Going westward one

next to what we observe, the
character of the country
described throughout the
pattern of fields is

In the eastern Ohio M.,
the pattern
regular, wooded, loamy

rectangular

W. and N. it becomes more
regular, wooded, prairie

which are graded,
"ill-factors" which could
become from the pattern
almost completely rectangular,
and wooded, fewer patches
2.5% of total area.

Having Chicago pondered
patches, common about the
patch, seem a bit less

regular.
Collection and Field Note Book
No. 36
(Sept. 1, 1952 - Oct. 4, 1953)
(34609 - 34924)

**VIRGINIA**
Fairfax County ...... 34609-34611 ...... 2-3
Fairfax County ...... 34612-34615 ...... 6-13
Fairfax County ...... 34616-34621 ...... 22-25
Fairfax County ...... 34669-34721 ...... 61-71
Fairfax County ...... 34723-34626 ...... 74-75
Fairfax County ...... 34759-34782 ...... 96-101

**VENEZUELA**
La Guaira to Caracas ............. 4-5
Aragua .................. 34612-34615 ...... 6-13

**MARYLAND**
Anne Arundel County ...... 34622-34630 ...... 26-27

**VIRGINIA**
Fairfax County .................. 34622-34630 ...... 26-27

**MARYLAND**
Anne Arundel County ...... 34622-34630 ...... 26-27

**MARYLAND**
Chesapeake Bay .................. 56-60

**VIRGINIA**
Fairfax County .................. 34668-34721 ...... 61-71

**MARYLAND**
Anne Arundel County ...... 34722 ...... 72-73

**VIRGINIA**
Fairfax County (Sleepy Hollow) 34723-34626 ...... 74-75

**MARYLAND**
Anne Arundel County ...... 34786-34793 ...... 106-109

**VIRGINIA**
Loudoun County .................. 34794-34796 ...... 110-111

**MARYLAND**
Anne Arundel County ...... 34797-34812 ...... 112-131

**VIRGINIA**
Massanutten Mts. .................. 34813-34828 ...... 132-137
Shenandoah County .................. 34829-34847 ...... 138-149
Frederick County .................. 34849-34851 ...... 148-149
Shenandoah County .................. 34849-34851 ...... 150-151
Rockbridge County .................. 34852-34855 ...... 152-153
Botetourt County .................. 34856-34875 ...... 154-157
Bedford County .................. 34856-34875 ...... 156-163
Shenandoah National Park .................. 34876-34920 ...... 164-173
Shenandoah County .................. 34921-34923 ...... 174-177

**WISCONSIN**
Dane County .................. 34924 ...... 182-187

**VIRGINIA**
Prince William County .................. E N D

Page No.
76-77
78-79
80-83
84-85
86-87
88-95
96-101
102-103
104-105
106-109
110-111
112-131
132-137
138-149
148-149
150-151
152-153
154-157
156-163
164-173
174-177
180-181
182-187
188-189
F. A. Forsberg collection
and field data books #36
beginning with #34609
ending with 34924

Standard
Miniature Blank
Book

No. 665 9½ x 6 120 Pages Units
No. 667 9½ x 6 200 Pages Units
No. 668 9½ x 6 300 Pages Units

Made in the Following Rulings:
Journals, Day or Cash Books, Double S and Cts.
S. E. Ledgers, &c. &c.
Double Entry Ledgers
Records with Margin Line.

When ordering give Number and Ruling desired.
Made in U. S. A.

WHEN ORDERING THIS BOOK SPECIFY
STOCK NUMBER AND RULING DESIRED.
A BOORUM & PEASE PRODUCT
1952 Virginia

Sept. 1 - Sleepy Hollow,
1 mi. S. of Falls Church
bottom land woods,
mainly liquidambar

34609
Nectria
on dead branches

13
10

on dead twigs, raw

15
11

in dead branches, common

Fairfax Co.

pileus and gills black
dull brown.
Sept. 3-9 Coastal range along road from La Guaira to Caracas

At this time of the year the hills are mostly at least somewhat green, though there are some areas low on the seaward side that are red and eroded. Upward the vegetation becomes more and more luxuriant.

According to the Venetian there were formerly thousands of goats on these hills, but they have been completely eliminated now. The acacia was eaten to bare sticks before, is now green and luxuriant.

On the side of the canyon leading up toward Caracas, facing inland, the vegetation is largely Acacia and Caesia (peruviana). This same type is on the lower slopes of the seaward side, a few hundred feet above La Guaira. Above it is replaced by a moister broad-leaved type of second growth, with some Inga, etc.

Up the canyon is being built a new and much straighter road to a super highway. It will have few curves, but will reach the same altitude as it goes over the pass into Caracas on the present La Guaira road. In the construction great scars are being cut into the mountainside.

The mountain to the east of the pass is quite high, well rounded on the upper slopes, and, according to Lasser, has a small Panama in 50, with Escholatia.
1952 Venezuela

dep't. 6 - 7 - Road from Caracas to Maracaay

This road runs for a good part of the way through sharply dissected country, slopes averaging 45° a plane, with small portions wooded with second growth, mostly covered by Panicum maximum. The forest is largely confined to ravine and canyon bottoms, steep slopes, etc. Its boundaries are usually quite sharp.

Toward Maracaay the road runs in a flat valley bottom, the sides abruptly rising from the edge of the bottom. This valley is largely in cultivation or pasture, with a liberal scattering of banana and other trees.

Anagui

In the western part of this valley is the large lagoon Valencia. This is surrounded, at least on the north side, by a broad belt of grassy, herbaceous vegetation, very uniform in appearance, said by Dr. Fassn to be Oenidea.
1952 Venezuela

Left. 7 - Ranchos Grande National Park.

Cinchona pubescens Val. tree in moist forest
in ravine below road

13 Beclaria

common in undergrowth
in wet forest in deep valley

occasional in wet forest
in deep valley

common in moist forest
in steep ridge

Ranchos Grande is situated
just east of a gap in a
mountain ridge at 1000 m.
on the south side of the
ridge. The prevailing
wind here is from the east,
but local winds, of
convection origin, seem
more important. Two of
these, one ascending from
the seaward, the other ascending
the valley from the south,
meet at the gap. The south
wind seems dominant and
wetter. These produce
sufficient rainfall to
maintain a wet forest,
with abundant lianas
and epiphytes, in the gorge

Anagania
Caracas, 24 de marzo de 1954.

Dr. F.R. Fosberg
United States Department of the Interior
Geological Survey
Washington 25, D.C., U.S.A.

Dear Dr. Fosberg:

Muchas gracias por su carta y por el informe que me suministró referente al Servival Service Committee.

El sitio donde Ud. coleccionó la muestra de Cinchona está situado entre Guamitas y Ranco Grande a una altura de más o menos 800 mts.

En unión de Magdalena reciba mis mejores deseos por el bienestar de Ud. y el de la Sra. Fosberg.

Sinceramente,

[Signature]

Tobias Lasser
Apartado 2156
Caracas, Venezuela
1952 Venezuela

Ranchos Grande National Park.

Cinchona pubescens Vall. on tree in moist forest in ravine below road

Besleria

common in undergrowth in wet forest in deep valley

occasional in wet forest in deep valley

common in moist forest on steep ridge

Ranchos Grande is situated just east of a gap in a mountain ridge at 1060 m. on the south side of the ridge. The prevailing wind here is from the east, but local winds, of connecting origin (?), seem more important. Two of these, one ascending from the seaward, the other ascending the valley from the south, meet at the gap. The south wind seems dominant and wetter. These produced sufficient rainfall to maintain a wet forest, with abundant lianas and epiphytes in the gorge

...small tree, 5 m. tall; old leaves red, flowers fragrant, shrimp 1 m. tall; fruit bright red...

950 m.

slender 1.5 m. tall, flower crimson red.

running up to the south side of the gap, this characterized by enormous trees of Gymnanther and an undergrowth of Passiflora, Heliconia, and various other shrubs and large herbs with many ferns. The walls are quite steep but irregularly so. There is no proper canopy. The Gymnanther trees tower above the others and are laden with bromelias and other epiphytes. They have a great expanse of buttresses at the base. Common in the forest are stilt palms (Iniaera)
and a clustered Bactris. This has spines up to 6 cm long on trunk and sheath. The stilt palms are up to 30 m tall and have a pyramidal conic arrangement. Stilt roots about 2 m high at base, and it is difficult to impossible to find any trace of the bottom part of the trunk, below where the aerial roots originate.

On the ridges is a slightly drier, type of forest, dominated by *Brooxeum*, lacking the *Quihuentia* with another palm with a great cluster of closely packed roots at the base. The undergrowth here is a little less dense. The ground is thickly covered with leaves. It is possible to walk freely in this forest, though occasionally necessary to push through some patches of brush.

On the main ridge above Pataschuela gully is a slightly more scrubby forest, with much undergrowth and masses of *Pilea*, etc. A species of *Thibaudia* is commonly epiphytic, with abundant crimson flowers along the bare elongate branches. The epiphytes are common in the path beneath the trees in which it grows. There are a few grasses also, along the trail.

