine forest.



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

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

in Our Lands – within 1960 & 61 – article by man from B & M office Vail, Co. on hibernas 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 north end of South Park also hodgehomes by Ars)
South Park is a great flat treeless valley surrounded by wooded mts. Two 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 w of Fairplay 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 patch



of spruce 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 pinches out, slopes become steeper, covered by open pine forest.
Lower down the south and west facing slopes are covered by pinyon scrub forest, with gradual addition downward, of juniper. On north facing slope and in ravines Pinus ponderosa and spruce come down lower, but then give way to pinyon.
Much Chrysothamnus, Cercocarpus in open spaces between trees.

Arkansas Valley - Buena Vista
Open pinyon juniper scrub on slopes, grassland on flatter areas.
(photos of grave inside and outside of fence; also of pinyon)

1961 Colorado

Outside fence –
Bouteloua gracilis, Sporobolus
sp. Chrysothamnus,
Euriolus, Artemisia frigida,
Erigeron sp., Senecio
cf. 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 ~~off~~ over the bars
and flats.
Then open grass with
scattered cottonwoods
and cottonwood ~~of~~ 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 ~~rocky~~ 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
out onto bluffs with
a little pinyon –
esp. on sandstone knobs.
Artemisia tridentata,
a very small depressed
form, on slopes of knobs.
53.5 2 mi. to. of Florence Jct.

1962 Colorado

Jan. 1 - Colorado Springs to Ute Pass - Lake George.
Mesas with scattered pines, small patches of Quercus gambellii, scattered Cercocarpus. Garden of the God (photos)
Ute Pass - thin scrub mostly Cercocarpus and Quercus, scattered pines on both sides of canyon. Upward more and more forest, first pine, then largely spruce.
Cascade - above this scrub on south facing slopes, forest on north. (photos: 3-4 mi. above Cascade on hwy. ~~to~~ 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. Level only in small patches.
Hills on north have flat grassy top. Woodland Park.
View of Pikes Peak.



Above here very shallow valleys - bottoms grassy, hills with Pinus pond. 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 pine.
Country rock is a coarse pinkish, weathering granite. 2 photos of an outcrop of this with grass and open pine forest.
6 mi below Lake George on South Branch of South Platte R. (Sportsmans Paradise) ±8500'. (Stables Cabin)
Steep cliffs and talus covered by Pinus ponderosa + slender Juniperus sp., mostly pine, open forest. 10-15 m. tall shrubs of Ribes, Jamesia?, etc. (photos, perhaps 6).
Valley open, grassy.
Slopes on other side open woods.
Yucca abundant on talus of Pikes Peak granite

1962 Colorado

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 ~~more~~ drier spots, open or sparse or scattered.

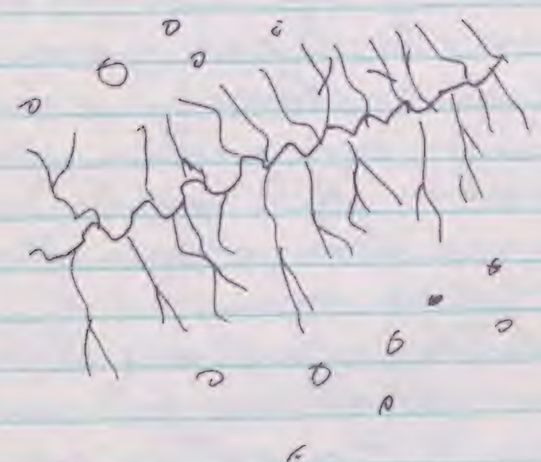
Jan. 3 - Air trip Denver-Kansas City.
East of Denver - very flat grassy plains, traversed by meandering streams and stream beds - water frozen where present.
This soon gives way to cultivation on an extensive scale, probably wheat. Dry stream beds, very few trees, at first no gallery wood, then a very little, deciduous. Trees around some house sites, occasional corrals. 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, dissipated 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.

1942 – Kansas

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 interfluves, 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.

1962 Kansas

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

Snow to north but along course now.

Fairly regular 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 interfluves, 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 river drainage.

Much contour 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 jct. (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.

1962 Virginia

Jan. 7 - Roaches Run
Rather few ducks, mostly pintails and baldpates, a few mallards.
More gulls ~~an~~ than ducks. Mostly ring-bills, a few herring gulls. Larger brown ones with dark tips to bill - herring gull females??
Some oil scum or shine in small peninsulas.

Jan. 10 - Sleepy 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 Centreville, near Rocky Run
patch of closed forest of Pinus virginiana about 15 m. tall, 10-20 cm. dbh mostly 2-5 m. apart.



a scattering of Rhododendron 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 Rhododendron
o Quercus marilandica?
a Lonicera japonica
c Cornus florida
i Smilax sp.
lc Acer rubrum
r Ulmus sp.

1962 Virginia

r Acer saccharum?
r. Prunus serotina?
r Corylus (sl.)
r Ilex opaca
r 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 row of juniperus 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 juniperus at Manassas Rd. intersection with new hwy.
Large juniperus at edge, with pines, as second photo.



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

shrub 3 m. tall, sparsely branched, twigs green.

Jan. 14 - cut banks along new highway -
(1.) Phleum dominant
1.1 mi scattered plants of
e of Lespedeza striata,
Man. Rd. Rumex cf. obtusifolia
Cichorium intybus
Conyza canadensis, etc.

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

0.6 mi about same,
e. Cub slightly more
Run Phleum
2 photos.
Also woody plants seen on any of cuts e. of Manassas road.

1962 Virginia

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

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

Rock outcrop with Parmelia colonie, Cornus florida, rather open.

Some areas of scrubby wood overgrown by grape vines.

Around small pond are a number of ruins of buildings.

Beyond this some fairly extensive patches of pine. Large Lycopodium ~~clavatum~~ complanatum colony under pines.

Chimaphila in hardwood forest on greenstone on slopes

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



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

Gentle slope w. of highway completely covered by an open stand of Juniperus virginiana varying from ~~15~~ 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 ht/width ratio, no conspicuous veteran.

A few scattered very broad large trees along one side.

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

Limestone slope, some small exposures at surface

Hanging cocoons very abundant on cedars.

1962 Virginia Rockingham Co.

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 Gleditschia 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 juniper becomes very scarce, but slope becomes covered by an almost closed thicket a scrub forest of Amelanchier, Ailanthus, Gleditschia, Prunus,

A few crows
a mockingbird
several killdeers

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 Symphoricarpos orbiculatus
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 South River, Anne Arundel Md.
abandoned Naval Academy Dairy.
Old fields and hedgerows with Sassafras, Celtis, much Campsis; Rhus toxicodendron, Lonicera japonica, etc.
Very large Rhus typhina.
Platanus, Liriodendron, Prunus serotina, etc.

1962 Virginia

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.

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

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

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

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



1962 Maryland annearundel co.

Mar. 4 - Mr. Murray's Wharf, bet. Rhode R. & West R. incl. High I. Flat I. & Huckleberry I. Corn I. neck farm. cumberstone.

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 washed out

Much young Pine where rather dens. in undergrowth. Patch of honeysuckle back of house and toward Corn I.

Thickets of Liquidamber, some Paulownia.

Old ruins of mansion Tangled Rubus phoenicolasius.

Small cattail marsh with low beach ridge. Junipers 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 they 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. ~~Dr.~~ 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 ~~deeply~~ 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 a mile 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 Ferns, japonica and similar.

Kalmia on slump slopes near old wharf.

Said to be Epigaea, Liatris, 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 Liquidamba.

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

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

A Mr. Fitzpatrick (?) owns a nearby ~~adjacent~~ place. A Mr. Forest apparently the adjacent one.

1942 Maryland

March 11. Ivy Neck Farm, Cumberstone

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 say 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, Cardicum virgatum, invaded by liquidamber 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 mixed juniper, sweet gum, Maclura, 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 pieces, some slumping of pieces of sod. 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 Cercis?)

Back of beach on Land Point, 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 periphery
At distal end more Spartina patens.
In rubbish on beach are small flies, in spite of a bitter cold wind.
Best 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, Lonicera, Diospyros, Viburnum, Old stumps with woodpecker holes.