At the bottom of the gully, near the road, there is a great mass of *Hedychnium*, with *Pilea* and *Colura sectellaroides*. In these were seen an extraordinary abundance of insects, both in kinds and individuals. Several kinds of beetles were collected. The great number of flies, wasps, etc. were not collected.

Around the great building is a stand of *Casuarina equisetifolia*, small trees, obviously not in
good condition, needles short, color rather pale.

Low on the valley toward Maracay, in a rather moist thick forest along road, a single small tree of Ceylonica pubescens, it is almost glabrous variety was found (34612). This is one of the lowest altitudes recorded for Ceylonica pubescens.
October 19, 1952 — Headwaters of Smokeden Branch of Difficult Run 7.2 miles N.E. of Herndon, 50 Road

Mixed forest, principally pine and larch, on rolling ground. In places oaks form almost the entire cover, in places pines make up as much as 1/3. Nowhere is it very dense. Largest trees perhaps 4-5 dm. thick, mostly much smaller. At this season color change is perhaps half complete and leaves have fallen. Populus grandidentata practically bare. Soil is a yellowish gray silt mixed with a little sand and some small broken quartz. Practically no dark soil on the surface. General low shrub stage of Vaccinium vacillans and Gaylussacia baccata. 5 dm tall, sometimes less. Some admixture of herbs and low shrubs.

Four acres on opposite sides of road compact. Terrain similar. On north side — mixed stand, about 1/3 pines, mostly P. virginiana, incl. a few old “wolf trees,” 3-4 dm. thin.

About 1/3 Quercus palustris, trees less than 5 dm.

About 1/3 other oaks (Q. alba, Q. stellata, Q. coccinea, Q. velutina, Q. prinus).

Tall red maple, black cherry, etc.

Very few oaks less than 5 m. tall, mostly 15-20 m. A very sparse and uneven undergrowth is made up of Cephalis fluviatilis, sapling Acer rubrum, sapling Nyssa sylvatica, some Viburnum dentatum, etc. Tangled somewhat with briars.

The Vaccinium-Gaylussacia ground cover is mixed with considerable Chimaphila maculata, some patches of Viburnum acerifolium, a few plants of Cypripedium acaule. In places it is very sparse and lacking. Under the pine is a thick layer of dead needles.
In this area there is no evidence of recent cutting, but there are very old, almost rotten away stumps of what appears to be Pinus echinata about 3-5 dm. thick, also apparently an old road, with many young oaks and a Pinus virginiana "wolf tree" 10" thick growing in it. But still evident.

On the south east side all of the larger trees 4-5 dm. have been logged off rather recently (rings still countable but some polypines evident). Most of these stumps are hick and, judging from backs, mostly Pinus echinata. Three stumps of pine counted showed 113, 94, and 75 rings respectively. All were in general 4-5 dm. size range. In all the inner 1/3 of rings were wide, the outer 1/3 uniformly narrow. Two oak stumps did not show this, rings were more or less uniform. One counted had 78 rings.

Fairfax Co.

This could be interpreted as meaning that the pines grew more or less rapidly until the hardwoods began crowding them, then only grew very slowly, barely holding their own for a long time.

The remaining forest here is principally oak—about equally Q. alba, Q. prinus, Q. velutina, Q. nigra, a little Q. alba, Nyssa sylvatica, Pinus virginiana, Allegheniana, Pinus echinata, and Populus grandidentata. It is ragged and rather open crowned, with a very uneven second story 1-3 dm. tall of oak saplings, Acer rubrum saplings, Rhus radicans, and Carpinus saplings. Some Cornus florida, Viburnum dentatum, tangles with a little wild grape, and I. natans, saliva. The Vaccinium vacillans ground cover rather uneven and with some herbs.
Oct. 25 - old clay pit on 18th St. S.W. west of Pentagon Bldg.

Area noted in 1948 to resemble tall grass prairie seems to have changed very little. Andropogon scoparius and Sorghastrum nutans are co-dominants or in the other locally dominant.

Secondary species are Deschampsia cespitosa, hollow-stem spleenwort, and heaven sp.

On bare spots is a thin bacheen and moss carpet.

Scattered plants of red berry, and an invasive of common Bermuda grass seem to be almost unaltered clay, baked hard and cracked in the current drought.

Another part of pit almost bare. Plants apparently kept that way by a continual slow wash of clay down from the walls of the pit forming broad alluvial fan-like deposition there almost bare. In bottom are polygons resembling frost polygons, but very small, outlines by thin grasses, etc. Apparently there are really desiccation cracks rather than having to do with frost.
Nov. 16 Bull Run Battlefield

Small patch of mature Pinus virginiana, rather sparse.
1952 Virginia

Nov. 23. Lee Blvd. just s. of Pine Ridge. Patch of Pinus virginiana, about 22-25 m. tall, up to 30 cm. diam., rather sparse crowns forming a thin canopy. Trunks irregularly spaced (5-15 m. apart). Second story, principally Liriodendron, but with sapling of Fagus and Acer rubrum etc. 3-6-3 m. tall, leathery leaves about 1 cm. Mitchellia abundant on ground, mostly small, some Hypericum, Calamagrostis and small tree seedlings. No young pines. 

Little Chimonaphila maculata. Mitchellia forms dense mat in bank at edge of forest, thin network in forest.

Adjacent field with thick sapling of virginianas stand about 5-6 (8) m. tall, with a few deciduous (Liriodendron, Fraxinus) saplings of same size; a large n smaller. Spacing of pines mostly 1-2 m.

Fairfax Co.

Loil brown, this layer about 15 cm., underlain by reddish 13 cm. layer. Surface covered by a dust of pine needles and some broad leaves 5-8 cm. thick. Cornus fruit, common on ground.

Invasion from all sides, by Lonicera, at corners forming tangle, in interior a very thin network of smaller vines, fruiting at edges.

34-616

Prostrate, dull green; fruits scarlet.

This is separated from the tall stand (above) by an old roadway, and fence; from this it is invaded for a few feet by a dense tangle of Lonicera growing thin, thread a few m. further, in but as a thin network of smaller vines. Beyond.
1952 Virginia

Fairfax Co.

Brown soil leaf, over yellow-brown subsoil.
Duff layer 4 cm.

1 cm. thin. all small ones dead or dying. Ring counted on 3 trees:
- 6 cm.
- 11 rings
- 14 rings
- Seedlings of Pinus densiflora growing in spite of shade.

Lycopodium complanatum
Polystichum acrostichoides
Asplenium platyneuron, etc.

Sprheading into Senecio
red shrub area on both sides of highway plant on s. side up to 1 m. tall.

- Plant dead at this season.
- Leaf, dark dull green, wthich along veins
  - Prostrate; fruit scarlet.
Nov. 25 - Head of Broad Creek, arm of South River, in thick duff layer in woods of Pinus virginiana.

Mitchella repens L.

Locality West side of head of Broad Creek, arm of South River.

Occurrence Common locally in old field, with scattered trees.

Date November 25, 1952

Alt. m

Coll. H. R. Fosberg

No. 34628

Remarks Prostrate; fruit scarlet.
Mitchella repens L.

Locality West side of head of Broad Creek, arm of South River.

Occurrence Common locally in old field, with scattered trees.

Date November 25, 1952
Coll. F. R. Fosberg

Remarks Prostrate; fruit scarlet.

Lycopodium lucidulum

Locality West side of head of Broad Creek, arm of South River.

Occurrence Rare, small colonies in old field, with scattered trees.

Date November 25, 1952
Coll. F. R. Fosberg

Remarks Erect.
Nov. 25 - Head of Broad Creek, arm of South River - in thick duff-layers in woods of Pinus virginiana.
1. 23 Climaphila maculata
common
2. 29 Climaphila umbellata
locally common

Old field, with scattered trees.
1. 15 Lycopodium
rare in old field
21. 26 Asplenium platyneuron
abundant in old field
3. 27 Botrychium denticulatum, obliquum
common locally

Pinus virginiana woods
1. 19 Mitchellella repens
common
11. 29 Lycopodium lucidulum
rare, small colonies
11. 30 Lycopodium complanatum
common, large spreading colonies.

Rhizome white, branched somewhat in one plane.
Stem long, purple; flowers bronze, lip white, with purple spots along edge.
Erect, leaves small.
Green, pale along veins.
Forming large colonies from horizontal subterranean rhizomes, these whitish, leaves glossy, dark green above, pale beneath.
Erect, leaves dead.
Fertile fronds erect.
Fruiting and stems bronzed.

with some admixture of hardwoods.
Prostrate, fruit scarlet.
Erect.
Rhizome prostrate, in loose duff-layers, fruiting stems erect.
Feb. 1 - Roaches Run
Waterfowl Sanctuary

Sunny but cold windy day.

Hundreds of ducks on water. Perhaps half are pintails. Many of these are sitting along the shore sheltered by overhanging banks. About 1/4 are baldpates and 1/4 are mallards. A small flock of white domestic ducks, 7 in number, are also in the group, as are two coots.

Herring gulls in small numbers in the outer part of pond, some of them flying over the ducks just off the beach, pursuing ducks which get pieces of bread. The ducks can outfly the gulls but the gulls outmaneuver the ducks and usually finally get the bread.

Arlington Co.

Alnus serrulata in full bloom.

A continual stream of visitors arrive and depart, mostly bringing dog treats to feed the ducks. An average of 10-15 cars present.
March 7 - Bull Run, 3/4 mi.

1/2 mi. S of Lee Blvd., 5 mi. N of Centreville. 50 - 65 ft.

That is a gently rolling tract of wooded land, about 1 mi. long, along the run, about 1/2 mi. deep.

Near the run, becoming slightly irregular, drained into the run. An escarpment along the run about 1 ft. high, is mostly back 10 to 100 yds. from the water, but in places is almost sheer into the water. Below this is a flat termed flooded by extreme high water, but usually well above the level of the stream.

The country rock exposed in most places along the escarpment is red Triassic shale, tending to dip westward toward the run. General smallbrooklets cross the west part of the area, originating in springs some distance back of the stream. The walls of the ravines slope gently except the bottom foot or two.

Fairfax Co.

which may be cut in but are not always.

The soil on this slightly dissected slope is quite thin, darker humus layer, filled with small shale platelets.

On the flat behind this the ground has no general slope. Part of the drainage is eastward (by Cub Run) part westward. There is evidently an impervious layer, as the water table at this time seems to be practically at the surface. Slight depressions have water in them. This is apparently not a permanent condition as they are no aquatic plants. A very large moss makes out the only distinctive ground cover in these wet places at this season.

All of this land except the extreme south tip is wooded. The south tip is pasture.

The wood is rather peculiar. There is a
scattering of fairly large old trees, mainly oaks. There are more common on the north half a third. Between these is a thin wood, varying from mixed hardwood and oak, hickory, very little tulip, ash, etc. or mixed hardwood and hickory, Virginia. Its the same, not easily explained. The pine is much more common away from the run, the gently dissected land being in the mixed hardwood type. Both of these types have a scattered but very conspicuous second story of Junipers and, away from the run, stems Virginia, saplings up to 10 ft. tall. The ground is locally covered by carpets of mosses, and a few places by Cladiums. The odd thing about the forest is the small size of all except the few scattered large trees, from 2 to 3" diameter, and the lack of stumps except very old and thoroughly rotten ones. If it were not for these old stumps it would seem probable that this is an old field, abandoned 20-30 years ago, though why the undergrowth is almost lacking would be hard to explain. If there were more and fresher stumps it might have got this appearance by constant and severe logging. Repeated fires could be responsible, though only one burned log was seen.

The lack of large Junipers explains my record. They had been much harvesting of cedar posts. But there are not stumps to support this idea. It is quite easy to walk in any direction in most of this wood.
Along the stream terrace along the Run there is some open ground. Fraxinus and Ulmus are common, also Betula nigra locally and Platanus locally.

The low shale cliffs, 15-15' high, where the Run comes close to the escarpment are covered with luxuriant mat, and cushions of mosses, and patches of ferns. Polypodium vulgare and Asplenium rhizophyllum are common, also Vellaea sp., and Dicrystophorus? is rather rare. Asplenium platyneuron was seen, but on a small slope rather, than on the whole ledge.

March 11 (same)
Walked with J. E. Tpker, in a large circle about in the center of the area, getting well back of the lines of drainage of the several brooklets entering Bull Run in this area. Prickly pear near the Run there are abundant signs of fire which occurred not too long ago (10-20 yrs.)
On the flat ground at the back in this section are areas with quite abundant pines, including several small pure even age patches. Juniperus is common throughout, with a few fairly large trees and some old dead trunks of fairly sizable. Several relatively open areas have a loose scrub of Viburnum prunifolium.

Below town and the mounds resulting from there are abundant but not recent. Most of the trees are almost completely rotted away.
In the thin woods are quite a few dead trees of about the average size of the forest. Possibly for some reason trees here don't get much larger than this.
Then Limoniana japonica in the part away from the Run, apparently kept in check by cattle. Many signs of grazing.
Probably if grazing were withdrawn the honeysuckle would completely cover everything.

Frank Egler's opinion is that not too many years ago this land was pasture with scattered trees - represented by the occasional wolf tree here and there and some of the dead skeletons. This quickly became thickly scattered with juniperus virginiana, then gradually a mixture of pine and broad-leaved scrubs, growth came in and finally, with considerable grazing all along, reached its present state.
March 14 - Fort Scott

Anna Miles, both Arlington

Wooded hill-top, with

earthworks of old

Civil War fort

Mixed deciduous

woods, with several

fairly large beeches,

and common young

beeches 1-5 m. tall.

34621 Fagus grandifolia

30 Fagus grandifolia

small tree 4 m. tall, trunk

bark gray, twigs brown,

old leaves persisting abundant

sapling 1 m. tall, top

possibly injured

small buds on normal

twig, large one on vigorous leading

shoots.
1953 Virginia

Mar. 22 - Bull Run. 3½ - 1½ mi. s. of Leesburg. 5 mi. w. w. of Centreville. 50 - 65 m. steep wooded slopes of crumbling reddish Triassic shale, above run.

34 Lecynanthis canadenis L. abundant on bare shale soil

35 Dentaria laciniata Muhl. abundant on bare shale soil

36 Helianthes apicalis (Curt.) Fann. common on muddy ground in old wood road

37 Polytrichum commune. Patches on flat ground, common.

38 Leucobryum on flat ground

Bluffs along Bull Run. edges, shaly slopes. Triassic shale

37 Hepatica americana (L.C.) Ker. common on ledges and talus

Edge of ledge
common on ledges and banks
(also on flat ground above)
12 47 Cyathodes
occasional on ledges

12 43 Dryopteris marginalis (L.) Gay
also in shaly slopes

11 44 Asplenium platyneuron
common generally

11 45 Arabis lyrata L.
on ledges, rare

10 46 Ulmus rubra Muhl.
at base of cliffs

11 47 Arabis lyrata L.
shaly slopes

12 48 Cladonia
common on bare ground
at top of slope

12 49 Cladonia
common on bare ground

12 50

13 51

13 52 Thuidium
common on ledges
(also on flat ground above)

13 53 Asplenium trichomanes
occasional on ledges

13 54 Asplenium rhizophyllum L.
local, patches on ledges

12 55 Polyodontium vulgare var.
abundant on ledges

11 56 Pellaea atropurpurea (L.) Link
occasional on ledges

Fairfax Co.

flattile stone dead,

flowers white

small trip to hill

flowers white

prostrate, luxuriant

prostrate
common on cliff and ledge

common on ledges

**Ambilicus**
local on large rocks at foot of cliff, flooded by occasional high water

common on cliff and ledge

common on ledges

occasional on ledges and at flooding over moss

_Flood Terrace a few feet above surface of run._

Heavy clay soil

_Erigeron bulbosa (Michx.) Nutt._

common

_Viola papilionacea Pursh._

common

_Mertensia virginica_ occasional

_Erythronium americanum_ common, few flowering

Claytonia virginica common

_Virginia_ 1953

Fairfax Co.

*anthem* dark purple

*style* purplish, petals white

leaves gray-green, flowers bright violet

calyx purple, corymb

leaves mottled with gray, gray-green, flowers yellow, bronze outside, inside reddish

leaves, flowers white to pinkish.
1953 Virginia

Mar. 21 - Galloway Rd. 1/2 mi. of Lee Blvd.

Small wood of Pinus virginiana about 60' tall, slight admixture of broad-leaved trees. Undergrowth, ground cover species, seen.

c. Mitchellella repens
c. Chimaphila maculata
e. Chimaphila umbellata
u. Polystichum acrostichoides
k. Dryopteris intermedia
e. Rhododendron nudiflorum
k. Kalmia latifolia
c. Rhizocodon tomentosum
u. Lycopodium complanatum
i. Vaccinium oxycoccus
e. Phyllodoce vaccinoides

Scale of occurrence: (for pine community)
a. abundant (many individuals)
de. abundant locally
c. common (a few individuals)
e. occasional
f. usually at least 3 g. gregarious (colonies)
u. uncommon - a few
o. rare - one or two
c. locally common

Fairfax Co.

There obviously had been a ground fire some years ago, as the pines were somewhat bleached at base and some charred in the soil stubbly layer.

Thin honeydew. (Conifer phloem

unity investigation. All in sight in any direction.

Individuals in sight at almost any time.

One individual in sight of a number of individuals, sometimes connected.

Scattered individuals seen. Individuals seen in stands.
March 19 - Deal Beach, Chesapeake Bay

Edge of open water lined with a thick sod of grass rhizomes filled with mud. The surface of this is at about high tide level and it shows evidence in the form of undercutting and collapse of being attacked by the bay wave. This belt of sod varies from one to five or seven yards in width. The edge is scalloped irregularly. The sod is principally formed by one two species of Spartina and has scattered shrubs of sea holly. One and a short distance, it seems to be underlain by a gravel with pebbles up to 5 or even 7 cm. across, very well worn. The grass is dry and mostly gone, new shoots are appearing.

Each of the belt of sod there is a low uneven beach ridge of quartz sand more or less filled with shells, these of Oyster, Mytilus, and a couple of other types. Pines 50' high, not very dense a few as an almost continuous stand of Mitchell's abundant Chin. mar. new generation of deciduous trees coming in, zorn 3-5 m., tall fagles, various hardy shrubs, and a large Rhododendron on the banks.