Small pond cut off by beach ridge.

Along Rhode River 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 opener 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 bed of Rhus copallina, Myrica

Farther along Rhode River shore, another point
Then a forest of Pinus taeda 20-30 m. tall, 10-25 cm. dbh. 1.5-5 m. apart.
This a plantation, as it is in rows. Much Smilax climbing about half way up the trees.
Considerable litter 5-10 cm. but little humus accumulation.
A few Cornus florida, more abundant farther in, some Liquidambar saplings, in undergrowth. but very sparse. Little undergrowth.
This extends almost to end of the peninsula on Rhode River side, on Deaton Creek side much interrupted by areas of deciduous forest, this very with Smilax, Vitis, Campsis, etc. Rhus tox. Smilax
Small plat of Spartina at tip of peninsula.

planted 25 years ago.

Edges of Deaton Creek marshy, with much Baccharis Panicum virgatum



2 m. escarpment bet marsh and woods. corner
Woods of Ulmus Machura, large patch of Ailanthus, Gulung
Opening tangled with Rubus, Rubus argutus + R. phoenicolasius
R. idaeus (or R. occidentalis?)
Salt marsh inlets extending in from Deaton Creek lined by deciduous woods.
Locally large Ilex and Juniperus 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 Juniperus at head of one saltmarsh inlet, extending to pasture.
This near where corner of woods extends into field
Margin of deciduous wood largely Liquidambar extends up creek from here.

1962 New York

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. ~~rubra~~ velutina
Betula lenta Tsuga,
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 is places
dominant, in places ~~do~~
almost absent, more
generally forms an
irregular second story



among shrubs several
Viburnums, Kalmia (r.)
Vitis sp. Lindera.

Herbs - Deschampsia,
Mitchella, Dentaria,
Coroplotis, 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 and ravine.
Much dead chestnut

1962 New York

have fire scars - charred stubs, etc.

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

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 land when stream is braided, under hemlock

Almost no hemlock on top along here.

Large trees in ravine and sheltered place.



Lier 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, Premises 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 - no private property.

As many as 300 birds seen on pond at once.

Pond probably 50 acres.

Some thickets & marsh at head of estuary. Phragmites & Panicum virgatum. & ashes, 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. Smilax

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

1962 New York

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 Shellbake R. originally
set aside for spreading out
flood water. Many ducks
stop here, though it is
developed to edges.

1962 Virginia

Mar. 24 - Wildcat Mt. -

Entered through gate just back of main house. Some small patches of Lonicera jap. near entrance in brushy forest.
Trail down moderate slope of broken greenstone. 1 juniper on rt. Considerable Cornus florida. A patch of trees have been cut, apparently several years ago. Spectacular growth of a white Polystichum (?) on stumps and trunks. Trees mostly oaks
As soon as trail curves to right the forest is larger - mostly oak-ind. 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. bus.
Many pine twigs clipped off (by squirrels?) still green.
Where here 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 clumps on other rocks left of jeep rd.
Below road and to left of pump house is almost pure tulip forest.

Down road from this a patch ominently Pinus virginiana. Several freshly broken limbs and one tree broken off about 3 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 layer of Vaccinium, Q. cyan. 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 honeys. A large patch of Vinca, mine



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 there. In all tufts of Cladonia.

"W of rec's 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 is a small ravine. Polystichum on sides of ravine.
Asplenium platyneuron, Ulmus fulva, Linden, 7 fraxinus, Cornus florida, Juniperus (small), Rhus typhinodendron, Platanus Rhus glabra, Viburnum sp.

The south facing slope below the boundary fence is scrubby forest of Pinus virg., Juniperus, Cornus florida, Cercis, etc.
Cornus abundant along fence. Vitis sp.
Few juniper 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 streams, Liriodendron, Cercis a few oaks, locally patches of springy or 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 a few tulips) some Carya. 7 recs to 5 dm. dbh.
Thin shrub layer of Vaccinium c. corymbosum. a few small Acer rubrum. Cornus. Vitis.
A broad leafed glaucous Carex (cf. laxiculmis?) common on rocky parts of slope.

Large knob of rock with luxuriant Polypodium.
From here in 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 mac.
Turkey vulture, crows.
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 in mud of road. Dog tracks.
Road runs through open second forest, largely tulip, some small pine, Rhus glabra, Cornus.
Considerable androsace in places forming a closed grass layer.



another road ~~to~~ 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 ruined 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 ruined 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 J. Kaltenbach
Rt. 17
Warrenton, Va.

1962 Delaware

Mar. 30 – Broadkill 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 75 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. 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 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 Broadkill River.

A number of vultures near Belltown.

Nearing 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 rt. 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 mi. s. of Dewey Beach. Trees browned but not dead. In and around pines are thickets of Prunus 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 this 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 (?), 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 –
loblolly 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
4:10 p.m. 12.5"-? sta gray. brown fine sand
15" water table in pit after a few minutes. Just perceptibly brackish.
The bases of the trees



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 marsh out from Dupont Basin, Henlopen Acres.
At least below 10' contour. Has been drained somewhat by digging of ~~canal~~ Lewes and Rehoboth Canal. Is in angle between canal and branch.
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 vir. common. 1 P. 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

1962 Delaware

~~about~~ - Largely P. rigida, some P. taeda. 1-3 m. apart rarely 6 m. about ~~12~~ 8-10 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 20" below mineral soil surface.

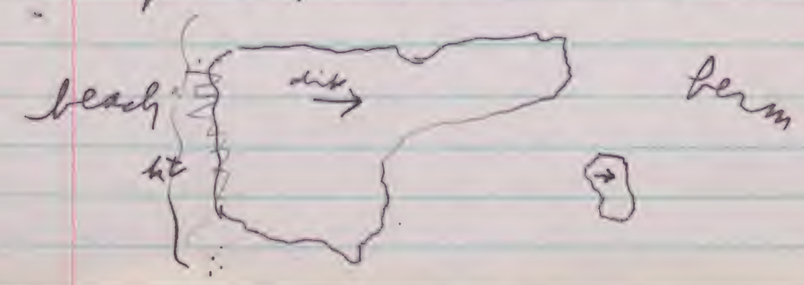
All largest trees and P. taeda maximum rigida about 2 dm. which is a wolf tree mostly 1 dm. or less.
Rather few small P. taeda. Taeda cones unusually small, also the rigida. Galls from wolf trees of both 2 yr. 30' tall.

Dune sand spread landward ~~for~~ in tenfoot 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 ~~sand~~ 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.



1962 Delaware

Labels typed 42302 42303

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

42302 Pinus taeda

03 Pinus rigida



Write labels
42302-3
blank / blank

Assigned

Write labels

42302-3

blank / blank

Sergeant

1962 Delaware

Labels typed
42302
42303

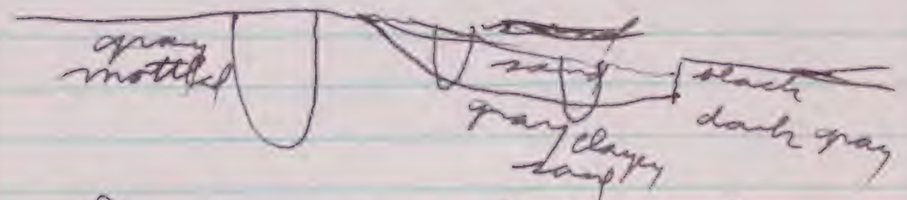
March 30 – just north of Rehoboth Beach
common in pine forest on sand flat.