Chin Marin. + Act. (Perice)

On this ridge but on a spot of low hill, rather than really part of sand ridge.
trees growing, random
some small
occasional

Pines 50' high
not very dense

a plan an
almost continuous
stand of Mitchell's
abundant

new generation
of deciduous

occasional


Pines 50' high
not very dense

a plan an
almost continuous
stand of Mitchell's
abundant

new generation
of deciduous

occasional


Pines 50' high
not very dense

a plan an
almost continuous
stand of Mitchell's
abundant

new generation
of deciduous

occasional

Uniformity of topography, original substratum, and early biotic colonization.

High average incidence of typhoons.

Probable short length of geological life of any given land surface.

Relative youth of habitat as a whole.
Limiting factors to development of complexity of flora and fauna, consequently of complexity of biotic communities.

Proximity of sea-consequent high average level of salinity.

Low deficiency due to high ppt

High temperature prevents much human accumulation except under saturated conditions.

Distance from sources of suitable species and ocean barrier to their spread
Vicksburg

small patch of fine soil. The

were rather scarce, surrounded

by scarcely sprinkled growth with

few mature trees. Some wine

grapes in this patch, on gentle

slopes gravelly, in flat open

spot, no thriving colony of

Mitchella, or Chimaphila maculata,

type plant with a few

shrub and small one

about 2 ft tall. Red dianthus near

3-4 in. white flag. Horsetail, about 3 ft.
scattered climaths
March 19 - Deale Beach, Chesapeake Bay

Edge of open water lined with a thick sod of grass rhizomes &
filled with mud.

The surface of this is at about high tide level and it shows evidence
in the form of undercutting and collapse of being attacked by the bay water.

This belt of sod ranges from one to five yard in width. The
edge is scalloped irregularly. The sod is principally
formed by one or two species of Spartina and has
scattered shrubs of Iva frutescens. One of the
at two points it seems to be underlain by a
gravel with pebbles up to 6cm. across, very well worn.

The grass is dry and mostly gone. New shoots
are appearing.

Each of the belt of sod there is a low uneven beach ridge
of quartz sand more or less filled with shells, these of Oyster, Mytilus,
and a couple of Clams. This is from one to two yard high. 5-3 yard. wide.

It is covered by a scrub of Baccharis halimifolia
up to 1m. high in places. The Baccharis may
reach a height of 10 feet.

The Baccharis stands. Hobbies, sempervivens, Phragmites,
communis and iberis (large form with panicle)
are occasional. This
ridge is essentially continuous but in
places it has been washed over and almost quite
obliterated by storm waves. This especially at head of
small bays or coves.

Phragmites is local
on this ridge but on a spot
of local higher ground a very
silti, rather than healthy, growth of the sand ridge.
Beck of the ridge on the slope is pure Iowa sand down to average high tide level. Then there are salt marsh stands of two to three paces - essentially pure stands, with occasional patches of Irva. This marsh is of varying width up to 300 yards wide, to a tidal inlet that runs nearly parallel to the beach. Along the side of this Irva bank is fairly general.

The marsh has been mostly burned. New shoots are just appearing.

The marsh is level, just barely covered by high tide. Along the creek the ground is a very slight but high and here is where the Irva runs (with a very slight admixture of Barley). As found the Irva runs beaver most general headways.

Along the creek Panicum Virgatum also appears, headward and in places in common, even pure patches occurring. The creek vanishes, headward into tidal channel, and广泛, and between these the ground is hummocky and Barley is general growing in (or giving rise to?) the hummocks. Between the hummocks are channels with deep gray sticky mud in them.

Up a mile or so from the mouth of the creek are small patches of Typha, associated with Panicum Virgatum.

These marshes are deliberately burned by the residents during the winter to reduce summer fire hazard.

Saw one black vulture, several crows, and several grackles [hearing]. Several vultures, two black, others too far away to see. Purple grackles, starlings, one meadowlark.
On slightly higher ground are thicket and thin woods of Liquidambar and Elaenia, with patches here and there of Populus grandidentata (?). In open places Juniperus tends to colonize, and there are areas with thickly scattered trees 15-20' tall, mostly of the columnar form.

The entire water's edge seems to be receding out away by bay waves. People with cottages have put up retaining walls. One group of lots were not thus protected and were almost entirely eliminated.

*Mytilus* sp. lives in the turf at the edge of the water, the bushes and inserted in the mud.

Land above the tide level, except the recently deposited beach ridges, tends to have deciduous thicket, and woods, some junipers and a very occasional pine.

May 15-24 - Sleepy Hollow, 1 mi. 2. of Falls Church.

Cicadas (17 year locust) emerging throughout this period. In Brown yard, which is a little more open, they started a couple of days earlier than in more densely wooded area. The nymphs climb up a few feet into shrubs or on fence, then stop, split along top of thorax, and imagoes struggle out, leaving the cast skins clinging to shrubs. They rest here while their wings are expanding and hardening. Then they climb a fly up into the trees, while they commence to make their characteristic low buzzing-whistling sound. Seems to be only the females that sing. This noise differs greatly from the shrill sound of other cicadas, being much lower and softer, infinitely less volume.
Mating was observed between May 22 and 24.
The population in the ground in the woods is quite enormous. Holes where larvae have emerged range as high as 12 in a square foot. They dig their way out even in firmly packed ground as in paths, etc.

May 24 - Bull Run, 3/4 mi. s. of Rt. 50, 4 mi. N.W.
Large flood plain, a terrace along river is thickly covered by herbs and low shrubs. The shale slope is thinly covered by Persicaria and various larger herbs.

Small flood terraces along river, stiff clay soil

Local under trees

Local under trees

Osmorhiza longistantha (7 ac), D.C. - none, under trees

Fairfax Co.

Under a flagstone some were able to burrow horizontally far enough to emerge. Others did not make it and died in their burrows.

In the woods on the flat the ground cover is rather thin, roughly 4 in, in proportion to the density of the woods. Legumes, Desmodium, Respedea, etc. are prominent in this, but not mature yet.

Flowers: blue, lavender, small tufts, calms forming, almost prostrate. Roots: slender, faintly anise- scented when broken.
71. Galium cincangense Michx.
under trees

72. Viola canadensis L.
under trees

73. Galium obtusum Bgld.
open grassy area

74. Oxalis filipes Small
open place with some small
trees

75. Stellaria pubera
under trees

76. Poa compressa
open grassy place

77. Carex
open grassy place, uncommon

78. Potentilla canadensis L.
common in open places

79. Plantago virginica
occasional in open places

80. Carpinus caroliniana
common, scattered
in open and under trees

81. common in open and under
trees

82. common in open

83. Eric sphenium angustifolium Mill.
common in open and
under trees

84. Myosotis versicolor Nutt.
common in open

Fairfax Co.
flowers greenish.
flowers white.
flowers white, 4-petal.
roots, range.
erect, flowers yellow.

petals white.
bluish green, culms erect,
flattened, forming
small open colonies
by buried rhizomes.

fronate, flowers, petals
yellow, petals very slightly
coriniate.
erect.
small tree, 5 m. tall;
spikes, pendulous.
culms erect, single
slightly crenate.
culms erect, solitary.

roots, yellow, flowers
blue, lavender.
erect
1953 Virginia

34.685 Hedysarum calycula (L.)

17 86 Carex rare in open

18 87 Graphium purpureum rare in open

19 88 Kochia virginica (L.) Willd. occasional in open

46 89 Carex common

47 90 Carex common

48 91 Carex occasional

49 92 Carex common

50 93 Galium aparine L. common generally

51 94 Allium canadense L. common in open

52 95 Osmorhiza longifolia synonym G. virginia rare under trees. At this
one only seen, at base of Cynus floridus but perhaps in root of something
else.

11 96 Kochia sandelia (L.) Nutt. Large colony under trees.

54 97 Veronica persica common in open

55 98 Oxalis violacea very rare

Fairfax Co.

flowers lavender

blue-green, culms strongly spreading, prostrate

erect, pale green

slit, arching, culms spreading

caeshiops, culms spreading

arching

procumbent

leaves flat, flowers pinkish; plant with

rank odor.

plant rather glaucous, tuberous, leaf-cutting

erect, flowers blue.

flowers pink
1953 Virginia

Fairfax Co.

lower part of crumbly shale slope, 315 thin.

34629 Euphania fejeuez
very common

63 700 Barbarea vulgaris
common

13 01 Asplenium platyrrhiza
occasional about bases of trees

1 02 Oxalis europaea, sed.
rare in open

14 03 Panicum
occasional in open

17 04 Danthonia spicata
common in open

11 05 Parietaria pensylvanica Mall.
local in open

11 06 Tradescantia virginiana
occasional under trees.

57 Pteris lividula (L.) Roth.

15 07 Taenidia integrigermis (L.) Dum.
common under trees

low shale cliff

11 08 Woodsia obfusa (Spreng.) Torr.
occasional on slope of cliff

11 09 Arabis lyrata
occasional on slope of cliff

13 00 Asclepias quadriflora
occasional on slope of cliff on crumbly shale

11 11 Myosotis
at crumbly shale at top of cliff, under pines

light green.
crest, flowers yellow,
mustly part.

flowers yellow.
caespitose, erect.
caespitose, culms erect
erect, stems fleshy.

depth-rooted, leaves
glaucous beneath.

flowers white, nearly part.

flowers pale pink.
70 1953 Virginia

34712 Silene caroliniana
m rocks, rare
13 13 Neudera
on ledges, common
14 Haplopappus virginianus, Mich.
on wet ledge
15 Senecio
On flat wooded ground
2 15 Senecio
bare crumbly shale, small colony.
16 Hedysarum caeruleum
common along trail
17 Lobelia spicata var. scoparia
occasional in small colonies
18 Centrocercus
occasional in thin open spots, in woods
24.5.19 Lilium philadelphicum L., Rid.
rare

May 24 - 1/4 mi south of
PA 52, east of Bull Run
20 Trifolium reflexum L.
rare along roadside
21 Clematis ochroleuca
in woods on gentle slope, few stems

Fairfax Co.
flowers pink
tending to be branched at base; anthers orange; sepals very little.

60 m.
Spreading by filiform rhizomes; flower bright deep yellow.
flowers lavender
flowers white

flowers bright yellow
flowers with petals large-purple.

75 m
flowers rose-colored
plant erect.
Maryland

June 7 - 3 m.i.e. of large

Hedysis pyramidata, pyramidata
Tall, rather open forest
of oak, hickory and tulip
thin understory, and
continuous ground layer

34722
2

June 7, head of
Broad Creek, Anne Arundel

Cicadas numerous
signs of their egg-laying
activity in both of
dead twigs hanging
on trees abundant
Driving along highway
certain spots are
passed where their
sound is very
strong, other places
apparently similar,
where they are
scarcely to be heard
at all.

solitary or slightly
a few stems from base
flowers pale lavender

Spilling variation,
noted in species:
annual vs. perennial
leaf cutting, hairiness
and robustness
and degree of ramifi-
cation. It is dominant
in parts of abandoned
field at O'Hilll place,
elsewhere Vicia is
dominant.
June 8 - Sleepy Hollow
1 mi. s. of Falls Church

34723 Carex siccum L.
common in swamp

are along roadside, edge of swamp

common along roadside, edge of swamp

June 11 - Falls Church area
Cicadas still present but numbers definitely falling off. Dead individuals on ground very common. Trees with dead twigs, very unevenly distributed. Some trees showing dozens or even hundreds of dead hanging twigs, others none.

Apparently the animal cuts the woody part of the stem but not entirely. The cutting takes place, curiously enough, not back of all the punctures where
June 11 - Along drive in North Section of Park, Avianthus and Robinia have come in to such an extent that they line the drive in places.

Crescent Rocks has been walked over so much that the rocks are becoming polished, and few plants, except Helminthotheca canadensis have been able to persist. The latter, in dwarfed form, persists in crevices and protected places in the rock.

At Big Meadows, the main meadow, east of the road into the Camp, is becoming conspicuously invaded by woody species. The places that, a year or two ago were grassy are now covered with a growth of young Robinia pseudacacia a foot or so tall, and a

Shenandoah Park

very few feet apart, low patches of Epigaea and bushes of Crambea, etc., are common throughout. The lower and around the swamp, is thick low wood, and the whole is losing the aspect of a Meadow. The meadow below the Skyline Drive is not showing much invasion yet.
June 13 - 1/2 mi. S. of Polish Church
Verbascum blattaria. Var in weedy roadside patch.

June 13 - Lebanon, estate of Dr. Paul Bartech, near Gunston Hall
Tern glen established in wooded ravine.
Fifteen or more species of ferns, as well as many insectivorous plants and some orchids growing in semi-natural condition.
Two small sphagnum bogs, a stream with pools, sandstone and limestone walls, a slope with Ophioglossum vulgatum growing in a large colony.
The surrounding wood is full of Enicurus japonicum which would envelop the whole if vigilance were relaxed.

exact flowers white, inflorescence viscid.

Bird feeding station attracts a great number of species. Five pairs of wood-ducks said to nest there, also v. pairs of pileated woodpecker.

458 acres in estate. Colonial house.
June 14 — 4 mi. N.W. of Williamsburg
1 mi. N. of Rte. 8

Generally rather thin mixed woods. Locally logged over, with
thick arboricous layer
8-10 ft. high, thinnest
in thickest places in woods.

34728 Selaginella apoda
common in acid swampy
place with a little running
water.

29 Helonias cristata

very local and small
marshy place, now
badly trampled by cattle.

30 Polystichum acrostichoides

31 Athyrium diphyllum

swampy forest

32 Asimina triloba

in marshy places along
stream, with royal fern,
sphagnum, etc.

Creeping bent fertilizes
branches ascending —

scapes ascending,
mostly just flowering; dish
dark green, rays yellow.

nerves

stems, storks
Powhatan swamp.

June 14, 434 mi. W. of
Williamsburg
swamps, with areas
of bare mud with
only some small
higher ground with
more vegetation, ferns, etc.

Cirsium quadriradiatum (Maxim.)
small colony on
ground just above
swamp level

Fagus grandifolia
very rare in swamp

June 14 – Powhatan Creek,
mi. above Jamestown
swamps, area with
mixed forest, undulating
ground with marshy
spots in low places

Lonicera planifolia
local in wet shot

Rosa palustris
along stream, edges of
swampy woods and in Phalaris
plains.

Jamestown, V.

1-2 m. tall, flowers pink

Acer rubrum

Quercus, Pines,
Taxodium

Ferns, sap.

Flowers white.

Small tree
June 15 - Feeder Ditch, running into Lake Drummond from canal on east side.

To left, going in, is dense growth of Myrica and Grindelia, with very few small trees.

To the right are many scattered Pimus taeda and Liquidambar at first, becoming shallow a thick forest with some admixture of other species.

1/2 mile or less in, on the left bank is a strip of young Pinus taeda, apparently on the fall from the ditch.

Banks lined with sapling Acer rubrum, Prunus serrata, Ailanthus, Liquidambar, with tangled with Muscadia and other vines and various euphorbias, occasional Rosa palustris in full bloom and Quillaja locally.

Further in the vine thick becomes broader and more mixed with Liquid.

Near Norfolk Co.

ambar and salix nigra. After a bit, is replaced by the two latter, which then become more or less between and then (both sides)

This forest a broken woods, on both sides is practically restricted to the ditch banks. Away from banks is Myrica - Grindelia thicket up to 7 m. high, flooded at

Away from ditch, are patches of woods, largely Pinus taeda.

In near lake is almost solid growth of Liquidambar, changing to Myrica and access. Some salix nigra, Persia occasional.

Soil piled up along ditch, is light gray with occasional deposits of oyster shells.
June 15 - Lake Drummond
roughly circular lake.
Water dark brown, with
peculiar but pleasant
taste. The whole lake
is surrounded by forest,
and is small enough
so that it impresses
me as a lake in the middle
of deep woods. Much of
the sky-line is very even
as though there had been
little disturbance. One
stretch, on the west or
southwest side is very
ragged, with sparse
trees above a dense low,
story. This is, where
there was a disastrous
fire lasting about a year
(see Wherry) occurred

The water is held in
the lake by the dam at
the spillway and fed
don the ditch as needed
to maintain the water
level needed in the main
Inland Waterway Canal.

At this time the water is
so high that some is
being let go to keep the
lake from overflowing into
surrounding country
and flooding agricultural
lands. Last summer
the lake went almost
dry.
June 15 - vicinity of Spellway on Feder Ditch, 2.5 of lake Drummond, Dismal Swamp. Mixed swamp forest of Quercus rubra, Nyssa aquatica, Pterostyrax, growing on deep, moist, sprightly, spongy peat. Afternoon, open beneath, sparse Abies balsamea, occasional tangles of Simila, Berchemia, etc. Dekunana lobata climbing tree twigs, in openings Rubus and Vitis. Ferns abundant except and under decaying stumps and logs.

34737 Dryopteris x separabili
38 Dryopteris austriaca n. spinnosa, occasional
39 Dryopteris austriaca n. intermedia, occasional
40 Dryopteris celata var. d. clintonia, occasional
41 Dryopteris celata common
42 Nanona common, locally common

Ferns seen, in order of abundance:
Woodwardia acuta
Dryopteris celata
D. austriaca n. intermedia
D. spinosa
X? separabili
Osmunda cinnamomea
O. regalis
Woodwardia virginica
Asplenium platyneuron
A. laciniatum
Athyrium asplenoides

Ferns ascending
Ferns strongly ascending
Herb Sp? 1 m. tall, flowers white.
June 15 - West side of Lake Drummond, Dismal Swamp

Tall forest 30 m. n. n., largely Liriodendron and Acer rubrum, with Persia borbonia, Ilex opaca, Ilex cassine in under story, a discontinuous layer of Pieris nitisida. 3 m. a. less deep, with Dryopteris austriaca s. intermedius and Asarum canadense common on ground, C. regalis and Woodwardia anomalata very rare. Vines of Euclia, 3 ft. Decumaria albula, Vitis rotundifolia, Pyrularia, scandens, very abundant, obstructing strolling somewhat. Deep peat soil.