42302 Pinus taeda — "wolf" tree, with many dead lower branches, 35 cm. dbh, 10 m. tall.

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

1942 Delaware

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

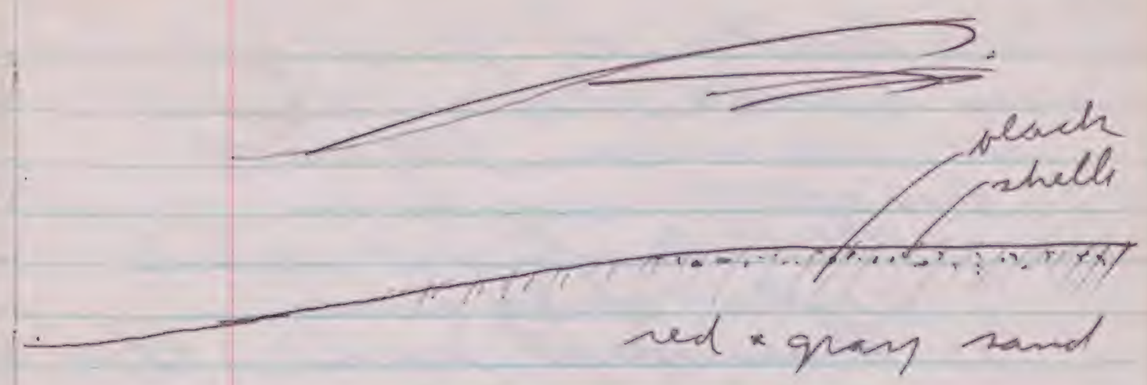



~~Dark gray~~ Black material fades gradually downward to dark gray

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. s. 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).

2.2 mi. s. of Silver Lake.

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 ~~stump~~ mean h.t.

38.5
61.5 + 3 - 14 20.8 - 21.2 - 3 - 22.0 -
~~Farthest out faintly large~~ 22.4
~~P. echinata in grove~~

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 ~~beach~~ 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 muck 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 marilandica, 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 ~~sa~~ side have been partially stabilized by snow-fences, etc. so that they still stay, partly stabilized by grass + Hudsonia. Behind them in depressions are Myrica patches and in deeper depressions patches of salt marsh.

Back of dune belt is a ~~mass~~ 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.

1962 District of Columbia.

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

A broad wooded ravine with a small stream.

Deciduous woods of

c-la 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 Sanguinaria canadensis (f)
o Thalictrum thalictroides (f)
o Ranunculus abortivus (f)
a Nepeta hederacefolia (f)
c Alliaria (b, f)
c Allium vineale
c Viola
lc Galium aparine
lc Luzula sp
l Dodecatheon meadia (b)
Polystichum acrostichoides
o Galium oblongifolium
l Stellaria media (f.)
l Miscanthus sinensis
Agrimonia
l Duchesnea indica
l Ornithogalum
l Corydalis flavula (f)
l Rudbeckia laciniata

Vines

a Lonicera japonica
olc Rhus toxicodendron

1962 Virginia

April 15 Wildcat Mt.
Watery Mts, n.w. Warrenton
E. of lake - on old road
mixed oak forest
trees to 30cm 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 path.

Rt. path
Just before small wet
with ledges on rt. north
Polypodium
Dryopteris marginalis
Asplenium ~~trachomanes~~ platyneuron
Heuchera
Arabis
~~Aquilegia~~
~~Arenaria lan.?~~
Rosa carolina
Saxifraga vir.
Thalictrum

on rt. much larger
rock then on left, more
Chimaphila umbellata



list
la Lindera benzoin (f)
l Hemerocallis fulva
l Rubus occidentalis
c Chimaphila maculata
r Syringa vulgaris
o Dioscorea (fr)
la Polypodium vulgare v. vir.
c Cercis canadensis (b)
o Juniperus virginiana
o Lasaopus albidum
r Obolaria vir. (b)
o Goodyera pubescens
c Thalictrum thalictroides (b)
o Dentaria laciniata
c Antennaria plantaginifolia
f Cunila origanoides
l Monotropa uniflora
c Galium oblongifolium
l Polystichum acrostichoides
l Veronica officinalis
l Pyrola rot. ann.
r Lonicera canadensis (b)
c Liriodendron tulipifera
o Acer rubrum (f)
lc Fagus grandifolia
c Quercus prinus
lc Dryopteris marginalis
lc Asplenium platyneuron
lc Heuchera
lc Rosa carolina (fr)
o Saxifraga virginica
lc Aquilegia canadensis ?
a Cornus canadensis
la Ilex virginiana

1962 Virginia

on top of hill
a Pinus virginiana
forest.
a Cornus florida
r Ilex opaca
Acer rubrum.
Fraxinus amer. (in rd.)
Sassafras (in rd.)
Monotropa
Lonicera japonica
Antennaria plantag.
Goodyera pub.
Chimaphila mac.
Cardamine
Chimaphila umb
Vitis
Polystichum
crows Asplen. platy
rabbit Juniperus virg.
tobacco Fraxinus
Carya sp.

42307 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 ctd.)

r Ilex opaca
o Fraxinus americana
la Lonicera japonica
lc Chimaphila umbellata

growing in a small clump,
flowers white.

on terrace to grass
at edge of
sidewalk

1962 Maryland

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 high side.

Flowers seen (mostly on Chain Br. flats)
Cardamine sp. (large fl.)
Glecoma 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)
Acer rubrum

Forest in bottomland largely Platanus, Acer negundo, and Ulmus, some Maclura, 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 ft. 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.

Appr. 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 & pale tan.



Abundance of pine suggests that these hills are not limestone.

April 21 - ~~E. Capitol St~~ ½ mile out 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 s. 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

Tsuga 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?
y.b. Myrica
fl Smilax rotundifolia
Aralia spinosa
Polystichum acrostichoides
fl Cornus florida
l yf Chimaphila maculata
Baptisia tinctoria
Quercus prinus
Quercus alba
Quercus coccinea
fl Rhododendron nudiflorum
Carya
Quercus



fl. Vaccinium stamineum
Juniperus ~~virginiana~~ ~~canadensis~~
Quercus falcata?
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
y.p. Uvularia perfoliata
Athyrium felix-foemina f. rubellum
Osmunda regalis
Dennstaedtia punctilobula
Euonymus
Alnus serrulata
Sambucus canadensis
l Mitella virginica
Viburnum prunifolium
Ilex verticillata?
Rubus argutus?
l Juncus effusus
Onoclea sensibilis
Uvularia sessilifolia
Cypripedium acaule
Pteridium aquilinum

Hypericum hypericoides
Mitchella repens
Epifagus virginiana
Osmunda regalis
Eupatorium perfoliatum
l76 Ludwigia alternifolia
l76 Juncus
Woodwardia vir
Carex
Panicum
86 Gaylussacia baccata
Goodyera pubescens
Yucca sp.
Campsis radicans
Lindera benzoin
Impatiens sp.
Rosa sp. palustris?
Equisetum arvense
Salix sp
Rumex crispus
Cerastium
Stellaria
Eupatorium
Panthoria spicata
Carex sp.
Botrychium sp.

(To Hellen Creek – turn off rt & at appeal (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

| | |
|---|---|
| Acer rubrum | 1 |
| Baptisia tinctoria | 3 |
| Smilax glauca | 4 |
| Pinus virginiana | 7 |
| Ilex opaca | 8 |
| Sassafras albidum | 11 |
| Quercus sp. | 12 |
| Chimaphila mac. | 16 |
| Quercus prinus | 17 |
| Liriodendron tulipifera | 21 |
| Carya sp | 25 |
| Amelanchier sp. | 41 |
| Fagus grand. | 52 |
| Vaccinium vacillans | 40 |
| Danthonia spicata? | 62 |
| Prunus serotina | 63 |
| Lonicera japonica | 64 |
| Tsuga can. | 74 |
| Myrica sp. | 92 |
| Vaccinium stamineum | 114 |
| Monotropa hypopitys | 115 |
| Polystichum acrost. | 139 |
| Lycopodium compl. | 140 |
| Botrychium sp. | 145 |
| Rhus tox. | 149 |
| Morus sp.? | 208 |
| Achillea millefolium | 219 |
| Parthenocissus quinq. | 229 |
| Goodyera pubescens | 272 |
| Rubus sp. | 331 |
| Solidago sp | 337 |
| Asplenium platy. | 340 |

| | |
|---|---|
| Mitchella repens | 374 |
| Diospyros virg | 417 |
| Cornus florida | 419 |
| Carex sp | 501 |
| Robinia ps. | 529 |
| Viburnum acer. | 575 |
| Vitis sp. | 687 |
| Nyssa sylvatica | 706 |
| Crataegus sp. | 738 |
| Viola sp | 934 |
| Campsis rad. | 940 |
| Athyrium fil.-fem | 956 |
| | 1000 |

On ~~road that was~~ 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 (wolf trees larger), and very sparse ground layer of Chimaphila, Vaccinium vacillans, Smilax glauca, seedlings of Quercus, Prunus serotina, Rhododendron, vines of Rhus toxicodendron and Lonicera japonica. The other plants are either rare, occasional 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, Dennstaedtia, Polystichum.