34743 Pieris nitida abundant on floor of forest

15

44 Ilex occasional

45 Pieris nitida abundant on floor of forest

46 Liriodendron tulipifera codominant tree in forest

47 Decumaria albula climbing on tree in forest

low arching, irregular shrub

shrub 3 m. tall, palm

immature low shrub, 1 m. tall

tree 70 m. tall

main stems closely clinging to tree trunk
June 15 - South side of Lake Drummond. Peninsula.

- Mixed forest, principally Ace. rubrum, Pensa. baldoria and Pensa. tosca, with thick layer of needles and thumus.
- Flex. sp. 3. cassiae, and small Pensa in second story, very sparse.
- Clerod. Pict. Penn. axillaris, etc. in shrub layer.
- Ferns: Woodwardia areolata, Dryopteris austinae, P. intermedia. C. arenaria.
- Cinnamomum, Pteridium aquilinum (very local or five needle pile), Dryopteris celsa (very rare).
- Vines:

  1. Pteridium aquilinum
  2. 49 Flex. glabra
  3. 50 Teh. virginica
  4. 51 Penn. axillaris
  5. 52 Taxodium distichum
  6. 53 Chamaecyparis thyhodes scattered near lake margin

Chamaecyparis is common at edge of lake, but doesn't form dense grove. A few Taxodium distichum very small, out in the lake.
June 15. Vicinity of spillway south side. Between spillway and lake Dunsam has evidently been burned over not too long ago. Tangled thicket of Rubus and Phacelia and tall Impatiens dillston in opening between patches of trees.

Berchemia scandens common, climbing into trees

Asplenium platyneuron v. sacculum rubrum common locally on ditch embankment

Vitis rotundifolia abundant on ditch, embankment climbing over brush and trees

Callicarpa americana occasional on ditch bank

48 Smilax glauca occasional on ditch embankment

Nasselle Co.

Saw a deer at edge of ditch between spillway and lake.

springsy vine, stems dark dull green, leaves somewhat glaucous beneath; fruit immature.

Extended woody vine

shrub 1 m. tall, calyx with, buds pinkish, extended woody vine; leaves very glaucous beneath.
June 20 — Bull Run, 3/4 mi.  
N of Rt. 50

61. *Baptisia tinctoria*  
in woods at top of slope

62. *Chimaphila maculata*  
in thin woods, common

63. *Phlox texensis var. pedicellata*  
common, at top of shale cliffs, in open

64. *Oxypogon virginicus*  
on low cliffs

65. on ledges of low shale cliffs,
in bar soil, in open

66. on bar soil, rather open

67. *Rosa carolina*  
on open slope, common

68. *Hydrastis virginiana var. longifolia*  
common on open slope

69. *Clematis ochroptera*  
rare in thin woods

70. *Anemone*  
rare in woods, lower slopes

Fairfax Co.

— spreading herb, flowers lemon yellow
— leaves dark dull green
— flowers white, fragrant, anthers dull pinkish
— creeping shrub, leaves bright green, fruit green
— tree 6 m. tall, fruit pale green, pendent

— shrub up to 0.7 m. tall, flowers bright rose pink, loose tufts; flowers lavender, erect
— erect,
June 20. Same
rich wooded bottom
land on flood terrace
east side of run.

34.77

1. Serrataria


3. Cryptotaenia canadensis

common in edges of
woods along stream.

4. Acer negundo

5.paniculata

6. Common in woods

in muddy margin
of stream on flat bar.

7. Justicia americana

common, forming extensive patches

8. Sagittaria

9. Common

lower slopes in woods,
shale exposures.

10. Galium cinnaceum

11. Geranium canadense fuscum

race, in wet north edge
of run.

Translated from oak.

Flowers Hale lavender.

Lavender

Violet and

Reed, flowers white.

Tree 10-14 ft.

Reed, flowers pendant.

Reed, flowers lavender.

Marbled with deep

Marrow purple.

Flowers white.

Stems ascending.

Flowers white.
1953 Virginia

June 20, name
Low rich woods on gentle slopes.
34780 Galium timeticum
common
81 Asarum canadense
local

82 Impatients
common

June 20 - Sleppy Hollow.
Cicadas are apparently
finished. Heard more
today.

Flowers white, 4-meris.
Alumone creeping in
surface of ground
under moist of dead leaves.
Flower prizant, white,
manom within.
Crest, stems glossy,
flowers orange.
June 25 - vicinity of head of Broad Creek, south side somewhat dissected coastal plain sediments.  

34793 Quercus phellos × macilenta?
   single tree in deep ravine in woods

2. 7 m. Tall, two trunks 1 dm. thick, no acorn.  
Leaves have texture of those of Q. phellos and shape intermediate between those of Q. phellos and Q. macilenta.  
Inner bark pinkish, no suggestion of yellow.

84 Dryopteris cristata (L.) Gray
   moist wooded ravine bottom

85 Fagus grandifolia edges of thick deciduous woods on rather level to rolling ground.
June 28 - Hemlock Spring
overlook
Wet bank above road
has several species of
Carrs that should be
collected. By culvert, above
road is a colony of Equistum
Caninula (large sp) around
parking lot.
July 4 - Deale Beach Camp
Low sand ridge backed by a broad tidal meadow.

The ridge is covered by Iva fruticosa, raised locally by a large Spartina, Phragmites, etc., and, esp. on each side by a small Spartina (S. patens) and Cyperus (Cypemes)

In front of the ridge is a shelf of a heavy root of Spartina (S. patens), Eleocharis, Leinera (S. patens), being undercut by water of bay.

The meadow is dominated by Spartina (S. patens) mixed somewhat with Leinera (E. asteris), Juncus (J. brizancus) and small plants of Iva.

Eleocharis is common, forming part of sod at edge of bay just below high tide level.

Cyperus is local, forming patches on inner side of low sand ridge.

Spartina patens (S. patens) Mühl. Dominant in meadow and on inner side of sand ridge.

Anne Arundel Co.

A pair of flickers were in the Iva thicket. Red-winged blackbirds, common, were not seen. About 5 dm. above ground in meadow is a small clump of Iva. Eggs blue with black irregular spots.

A few swallows were seen, two unidentified ducks, one small sparrow (in the marsh).

English sparrows occurred.

erect, terete.

tubercilous, not especially caecitious

rhizomes forming a dense sod.
1957 Maryland

108

Eleocharis

90 June

91 June

92 June

1

1957 Virginia

July 15 - Leesburg Hollow 1½ mi.
Falls Church

93 June

Erect, flowers pale green.
July 8 - 9 mi. S.E. of Leesburg
in Leesburg Lake Tract
S.E. of Broad Run
Wd. of Pines, virginiana
20-25 m. tall, crown
rather small, making
a thin canopy.
Marked second stand
5-10 m. tall principally
Cornus flava, 3rd
Acer rubrum.
Floor completely invaded
by Lonicera japonica, here
deeply in places, bare in
a very few spots. Scattered
shrubs of Symphoricarpos
umbelatus, a few bunches
of Viburnum brumaticum,
some Panthera cissus, mixed

\[ 34794 \]
Hedysarum purpureum, longifolia
occasional in grassy
spot near edge of pines woods

\[ 95 \]
Nyssa sylvatica
one tree at edge of pines woods.

\[ 46 \]
Quercus
small brush, edge of
pines woods.

with the Lonicera. A
few miscellaneous
deciduous tree seeding.
A few herbs, but none
of the characteristic
associates of Pines
virginiana. Some
signs of grazing, no
obvious sign of fire.

Places with no
Lonicera, near edge
of woods have Plantain;
some Hedysarum purpureum,
Longifolia.

single stems in slightly
calcareous; fall.
Lavanda
small trees, 10 m. tall;
fruit immatures.
small staves buck
July 11 - 1½ mi. s. of Shady Side. Old field of gray hard silty soil, scattered bushes and grass.

Veronica hastata L.

Rare among bushes.

98 Lathyrus angustus (L.) Pursh. Local along road.

July 11 - 1/2 m. S. of Danes Beach, north east of Shady Side.

Oak forest, about 25 m. tall, trees mostly 1-2 dm. thick, some up to 3 or 4 dm. forming a fairly good canopy. Dominant, in order of abundance: Quercus falcata, Fallopia primus - with a few Liquidambar, Acer rubrum, and very few Primus virginianus, some of these quite large.

An open second story 3-5 m. m. tall mainly: Ilex opaca, a few small Myrica silvatica, Prunus serotina, very few Diotis, (no mature trees of these 3 seen), besides saplings of other trees: Gymnocladus, Serotina etc. Ground layer sparse: Vaccinium vacillans, Gaylussacia baccata, occasional Primus virginianus and 5. rotundifolius (small) and numerous tree seedling: Occasional moss cushion, up to 3 dm. across of Polytrichum or Leiophyllum. Much bare ground covered by a few cm. of oak leaf stuff. Very few herbs, etc.

Booths abruptly on salt marsh. (pure Leucaena americana). At border Laminas more abundant with Rhus toxicodendron, Baccharis, Myrica, etc.
July 13 - Deale Beach

The entire area from Deale north at least 5
further than that, is side
has a terrace which
appears to be about 1 m.
above high tide level,
very flat, of a gray
silt which is hard
when dry. This is
up to several miles wide,
backed by an eroded
terminating the general level of the
escarpment.
This 1 m. terrace is
generally wooded, not
cultivated. Most
of the woods are rugged
summer second growth,
largely Liquidambar, Pines
and Red Maple with Pinus,
Douglas and Oaks. Locally
as n.s. of that, side (see p. 113),
there is an oak forest which
may more nearly reflect
what was here prior
to man's activities.

The outer edge of this
terrace is deeply lobed
and between the lakes
are areas of salt marsh,
inlets, and sand ridges,
the latter unusually

Anne Arundel Co.

On the outer border of
salt marsh areas in
meadows, the vegetation
with a sod of Spartina
with admixtures of
harsh robustus, Juncus
y. Iva fruticosa, Typha,
Paniceum virgatum, etc.
the sand ridges have
a mosaic of Iva fruticosa,
Bacccharis Minamitza
which encroaches on the
marsh, Spartina (esp.
sp.), small shrubs
of Pinus silvestris and
Older ridges have
young growth of
Liquidambar, Pinus,
Nigra silvatica, etc.
up to 1 m. tall. These
shade into patches of
slightly higher ground
with tangled and mat
complexes of woody vegetation
and it is hard to tell
where the constructed
sand ridges end and
the marsh begins.

The outer edge of the
sand ridges is fringed
with a dense sod of
Spartina (tall 2 ft.) with
tangled rhizomes embedded
in silt. Along the
entire front of the front
of this examined the
water is obviously
cutting this away
quite rapidly. It is
undercut with bare
shelves, exposed, and
frequently slumping
down in large chunks.
The water just outside
this varies from 0.5 to 1 m.
deep at high tide, and
channels of sod are
sometimes on the bottom
in places. In several
out from the shore.
Beaches are few and
very small. In no
place was an actual
constructed coast seen.

Out from this the
bottom is silt, with
some embedded shells.
It has slight undulations
but gradually slopes
from 0.5 m. deep along
the slope to 2 m. between
1/4 and 1/2 (measured to 1/2 generally)

A possible interpretation
of this terrace is that it
is similar to what would
be exposed by a
fall of 2-3 m. in sea
level in the area now
covered by shallow (0.5-2 m.)
water.
The silt on the bottom
at present is about
like the material
comprising the terrace.
The topography, with
its very gradual
slope and very slight
relief is much like
the present bottom.
The amount of erosion
that would logically
have taken place in the
last 5000 years, since
the "post-glacial high
sea-level" would have
removed the shells in the
surface layers even if
they were not dissolved
out. If the terrace were
a cut, surface there
would be no deeper
shell beds, at least
of recent age.
July 14 - 1/2 mi. w. of Deal Beach, Chesapeake Bay, in woods of Quercus palustris and Acer rubrum, on low, poorly drained, silty soil.

03 Dryopteris novae-angliae
- fragrans (deich.) Burk. colony of 100 or more plants

05 Dryopteris thelypteris
- var. pubescens (trees) Kelai
- colony of 100 or more plants

Closed woods of rather small trees about 20 m. tall, up to 2, rarely 3, dm., 250. about 1/3 Quercus palustris, a few Quercus velutina, Q. alba, Q. rubra (2), and a very few Myrica silvatica on

spread leaf slightly buried, rhizomes.
- erect, leaves slightly; flowers with yellow sepal and white petals.

01 Mentha crispa L.
- local along fence row, possibly planted and persisting.

04 Eleocharis acicularis
- local in loose sand

05 Cyperus ericoides
- local in loose sand

06 Cyperus esculentus L. local colonies in loose sand
poorly drained heavy gray silt soil. Generally a sparse uneven story of tree seedlings up to 1.5 m. tall, mostly Acer, rubrum, some Nyssa, Quercus, etc. between them in spots where the forest is thinner is a loose tangled layer of Campsis radicans about 0.5 - 0.7 m. tall, (not in flower, though in open and at edge of woods it is flowering abundantly), in dense part of woods, this replaced by a sparse layer 0.5 - 1 m. tall of Chilopsis linearifolia and Vaccinium crambes, with small tree seedlings some spots completely bare of any herb layer, others with thin steel grass.

July 14 - 1 mi. n. of Churchill Forest 20 - 25 m. tall, trees 1 - 3 dm. thick, canopy essentially complete. - mixed oaks - Quercus palustris, Q. phellos, Q. bicarpa, small Acer rubrum and Liquidambar.

Anne Arundel Co. locally some Q. alba, a very few Q. prinus and Q. velutina. Composition in all layers varies locally. Understory sparse and uneven, of tree seedlings of varying heights, locally much tangled with 'shrub.'

Ground layer of grass but very uneven, large patches of bare ground locally a little sphagnum and barna colonies of several kinds, occasional moss cushion. Locally a few Quercus alba and Quercus prinus saplings, many Nyssa saplings, 1 - 5 m. tall. Soil gray, silty, poorly drained, covered by this oak leaf duff.

July 15 - 1 mi. n. and 1 mi. w. of Churchill Small area of forest of large trees about 30 m. tall, mostly 3 - 6 dm. dbh.; widely spaced, canopy somewhat lobed - principally Quercus prinus
and *falcata*, some *Liquidambar*, a few *Nyssa*, *Acer rubrum* and *Liquidambar*.

Understory to 10 ft. of *Ulmus*, *Fagus grandiflora*, *Nyssa*, *Acer rubrum*, very much tangled with *Rhus typhina* and *Rhus torridifolia*.

The two latter forming a dense ground layer, also, raised locally with areas of pure Impatiens, or more locally Beech, a grass, or *Olecea*, one large area of *Flehema*.

Some large *Sitis* trees climbing into trees.

Soil a gray silt, locally poorly drained. This area of a few acres surrounded by logged out decadent woods.

---

Anne Arundel Co.

July 4 - General vicinity of Scate Beach and Churchton.

Small cultivated patches, more old fields, second growth thickets, and woods, with a few areas of tall woodlands as described.

Original vegetation probably a varying mixture of *Quercus* species, probably with some *Nyssa*, *Liquidambar*, and *Acer rubrum*, small number of other trees.

Logging as well as settles and latter abandonment seems to favor especially the *Liquidambar*, but most of the oaks are well represented in the young growth, as well as *Acer*.

There is much *Rhus* etc. that disappears when the forest canopy closes.
July 15 - Deal Beach
Chesapeake Bay
edge of salt marsh

2 4804 Elymus virginicus L. virginicus
local

4 05 Cyperus ovuliflorus var. sphaericus

4 06 Spartina americanus Pers. dominant in part of salt marsh immediately bordering on bay.

July 17 - same

somewhat coarctate, somewhat coarctate, erect, somewhat coarctate

somewhat coarctate

erect from deeply buries rhizome, sharply triangular.
July 14 - Cliffs south of Fairhaven.
Cliffs of gray diatomite (?), up to 15-15 m. tall, straight up from water, being very slowly eaten away by the water. Unevenly, on top of this is 1-15 m. of unconsolidated sediment of a gray, brown color, with oyster shells in it.
In the diatomite, which is so soft that it can be crumbled or cut easily, are numerous fossils, principally small bivalve of several kinds, not well preserved, principally as casts and molds. Fish scales and bits of lignite.
In the lower layer of this, about 1 m. thick, at water level are numerous fossils of a black color - casts from a worm-like gastropod, shark teeth, birdlines, fish vertebrae, jaw fragment, limpet, etc. which most likely are not of same age as diatomite as in the same bed are numerous flint-like black pebbles, etc. All this black material probably dates from an earlier bed that contributed debris to the diatomic sediments.
July 15. Cliffs south of Fairhaven.

Chrysopogon virginicus var. jejeunus

White, ringletting in woods (Ramale) Bush. At top of cliffs.

Phragmites communis

Large patch at top of sandy beach in mouth of broad ravine cutting cliffs.

Chrysopogon complicated, branched many ways, older ones slightly compressed deeply buried, forming a dense sod; canes up to 2.5-3 m. tall, influence child jungle.
July 17 - Deal Beach

6 1. "sand ridge, edge of dense strip of Spartina sod."
2. "Spartina cynosuroides (L.) Aits."
3. "Common locally, forming clumps and small clumps.
4. "Local in sod strip.
5. "S. alterniflora var. glabra (Walt.)"".
6. "S. communis americana."
7. "Common locally in sandy part of sod."
8. "S. alterniflora var. glabra (Walt.)"
9. "S. communis americana occasionally in edge of sand (perhaps an extreme of 34809).

Anne Arundel Co.

Spartina sod clump. 15 cm. tall.

Erect

Culms solitary from deeply buried prostrate rhizomes, thin, soft, spongy. No rhizomes, these soft and spongy; sides of culms concave, light green.
July 13 - Edinburg Gap, Shenandoah Co. 
Shale slopes with sparse small pine wood.

Eriogonum allexi Walt. scattered in openings in shale. 
in opened root of crumbly shale 

July 13 - Biggs Furnace, Shenandoah Co. 
Physalis rare, about old furnace.

Massanutten Mt.

Phlox subulata is common. Draba nanus occasionally. 
Trifolium virginicum occasional. 
Oenothera angustifolia common in loose cliffs and talus along road.