~~Ho~~ May 10 - Hellen Creek

labels written

| | | | |
|---|---|---|---|
| 42306 | | Stellaria<br>sandy moist roadside | diffuse, inflorescence ascending, flowers white. |
| 1 | 07 | Cerastium<br>sandy moist roadside | ascending; flowers white. |
| 1 | 08 | Oxalis corniculata L.<br>sandy moist roadside | flowers yellow; fruits pointing upward. |
| 1 | 09 | Potentilla<br>edge of woods near road | ascending; petals yellow, scarcely emarginate. |
| 1 | 10 | Viola<br>common in woods along old trail in sandy soil | flowers white, slight black marking on lower petal. |
| 2 | 11 | Viola cucullata Ait.<br>common in wet ravine bottom | rhizome slender, horizontal. scapes erect; flowers violet. |
| 1 | 12 | Juncus<br>common in sandy soil in edge of woods near road. | |
| 1 | 13 | Lechea<br>occasional in cleared pine woods | |
| 2 | 14 | Gaylussacia baccata<br>local in cleared pine woods | shrub 40 cm. tall; flowers reddish green. |
| 1 | 15 | Potentilla<br>in eroded ravine in cleared pine woods | ~~flowers~~ petals yellow, scarcely emarginate. |
| 2 | 16 | Vaccinium vacillans<br>common in cleared pine woods | shrub 3-4 dm. tall; flowers reddish green. |

1967 Virginia

May 13 - Wildcat Mt. Preserve

fl Vaccinium stamineum
Castanea dentata
Nyssa sylvatica
fl Polygonatum biflorum
Fraxinus americana
Botrychium virginianum
fl. Ranunculus abortivus
fl Uvularia perfoliata
Circaea quadrisulcata
fl Viburnum acerifolium
Monotropa uniflora
Polystichum acrostichoides
Diervilla quaternata
fl Galium aparine
Galium triflorum
Catalpa
Symphoricarpos orbiculatus
fl Viburnum prunifolium
Broussonetia papyrifera
Celtis 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 plantag.
fl Saxifraga virginiana
Woodsia ?



fl Silene caroliniana
fl Fragaria
fl Cynoglossum virginianum
fl Cnalorhiza
fl Aquilegia canadensis
Dryopteris marginalis
fl Arisaema atrorubens
fl Cornandra umbellata
fl Carex
fl Viola

May 3 - Wildcat Mt. Preserve, ~~mi.~~ mi. of Bethel, 5 mi. n.e. Warrenton in second-growth hardwood forest, mostly oak.

✓ = labels typed by WK

| | | | |
|---|---|---|---|
| 42317 | Comandra umbellata (L.) Nutt. very local, with Vaccinium | ~~grn~~ flowers white. |
| ✓1 18 | Carex rare | glaucous; culms ascending. |
| ✓1 19 | Obolaria virginica L. very local | plants purplish green; flowers white. |
| ✓1 20 | Cynoglossum virginianum L. rare | erect; corolla pale bluish. |
| ✓2 21 | Aquilegia canadensis L. rare | sepals and spurs red, limb of petals yellow. |
| ✓1 22 | Corallorhiza wistariana Conr. | plant bronze-purple; lip white with purple spots. |
| 22a | rare Saxifraga virginiensis | |
| ✓1 23 | Silene caroliniana Walt. rare, on rocks | flowers pink. |
| ✓2 24 | Dentaria laciniata Muhl. abundant | erect |
| ✓2 25 | Woodsia very local on rock outcrop | |
| ✓2 26 | Gaylussacia baccata (Wang.) Koch common locally | shrub 0.5 m. tall, flower reddish green. |
| ✓2 27 | Vaccinium stamineum L. common | shrub 0.5 m. tall; flowers white. |
| ✓2 28 | Viola pedata L. locally common; on old almost obliterated wood road | upper petals very dark purple, lower violet. |
| ✓1 29 | Antennaria plantaginifolia (L.) Hook. very local | stoloniferous; ♂ |
| ✓1 30 | Antennaria plantaginifolia (L.) Hook. very local | stoloniferous; ♀ |
| ✓2 31 | Vaccinium vacillans Torr. very common | low shrub, 0.3 m. tall; fls. white. |

| | | | |
|---|---|---|---|
| 42332 ✓2 | | Rhododendron nudiflorum (L.) Tor. local | shrub 1 m. tall (others up to 3 m.); corolla pale pink with red tube, rather disagreeably fragrant. |
| ✓2 | 33 | Thalictrum thalictroides locally common, on rocks | petals white. |
| ✓2 | 34 | Viola sororia Willd. common in large grassy clearing, (also in woods) | petioles erect, white villous; flowers bright purple. |
| ✓2 | 35 | Viburnum prunifolium L. occasional | shrub 3 m. tall; flowers white. |
| ✓1 | 36 | Antennaria parlinii Fern.? ~~[illegible]~~ occasional in grassy clearing. | scapes erect; leaves green above. |
| ✓2 | 37 | Polygonatum biflorum (Walt.) Ell. very local | flowers greenish white, limb green. |
| ✓3 | 38 | Uvularia perfoliata L. abundant | flower straw-colored, pendent. |
| ✓2 | 39 | Ranunculus abortivus L. var. abortivus common, locally abundant | plant glossy green; petals minute, yellow. |
| Labels typed 42340-42344 | | | |
| | | May 19, 1 Bureau of Public Roads ~~Administration~~ property, Langley, Fairfax Co. | |
| 4 | 40 | Elaeagnus common locally in thickets and open woods | shrub 2 m. tall; flowers yellow, (drooping). |
| 2 | 41 | (moss) abundant on top of quartz ridge, in forest. | gray-green |
| 1 | 42 | (moss) same | |
| 2 | 43 | Acer nigrum seedlings and saplings in tall mixed forest | saplings 2 + 10 dm. |
| 2 | 44 | Morus rubra one tree seen in mixed forest, understory | slender tree 5 m tall. |

1962 Virginia

May 19 - Bureau Public Roads ~~Cabin~~. 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 very deep blanket of Lonicera and Rhus tox., with scattered Rhus typhina, Sassafras, and Rubus argutus.



Fairfax Co.
Near PRA lab bldg.
is some open grass on rolling hills, around it more choked tangled scrub forest of Juniperus, Robinia, Gleditschia, Acer rubrum, Acer negundo, Pinus vir.

Back of lab, toward river, forest is still very irregular, partly open, with much more Cornus florida, some Juglans nigra, considerable Oxeanus 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 under growth 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,

a few seedling pines

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



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 sapling 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 virg., Q. falcata,

with a good Vaccinium layer, ~~so~~ some Cornus florida, Sassafras, - 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 Nyssa + Sassafras. Sparse undergrowth mostly Rhododendron maximum. locally saplings ½-3 m. of Rhododendron Nyssa Pinus virg. Sparse Vaccinium layer with Quercus + Carya seedlings. Hypoxis, Chimaphila maculata irregular moss layer. Various other herbs, e.g. ~~Amelanchier~~ Amelanchier 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 ring count) (this - about 1 cm. thick, has about 15 rings)

N. no. of ~~so~~ north end of hill is tall forest of Quercus alba, Rhododendron, Q. falcata, Carya sp., occ. Fagus.

with about 80% canopy and trees to 3(6) ds dbh. a fairly dense layer 2-5 m high of Cornus, with some Carpinus, Juniperus, Lirioden dron. ~~[illegible]~~ Lindera

rather dense ground layer of Lonicera, Vaccinium, Hepatica, Mitchella, Solidago caesia, Hypoxis, Galium triflorum, May Apple, Parthenocissus, Antennaria, Heracium venosum, laev., Desmodium, Stellaria pubera, etc. and seedlings of oaks, Cornus, Prunus, etc.

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

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

Variations on the oak woods described above extend around the north end of the hill and down to a small stream just [illegible] of Parkinson fence.



Undergrowth along the stream is rich. Forest has Platanus. Asimina is common. also Lebrus. A tiny substantial concrete bldg. along stream - roof, no good.

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

On bank here above stream and old road are Adiantum pedatum and Polystichum. Osmorhiza. 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. Houstonia, Solidago, Stellaria pubera, Dentaria, Mitchella,

Smilacina, etc.
Prosorea villosa (rare)
Up the hill some Vaccinium Viburnum acerifolium, ground layer rapidly becomes sparser. also shrub layer. Some azalea

The top of the ridge at this end is a cresta of quartz outcrop - 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 dense canopy at least 90%, with Fagus, Liriodendron, Ailanthus, Quercus small Morus rubra,



Thin Lonicera grows over with seedlings of Q. prinus, F. rapanea, Ailanthus, Fagus etc.
over nigrum seedlings some native herbs. Botrychium Fairly good Cornus virg. 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 becomes much less southward
Lindera, Aristolochia atriculata, Circaea, Podophyllum, Parthenocissus, Polygonatum, Botrychium, Dentaria, all become common. Dioscorea quaternata.

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

1962 Maryland

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

a Vaccinium vacillans (y.b.)
a Lonicera japonica
Fraxinus americana
a Rhus toxicodendron (fl)
a Cornus florida u
o Vitis
o Quercus prinus c
c Ilex opaca u, s (fl)
c Parthenocissus quinquefolia q
o Polygonatum biflorum
o Euonymus americanus (fr)
c Viburnum acerifolium (fl)
c Amelanchier
c Podophyllum peltatum q (fl)
Carya
a Liriodendron tulipiferum c (fl)
Robinia pseudo-acacia
s Quercus alba c
Vaccinium cf corymbosum
Smilax cf. herbacea (fl)
Smilacina racemosa q (fl)
Quercus velutina
Acer rubrum
Amelanchier canadensis?
Polystichum acrostichoides
Lycopodium lucidulum q
Mitchella repens q
Viburnum dentatum s (s)



Quercus falcata c
Fagus grandifolia s
Kalmia latifolia s
s la Hedera helix q (fr)
l s Uvularia perfoliata
o Prunus serotina
o Prunus avium?
s Amelanchier arborea
s Sambucus canadensis
s Morus nigra?
o Lindera benzoin
s Quercus coccinea
l o Nyssa sylvatica (s)

1942 Maryland

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 Polystichum. 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 locust, become more abundant, Liriodendron less. Honeysuckle becomes sparse, as does all ground cover. Cornus layi 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 · Weems Creek,
Annapolis

42345
#3345 Thelypteris noveboracensis (L.) Nieuwl (Nieuwl)
✓1 very local in Rhododendron forest
Va

Sh, Nor, Pale

May 26 - Crescent Rocks
✓1 46 Arabis flowers white
abundant in crevices
of rock cliff

May 26 - Story Man Mt.
slope above Skyland
~~47 Rubus~~ in this low
~~common~~ forest, mainly oak, on rocky soil.
✓2 47 Rubus
common

✓1 48
common along trail
✓3 49 Pedicularis canadensis galea maroon, lower lip yellow
very common locally, with #42350
✓3 50 Pedicularis canadensis galea bronze-yellow, lower
very common locally, with #42349 lip yellow
✓2 51 Rhododendron roseum shrub 2 m. tall, flowers
common bright pink with red tube,
very fragrant, clove scented.
✓1 52 Carex
common
✓1 53 Anemone quinquefolia L. rhizome horizontal, brittle,
common locally white with brownish epidermis;
flowers white.
✓1 54 Cypripedium calceolus lip large, yellow, petals
common locally, with #42355 + sepals greenish brown;
✓1 55 Cypripedium lip small, yellow,
common locally, with #42356

(5 p. 154)

1962 Virginia

May 22 - Stony Man, just above Skyland

Cypripedium calceolus common in large patch of Osmunda claytoniana
Measurement of lip -

| | |
|---|---|
| 1 5/8" | ~~IIII~~ III |
| 1 6/8" | ~~IIII~~ |
| 1 3/8 | ~~IIII~~ |
| 1 4/8 | ~~IIII~~ I |
| 1 7/8 | IIII |
| 1 2/8 | ~~IIII~~ III |
| 1 | ~~IIII~~ ~~IIII~~ III |
| 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 browner sepals and petals.

The plants are commonest in the large colony of



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

The plants with very small lips (about 1 inch) have little fluting, tend to have browner 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.

| | | | |
|---|---|---|---|
| 42356 | | Carex common | |
| ✓1 | 57 | Viola occasional | flowers yellow |
| ✓1 | 58 | Ranunculus common | |
| ✓1 | 59 | Silene locally common | calyx reddish green; petals pink. |
| ✓1 | 60 | Carex locally common | |
| ✓1 | 61 | Viola occasional | leaves gray-green; flowers purple |
| ✓3 | 62 | Ranunculus common | roots slender; petals yellow, glossy. |
| | | May 27 - Big Meadows | |
| ✓1 | 63 | Secale cereale around building in new campground | erect, somewhat glaucous. |
| ✓2 | 64 | Callitriche in newly excavated ditch in edge of swamp, in very shallow water on gravel bottom. | |
| ✓3 | 65 | Callitriche in newly ~~ed~~ 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) | shrub 1.5 m. tall; flowers white with pink tube, ~~ed~~ stamens and style, rather unpleasantly fragrant. |
| ✓2 | 67 | Rhododendron roseum common in mixed woods, principally Quercus and Betula (with #42366) | shrub 1.5 m. tall, flower bright pink, tube, stamens and style deeper pink; deliciously clove scented. |

(to p. 162)

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

Crescent Rocks — 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
~~[illegible]~~ length of lip

1" ||||

1 1/8 ||||

1 3/8 ||



Mixed oak forest
Trillium grandiflorum (fl)
Lycopodium complanatum
Zizia aurea (fl)
Geranium maculatum (fl)
Cypripedium calceolus (fl)
(sepals + petals maroon)
Adiantum pedatum
Thelypteris dryopteris
Silene caroliniana (fl)
Goodyera sp
(ciliaeum) (below trail)
Stellaria pubera (fl)
Pedicularis canadensis (fl)
(both forms)
Hedyotis caerulea (fl)
Vaccinium vacillans (fl)
Dioscorea quaternata (fl-♂)
Thalictrum dioicum? (fl)
Smilacina racemosa (ff)
Rhododendron roseum (fl)
Zizia aptera (fl)
Menziesia pilosa (ff)
Ligusticum? yellow (fl)
Hamamelis virginiana
Polypodium vulgare
Pseudolaenidia? (yellow fl) (fl)
Saxifraga virginica (fr)
Viburnum acerifolium (b)
Physocarpus opulifolius (b)
Sedum telephioides
Robinia pseudoacacia (fl)
Acer spicatum (fl)
Chrysosplenium [illegible] (fl)

Thalictrum polygamum (fl)
Veronica officinalis
Ranunculus abortivus (fl)
Epilobium [illegible] (fl)
Viola canadensis (fl)
Vaccinium stamineum (fl)
Sassafras albidum (fl)
Sanguinaria canadensis (fr)

---

Rubus occidentalis (fl)
Rhus Toxicodendron (fl)
Juglans nigra (fl)
Ribes
Hydrangea arborescens (b)
Viburnum acerifolium (fl)
Kalmia latifolia (b)
Asclepias quadrifolia (b)
Parthenium integrifolium (b)
Hypocarpus opulis (fl)
Sedum (b) (fl)
Cornus florida (fl)
(about past)
Rubus cf. hispidus (fl)
Fragaria (fl)
Spiraea betulaefolia (b)
Symplocarpus foetida (fl)
Aronia (fl) (b)
Uvularia perfoliata (fl)
Pteridium aquilinum
Polystichum acrostichoides
Baptisia tinctoria
Acer pensylvanicum (fl)
Aralia



Impatiens capensis
on appal. Tr. bet
Lewis Spring + Big Meadow
(1899 Flood Mark)

1 1/2 IIII
1 IIII IIII
0 7/2 I

Trail around the swamp:-
Senecio aureus (fl)
Fragaria (fl)
Thalictrum polygamum (fl)
Anemone quinquefolia (fl)
Ranunculus (fl)
Vaccinium vacillans (fl)
Geranium maculatum (fl)
Cornus foemina (b)
Potentilla canadensis (fl)
Antennaria plantag. (fl)
Hedyotis caerulea (fl)
Uvularia sessilifolia (fl)
Vaccinium stamineum (fl)
Rumex acetosella (fl)
Stellaria pubera (fl)
Xenobia liquetrina (b)
Hieracium pratense (b)
Uvularia perfoliata (fl)
Trillium grandiflorum (fl)
Silene carolinana (fl)
Osmunda claytoniana

Zizia aptera (fl)
Caltha palustris (fl)

Chimaphila maculata (b.)
Amianthum muscetoxicum (b.)
Ariisaema atrorubens fl
Viola eriocarpa (fl)
Stellaria pubera (fl)
Rhod. nudiflorum (fl)
Rhod roseum (fl)
Hedyotis caerulea (fl)
Geranium mac. (fl)
Fragaria virg. (fl)
Senecio aureus (fl)
Prunus virginiana (unp.)
Cynoglossum officinale (fl)
Smilacina racemosa (fl)
Trillium grandifl. (fl)
Maianthemum can. (fl)
Pyrola rot. v. ames. fl
Mitchella repens



Quercus ilicifolius (ac)
Zizia aptera (fl)
Eupula mult. (fl)
Vaccinium stamineum (fl)
Vacc. vacillans (fl)
Lycopodium complanatum (fl)
Lycopodium obscurum

| | | | |
|---|---|---|---|
| | | May 27 same - around edge of swamp | |
| 42368 | | Viola<br>muddy marshy open place | flowers purple, lateral petals bearded at base. |
| ✓1 | 69 | Ranunculus<br>moist but not wet ground under trees | roots very slightly fleshy; petals yellow, glossy. |
| ✓1 | 70 | Viola<br>moist but not wet semi-shaded ground | flowers deep purple, lateral petals bearded |
| ✓1 | 71 | Carex<br>moist but not wet, semi-shaded ground | |
| ✓1 | 72 | Salix<br>moist but not wet shrubby ground | shrub 1 m. tall. |
| ✓2 | 73 | Quercus alba<br>moist but not wet ground | small tree. |
| ✓2 | 74 | Quercus velutina<br>moist but not wet ground | small tree, 10 m. tall, spreading crown. |
| ✓1 | 75 | Lonicera dioica f. glaucescens (Rehd.) Deam<br>open shrubby moist ground | twining up through bushes. |
| ✓2 | 76 | Antennaria plantaginifolia<br>moist meadow | |
| ✓1 | 77 | Viola emarginata<br>occasional in moist meadows | flowers purple, center white, ~~lateral~~ lateral petals bearded at base. |
| ✓2 | 78 | Saxifraga pensylvanica L.<br>rare in moist ground among low bushes. | petals white |
| ✓1 | 79 | Pyrus coronaria L.<br>occasional in thickets | shrub 3 m. tall, twigs spinescent flowers pink. |
| ✓2 | 80 | Vaccinium vacillans Torr.<br>very common | low bush; ~~3~~ 30 cm. tall, leaves glaucous beneath, corolla pale green. |
| ✓1 | 81 | Luzula<br>common in grassy meadow | |

42382 Rhododendron roseum
√3 occasional — shrub 2 m. tall; flowers bright pink, tubes, stamens and style deeper, deliciously clove-scented.

√1 83 Prunus serotina
occasional — small tree; flowers white.

√1 84 Maianthemum canadense
common in moist shaded ground — flowers white.

√1 85 Viola papilionacea f. albiflora grows
local in cleared muddy place — flower very pale lavender with somewhat darker center.

√1 86 Poa
in cleared muddy place

√2 87 Viola cucullata
common in cleared muddy place

√1 88 Crataegus
abundant, forming thickets — shrub 4 m. tall; petals white, anthers purple.

May 27 – trail from Big Meadows to Lewis Spring Falls
in second-growth mixed oak woods on rocky soil

√1 89 Senecio obovatus Muhl.
occasional — ligules and disk each lemon or butter yellow.

√1 90 Asclepias
rocky place

√1 91 Osmorhiza claytoni
rocky talus — flowers white.

√2 92 Carex
~~rocky~~ on rock outcrops — caespitose.

√1 93 Vaccinium angustifolium
very local on rocky slope — 1-2 dm tall; fruit immature.

√1 94 Antennaria
occasional

√1 95 Ribes
at foot of rock cliff — shrub .7 m tall, fruit immature.

| | | | |
|---|---|---|---|
| 4x396 | | Ribes | slender shrub 0.5 m. tall, fruit immature. |
| ✓1 | | on talus at base of cliff | |
| ✓1 | 97 | Carex | plant tufted, culms spreading, leaves glaucous. |
| | | on rock ledge | |
| | | May 27 Lewis Spring Falls | |
| ✓1 | 98 | Woodsia ap. obtusa (Spreng.) Torr. | |
| | | in rock crevices | |
| ✓1 | 99 | Polygonatum biflorum | flowers whitish with green tips |
| | | in rock crevices | |
| 4x400 | | Thelypteris dryopteris (L.) Slos. ex Rydb. | |
| ✓1 | | very local in oak woods | |
| ✓1 | 01 | Pyrus melanocarpa | low shrub; flowers white. |
| | | on rocky ledges | |
| 11 | 02 | Prunus pensylvanica L. f. | shrub 1 m. tall |
| | | on talus of boulders | |
| | | May 27 – north entrance to Park, s. of Front Royal | |
| | | deciduous woods | |
| ✓2 | 03 | Celtis occidentalis. | shrub 1.5 m. tall. |
| ✓3 | 04 | Rosa multiflora var. | flowers double, white. |
| | | in edge of forest, climbing in trees | |
| ✓3 | 05 | Rosa multiflora | flowers single, pinkish white. |
| | | in edge of woods, climbing in trees | |
| ✓2 | 06 | Prunus cerasus L.? | small tree, fruit immature. |
| | | in edge of woods | |

1962 · Virginia

May 30 - Wildcat Mountain

Plants seen on trail back of house

Heuchera (fl.)
Hedyotis purpurea (fl)
Senecio aureus (fl)
Rhus Tox
Botrychium virginianum
Asplenium platyneuron
Uvularia perfoliata (f.)
Rubus (fl)
Lychnis (fl)
Asclepias (fl)
Galium aparine (fr.)

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

"Seventeen-year locust," 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.

1962 Virginia

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

√42-407 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 Hedyotis purpurea var. purpurea
common, especially in trail, but also in forest.

√1 14 Rubus flagellaris Willd. Det. K. Heller 31 July 1986
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

---

Fauquier Co.

n above.

um
ous
escule
zed,

ng &
ellow,
marginate.
mm

wender,

wender.

flowers

white.

recumbent.

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

---

Theodore F. Bl
Theodo
Denise
Mrs. Theodore F. Bland
Jessica Bland
Jessie Ford
Anthony Ford

Theodore F. Bla

Theodo

Denise

Mrs. Theodore F. Bland

Tonisia Bland

Irma Ford

Anthony Ford

1962 Virginia

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

| | | | |
|---|---|---|---|
| √41-407 | | Antennaria parlinii Fern. occasional along trail | leaves bright green above. |
| √1 | 08 | Galium aparine L. rare | weakly ascending. |
| √2 | 09 | Uvularia perfoliata common | ~~[illegible]~~ root crown deeply buried, stolons white, slender; capsule immature, 3-lobed, lobes bifid. |
| ~~√10~~ | | | |
| √2 | 10 | Potentilla canadensis common in semi-open places | stems ascending & erect, flowers yellow, petals somewhat emarginate. |
| √2 | 11 | Carex common | small loose tufts, culms ascending. |
| √2 | 12 | Asclepias very local in open trail | flowers pale lavender, crown white. |
| √2 | 13 | Hedyotis purpurea var. purpurea common, especially in trail but also in forest | flowers deep lavender. |
| √1 | 14 | Rubus flagellaris Willd. Det. K. Fletcher 31 July 1986 common, especially along trail | stems trailing; flowers white. |
| √2 | 15 | Silene local in trail in open | erect, corolla white |
| √1 | 16 | Galium aparine L. rare in trail | recumbent. |

June 4
~~May 15~~ – Washington, DC.

| | | | |
|---|---|---|---|
| √1 | 17 | Cornus mas planted near Library of Congress | shrub 3 m. tall, densely branched. fruit green. |

1942 Illinois

June 2 – Wabash bottom land above Rochester. Tall forest

Q. macrocarpa
Q. nigra
Gleditschia
Ulmus
Q. palustris
Juglans cinerea
Platanus
Acer saccharinum
~~Celtis (rare)~~
Carya illinoinensis
Betula nigra
Celtis laevigata

Ingrown
a Solidago sp.
la Rhus tox.
la Viola cf. papilionacea
la Lysimachia nummularia
a 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. Shut (Chicago) reports, in letter to Illinois 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.)

 1962 Maryland

June 14 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 tinctoria (fl)
c Dantonia spicata (fl)
c Panicum sp. (several)
o Lechea sp.
c Andropogon sp.
r Stylosanthes

with scattered dwarf shrubs

c of Vaccinium ~~sp~~ vacillans
o Parthenocissus
1 various seedlings
o Rubus cf. Hispidus
r 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 montana (?) (to 15 m.)
c Pinus virginiana (to 2.5 m.)
l Myrica
o Fagus (to ~~3~~ 2 m)
o Aralia spinosa (to ~~3~~ 2 m.)
o Rhus copallina (to 1 m.)
o Kalmia latifolia (1 existing?)



o Vaccinium corymbosum
lc Carya sp. (to 1 m.)
lc Sassafras albidum
o Ilex opaca
o Prunus serotina (to 1 m.)
r Quercus prinus (to 1 m.)
r Quercus coccinea (to 0.5 m.)
r Viburnum acerifolium

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

General list (from pp. 121-4)

Juncus effusus
Asplenium platyneuron
Vitis aestivalis
Vitis sp.
Euonymus
Goodyera pubescens (fl)
Lycopodium complanatum
Campsis
Achillea millefolium (fl)
Apocynum androsaemifolium
Gaylussacia baccata
Senecio obovatus asteroides
Euphorbia corollata
Vaccinium stamineum
Smilax glauca
Smilax rotundifolia
Nyssa sylvatica

1902 Maryland

Veronica officinalis
Krigia virginica
Prunus
~~Sa~~ Sassafras
Asimina triloba
Diodia teres
Rumex acetosella (fl)
Geranium carolinianum
Bromus japonicus (fr)
Euphorbia hypericifolia
Ambrosia artemisifolia
Carex lurida (fl)
Trifolium repens (fl)
Oxalis (fl)
Plantago lanceolata (fl)
Rubus cf. argutus
Cuscuta ~~americana~~ strigosa (fl)
Chrysanthemum leucanthemum (fl)
Holcus lanatus (fl)
Lonicera canadensis (fl)

General area of Appeal – Lusby & south.
Locally evidence of 17 year cicadas.
~~Noes~~ No broken twigs seen near preserve.

Osprey nest deserted



Plants of marsh
Carex lurida (fr)
Juncus effusus (fr)
Galium (fl)
Scirpus (fl)
Panicum sp. (fl.)
Sparganium (fl)
Carex (Ovales) (fr)
Juncus (fl.)
Juncus tenuis ? aff. (fl)
Leersia oryzoides
Sarcocornia perennis (fr)

/ perhaps 2 spp. one individual brown yellow-brown but. eye wing.

South of Appeal the cicada damage is fairly general. Great number of holes, cast skins, wings and a few dead and dying cicadas on ground and low vegetation. None heard singing and no very active ones seen.
Asclepias tuberosa common, coming into flower

1962 Maryland

June 11 - Hellen Creek,

wet woods along roadside ditch in sandy soil.

| | | | |
|---|---|---|---|
| 4 2 4 1 8 | | Carex | loose tufts, culms ascending, |
| 2 | | occasional at edge of water | |
| 2 | 19 | Ilex | – spikes pendent. |
| | | occasional in edge of | shrub 2 m. tall; |
| 2 | 20 | Amelanchier | – flowers white. |
| | | occasional in edge of | small tree or shrub 3 m. tall, fruit red, juicy, pleasantly acid. |
| 1 | 21 | fungus) | |
| | | infecting fruits of Amelanchier | |
| 2 | 22 | Salix nigra | shrub 3 m. tall; |
| | | occasional | leaves green beneath. |
| | | same - roadside | |
| 1 | 23 | Geranium carolinianum | |
| | | uncommon | |
| 1 | 24 | Oxalis corniculata L. | flowers yellow, fruits erect. |
| | | common | |
| | | same - in marsh along creek | |
| 2 | 25 | Carex | loose tufts, culms almost erect, vegetative ~~stems~~ decumbent with erect branchlets. |
| | | occasional | |
| 1 | 26 | Juncus | |
| | | common | |
| 1 | 27 | Panicum | culms erect |
| | | common | |
| 2 | 28 | Carex lurida | |
| | | common | |
| 1 | 29 | Juncus tenuis Willd. | |
| | | occasional on sandy shore | |

| | | | |
|---|---|---|---|
| 4 2 4 30 | Panicum common in edges of | | culms erect. |
| 2 31 | Scirpus abundant | | culms erect, very sharply ~~angled~~ trigonous |
| 2 32 | Sparganium locally abundant | | erect |
| 1 33 | Juncus effusus locally abundant | | culms erect, terete |
| 2 34 | Panicum common | | culms erect, plant purple, white reflexed hairs at nodes. |
| | ~~same - roadside~~ | | |
| ~~+ 35~~ | ~~Triodanis biflora rare at roadside~~ | | ~~flowers deep purple.~~ |
| 3 35 | Galium tinctorium L. common | | stems weak erect; flowers white. |
| | same - sandy roadside | 7 m | |
| 1 36 | Triodanis biflora rare | | flowers deep purple. |
| | same on wooded sloping side of ravine. | 7 m | |
| 1 37 | Asplenium platyneuron (L.) Oakes locally common | | |
| 1 38 | Thelypteris noveboracensis (L.) Nieuwl. (Nieuwl.) locally common | | |
| | same - sunny cleared pine woods | 10 m | |
| 2 39 | Prunus floribunda Lend. occasional in edges of | | shrub 1.5 m. tall, fruit immature. |
| 1 40 | Pteridium aquilinum var. latiusculum abundant | | |
| 1 41 | Krigia virginica rare | | flower orange |

| | | | |
|---|---|---|---|
| 42442 | | (lichen) terrestrial on decomposing pine trash | |
| 1 | 43 | (lichen) same | |
| 1 | 44 | (lichen) same | |
| 1 | 45 | SEI ~~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.) T.&G. occasional in edges of | shrub 1.5 m. tall, glaucous; fruit immature. |
| 1 | 50 | Panicum occasional | erect tufts. |
| 1 | 51 | Ptyloxanthes rare | flowers yellow. |
| 1 | 52 | Panicum occasional | erect tufts. |
| 1 | 53 | Danthonia spicata common | culms ascending. |
| 1 | 54 | Lespedeza occasional | stem procumbent; flowers lavender. |
| 1 | 55 | Baptisia tinctoria occasional | |
| 1 | 56 | Rubus occasional | stems procumbent |
| 1 | 57 | Viburnum acerifolium rare | erect shrub 1.5 m tall; fruit immature |
| 1 | 58 | Vaccinium cf. ~~corymbosum~~ atrococcum (gray) Heller occasional | shrub 1 m. tall, leaves glaucous beneath; ripe fruit black. |

v. Labels typed by HK

1942 Maryland - D.C.

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

42459 Athyrium felix-femina
1 f. rubellum
side of

1 60 Lycopodium obscurum
very local, one small colony seen in

1 61 Osmunda cinnamomea L.
occasional

2 62 Thelypteris noveboracensis (L.) Nieuwl.
locally abundant in

~~Parks~~
June 15 - Washington, D.C.
in park across from State Dept. Bldg.

1 2 63 Pyrus (Aronia)
planted

√2 64 Vaccinium corymbosum
planted

√2 65 ~~Crataegus~~ Myrica cerifera
~~plo~~ planted

√2 66 Crataegus
planted

√2 67 Pyrus (Aronia)
planted

~~2 68~~



6 mm.

rachis reddish

shrub 1.5 m. tall;
- fruit immature

shrub 1 m. tall
- fruit immature.

- trimmed shrub 1 m. tall,
(untrimmed nearly to 3 m.)
small tree: fruit
immature.

1962. West Virginia

June 24 - Cacapon River
Pinsley Springs
on stony river bar

42468 Alnus — shrub 3 m. tall
very common

x1 69 Uniola
local

same - wet mossy
on rocks below spring

x3 70 Myosotis scorpioides L. Det. Peter Hartzler 1974 — flowers light blue
local

x1 71 Clematis virona L. — vine
occasional

x2 72 Equisetum hiemale L. — stiffly erect
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
r Q. muhlenbergii ?
c Acer saccharinum
o A. nigrum var. glaucum
c A. rubrum
c Ulmus americanum
o Ulmus rubra ?
c Celtis canadensis



c Ailanthus altissima
o Fraxinus americanus
c Platanus occidentalis
lc Liriodendron tulipifera

Hemerocallis fulva common all along.
Large flats in bows of river
Great talus slope and cliffs.

l Tilia heterophylla
o Quercus prinus
o Q. alba
o Nyssa sylvatica

 1962 West Virginia

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

42473 Tilia heterophylla
X6 occasional

X3 74 Catalpa speciosa
rare, edge of water

X2 75 Oxalis grandis Small
local on sand banks

X1 76 Ilex
common in edges



small tree; leaves dull silvery beneath, badly attacked by tingids; flowers
– partly fallen small tree; flowers very fragrant, calyx narrow, corolla white, throat and inner part of lower three lips marked with network of purple, lower lip also with two orange spots leading down to two folds in throat.
– erect; leaves sour; sterile.

1962 Virginia

June 26 - Wildcat Mt.

Plants noted:

t Lyptis patula (fl)
tw Polygonatum biflorum (fr)
t Dianthus armeria (fl)
tw Sanicula ~~marilandica~~
t Erigeron strigosus (fl)
t Chrysanthemum leucanthemum (fl)
t Allium vineale (bulblet)
t Rhus glabra (fl)
w Lysimachia ciliata (fl)
wt Hedyotis purpurea (fl)
w Smilacina racemosa (fr)
w Botrychium virginianum
w 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 vacillans (fr)
te Circaea quadrisulcata
t Panicum f. boscii
t Panicum linearifolium
w Viburnum acerifolium (fr)
w Heuchera americana (fl)
n w Asplenium platyneuron
w Chimaphila maculata (fl)
n w Polypodium vulgare
w Quercus prinus



l w Carex
l w Sanguinaria canadensis
l w Chimaphila umbellata (fl)
l w Dennstaedtia punctilobula
n w Asimina triloba
o w Festuca obtusa (fr)
o w Morus
n Borago officinalis (fl)
r Cryptotaenia canadensis (fl)
r anemone (fr)
n Pyrus malus
n Apocynum cannabinum (fl)
n Asclepias tuberosa (fr)
n Delphinium ajacis (fl)
n Centaurea cyanus (fl)
n Achillea millefolium (fr)
n Rosa carolina (fl)
n Fraxinus americana
n Parthenocissus quinquefolia (fr) (smooth)
n Asclepias syriaca (fl)
n Melilotus alba (fl)
n Rudbeckia hirta (fl)
n Daucus carota (fl)

Crows
Indigo bunting
Eastern kingbird
mocking bird
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.

~~X 2477~~ June 24 - Wildcat Mountain Preserve

X4 2477 Vernica
in mowed meadow on top of mountain — flowers lavender.

same - on roadside in woods near old dump

X1 78 Polygonum erectum L. — plant ascending, somewhat glaucous.
X1 79 Delphinium ajacis — erect, flowers deep purple.
common
X1 80 Delphinium ajacis — flowers pink.
common
X2 81 Borago officinalis L. — flowers bright blue.
very local

| | | | |
|---|---|---|---|
| ~~40~~ | | same – in forest of oaks, hickory, with some pine | |
| 42482 | | Dennstaedtia punctilobula one large colony | rhizome buried, fronds ascending. |
| X3 | 83 | Chimaphila umbellata one colony seen | leaves glossy green; flowers white. |
| X1 | 84 | Sanguinaria canadensis very local, in rocky area | latex red; leaves glaucous beneath. |
| X3 | 85 | Woodsia? obtusa rare, on rock ledge | |
| X3 | 86 | Polypodium vulgare var. virginianum common on rocks | |
| X1 | 87 | Carex rare on ~~so~~ rocky slope | green, culms spreading. |
| X1 | 88 | Carex local on rocky slope | leaves very glaucous, culms spreading. |
| X1 | 89 | Asplenium platyneuron (L.) Oakes occasional | fronds erect |
| X1 | 90 | Woodsia? obtusa (Spreng.) Torr. rare on earth slope | |
| X1 | 91 | Carex occasional | spreading tuft |
| X1 | 92 | Heuchera near rocks | scape erect, flowers cream color. |
| X1 | 93 | Heuchera on rock ledges | scape erect; flowers cream color. |
| X3 | 94 | Chimaphila maculata common generally | leaves dull dark green with white veins ~~lines~~; flowers white. |
| X4 | 95 | Lysimachia ciliata a single rather large colony | rhizomes buried; flowers yellow |
| X4 | 96 | Smilacina racemosa common | stems ascending from buried rhizome, fruits greenish. |
| X1 | 97 | Galium circaezans occasional | |

1962 Virginia

same – ~~along~~ old trail
in second-growth woods.

| | | | |
|---|---|---|---|
| 4 x 498 | Panicum boscii | | culms erect, arched at top. |
| x 2 | rare | | |
| x 1 | 99 | Galium circaezans | flowers greenish-yellow. |
| | | occasional | |
| x 2 | 500 | Panicum | |
| | | rare | |
| x 2 | 01 | Scutellaria | corolla tube white below, |
| | | occasional | purple above, limb purple. |
| x 2 | 02 | Hedyotis purpurea | flowers lavender |
| | | common | |
| x 1 | 03 | Hedyotis purpurea | flowers lavender |
| | | common | |
| x 2 | 04 | Carex | culms spreading |
| | | rare | |
| x 1 | 05 | Poa compressa | bluish green. |
| | | common | |
| x 1 | 06 | Danthonia spicata | |
| | | occasional | |
| x 2 | 07 | Ceanothus americanus | erect subshrub; flowers white. |
| | | occasional | |
| x 4 | 08 | Geranium maculatum | |
| | | occasional | |
| x 1 | 09 | Dianthus armeria | flowers bright magenta pink. |
| | | occasional | |
| x 2 | 10 | Hedyotis purpurea | flowers lavender. |
| | | common | |
| x 1 | 11 | Panicula | |
| | | occasional | |

Hellers Creek
Turn off Rt. 2 at Lusby.
after 4 miles and just past
St. Wins Church turn ~~right~~ left
after 3½ miles keep to ~~right~~ left
again and travel to stand
next to road (6/10 of a mile)
Hemlocks on right.

Jean Paul (Pabst Boy)
Kennedy Pt
Orangeburg Co

Helle[illegible] Creek

Turn off Rt. 2 at Cusby.

after [illegible] miles and just past

St. [illegible] Church turn ~~right~~ left

after 3½ miles keep to ~~right~~ left

again and travel to stand

next to road (6/10 of a mile)

Hemlocks on right.

follow telephone cable
to dead end & bear
around barn up
a lane to tele cable to
cattle guard turn
it into field
and house on left.

UN 7-5593

No. 2
to 214
14th Lt. Regt
SR Bn, Cumberland
on 214 Tn
48. Th
Cumberland Rd

Green Prof (Nat Hist)
Kennedy R.
Augusta Co.