Most plant not in recognizable condition because of extreme dry spell or not yet out.

These shale barriers are definitely shale outcrops rather than 
shale talus branching at base, branches not branched, 
gentral yellow. In tumors they run to willow, because of chisell crania.

Eriogonum scattered in openings in pine wood, 
on slope, but in road cut and talus at base it is abundant. 
loosely branched root crown, making small clumps. 

very viscid; flowers pale yellow with purple center.
1953 Virginia

July 13 - Caroline Furnace, Passage Creek, 2 mi. N.E. of Massanutten Gap, Shenandoah G.
Brushy patches in old field

3481c gomphocarpus
climbing in thicket

37 17 Rhhamnus
in rocky outcrops and stonewalls.

July 13 - just east of Massanutten Gap, Page Co.

small bog

18 Habenaria clavellata (Michx.) M. occasional

19 Habenaria clavellata (Michx.) M. occasional & common

20 Erythronium grandiflorum (Eng.) M. common in Phragmites

21 Lamium occasional at edges of bog

22 Lamium occasional at edges of bog

23 Dryopteris helystichus (L.) Gray

common in wet edges of bog

Massanutten Mts. 135

twines, several m. long.
forming small thicket

erect, flowers bright

erect, flowers greenish white.
prostrate with erect branches.
rhizome prostrate.
July 18 - Powell's Fort Camp, Little Passage Creek, Little Fort Valley, Shenandoah Co. Boggy swamp in valley bottom.

34824 Fraxinus nigra Marsh. occasional

15 Tradescantia caroliniana (Walt.) Unit. common

16 Dryopteris rotundifolia L. local on mossy boulder in bog

27 Campanula aparinoides Parl. common

Aug. 5 - Sleepy Hollow, 1 mi. S. of Falls Church, Fairfax Co. 22 Lathyrus canadensis in second growth, deciduous woods.

Massanutten Mt.

Small sterile 1.5 m. tall, others seen up to 10 m. stems ascending, flowers white.

forming a mat, in bud only, flowers whitish.

Sprouts from buried rhizomes, sterile; specimen to show underground system.
Aug. 12 - Elizabeth Furnace, Fort Valley
Floral at foot of shale cliffs along road covered with Desmodium argylocladum, same colony as #34913. Flower now larger (width 9-10 lines on this page) - ovaries and outside of calyx marked, villous. Flowers distinct, zygomorphic, the stamens all sharply bent in one direction from point of attachment at base of corolla, then gradually recurved so that they spread somewhat wide out one half of the flower.

Aug. 13 - same
White Pine Plantation
Strip of young white pines about 50 m wide not more than 2-3 cm of needles on ground.
Seedlings and seedlings of Ulmus, Fraxinus, and Cornus on ground.
Most common plants:

6. Rubus (dewberry)
6. Panthostischium quinquefolia
6. Chimaphila maculata

a little shorter than petals (petals 3 cm), filaments 2 cm, anther parallel with filament 9-10 mm, 1 attached just below center, pistil 3 cm, 2, the branches somewhat thickened 4.5 mm, 2.

When observed just before sunset very few flowers open, just at dusk a beautiful display open.
(Has been seen as var. castaneum)

5. Desmodium nudiflorum
6. Galium triflorum
6. Graphium juniperinum
6. Gentianopsis plantaginea
6. Nepeta hederacea
6. Veronica officinalis

Back of this was a patch of Pinus virginiana but several months ago this was cut for pulpwood. Suffered tree, (seed trees?) were left 5-10 m apart.
140

Scattered second story of Carya glabra. Seedling of deciduous trees, esp. Cercis, Carya, etc., coming up, with many weeds.

Aug. 13 - Fort Valley about 1 mi. above organization. Cell Road.

Patch of Linum virginianum woods. Small tick, 1-2 cm. thick, 10 m. 5 tall, 1-2 cm. of its needles on ground. Rolling to sloping ground.

A few oak, Carya, and red maple seedlings.

c. Lespedeza procumbens
b. Chimaphila maculata
a. Rubus
la. Asplenium platyneuron

34329 Galium pilosum

1 30 Hedigos puberula locally common
1 31 Lespedeza common

4 32 Cladonia locally abundant on ground
1 33 Asplenium platyneuron locally abundant, especially in slabs.

141

Hemlock G.

Humus 3-5 cm. deep. Left in place much of it scraped off. Hylocomium pentlandii common in bare spots.

d. Centaurea maculosa
b. Hedigos puberula
o. Veronica officinalis
o. Hedyotis purpurea v. engelii
o. Pentathecium quinqueseptatum
a. Galium triflorum pilosum
 o. Cypripedium calceolus
o. Antennaria neglecta
b. Deschampia flexuosa
 o. Rhus toxicodendron
 o. Epipactis comata
o. Polytrichum commune
a. Cladonia
 o. Anacalia
 o. Monotropa hypopitys

Ascending

each flower bright yellow.

Prostrate from deep root. Flower rose pink, wth red in standard. Forming scall rounded greenish gray cushion

Stalks grow prostrate, fertile slant.
August 13 - Fust Valley, just above Dumas. 

Mississippi wisteria, somewhat grazed, about 10 ft. tall. A patch, 5 ft. tall, and next to this, a small stand about 1.5 m. tall.

In the tall stretch are seedlings and saplings of oaks, basswoods, cypress, and other shrubs, a little far from the plant on the ground layer are:

- Hedyotis purpurea v. longifolia
- Kalmia latifolia

Between small round mounds 1-1.5 dm. across forming pale green cushions.

- Chimaphila maculata
- Leptospermum scoparium
- Hedyotis purpurea v. longifolia
- Galium odoratum
- Rosa carolina
- Danthonia diffusa
- Antennaria plantaginea
- Veronica officinalis
- Phlox subulata

In the two younger stands, these plants, the Leptospernum, Hedyotis, and Danthonia are common, along with many weedy plants. 

There are mounds and near the top of a hill that ends in a steep, crumbly shale slope that is often covered with ephemerals, flowers lavender to white, heterostylous, deeply rooted, branching at base, flowers cream white.
144

Rosedales, upper
very dry, shaly slope
Oenothera
very dry, crumbly shale, slope

Aug. 13 - Fort Valley, near
Joppa Road, along passagebed
Low cliffs cut in
fossiliferous shale
- abundant Devonian
- lichens

Low shale cliffs with
ledge and steep slopes
- with abundant ferns
  a. Asplenium trichomanes
  b. Woodsia
  c. Polyodonium vulgare, viviparum
  d. Dryopteris marginalis
  e. Asplenium platyneuron
  f. a. Asplenium trichophyllum
  f. b. Hesperis flexuosa
  f. c. Heuchera americana
  g. Hedyotis purpurea, longifolia
  h. Rumex acetosella

31942 mor

3 43 Asplenium trichophyllum
locally abundant on low
cliffs

4 44 Asplenium trichomanes
abundant

1 5 Woodsia obtusa (Spreng.) Torn.
common in small bunches

3 1942 flor

13. ced. flowers reddish
purple, ascending, flowers yellow
Escarpment with a
slope above it - the
slope wooded with
low second-growth
oak woods, ericaceous
undergrowth - then
border above escarpment
with Vaccinium alpinum
and Arctostaphylos. Ended:

- a. Carex nigricans
  a. Rhizoctonia
d. Phlox divaricata
  b. Calamagrostis
c. Parthenocissus quinquefolia
  d. Chamaenathus virginianus

soft cushions
prostrate
Aug. 13 - Fort Valley, near Dale Levels, w. of Patuxent Creek (opposite Kennedy's Peaks)  
Forest of Pinus virginiana  
1-2 dm. thick (d.b.h.), about 15 m. tall, on slope of hill.  
Little undergrowth except occasional seedlings  
of Salix (c), Acer rubrum (c),  
Fagus (c), Larix laricina (c),  
Nyssa sp. (c), Fraxinus, Juglans americana (c), Cornus fluviatilis (c)  
Ground layer sparse of  
c. Lepidago procumbent  
c. Galium triumatum  
c. Chamaepericlymenum  
c. Rubus  
c. Cassiope flexuosa  
c. Antennaria plantaginea  
c. Rosa carolina  
c. Crataegus crus-galli  
c. Viola pedata  
c. Vaccinium stamineum  
c. Parthenocissus quinquefolia  

Shrub about 1 m. tall, 
differently branched.  
of hill, very little  
undergrowth. Ground  
layer of:  
c. Antennaria plantaginea  
c. Potamogeton canadensis  
c. Danthonia spicata
1953 Virginia

148

149

148

1. Viola pedata
2. Acer rubrum
3. Lepidoptera procumbens
4. Antennaria neglecta
5. Vaccinium vacillans
6. Gaylussacia baccata
7. Juniperus virginiana
8. Chimaphila maculata
9. Quercus ilicifolia

(large 3d plant)

Quercus ilicifolia
scattered in undergrowth

Aug. 13 - along Cedar Creek about half way between Marlboro and Crands Frederick Co.
Creek meanders, with cliffs first on one side, then the other, flats on opposite side from cliffs. On flats, willow, Indian grass. Much Phalanus along creeks.
On talus at base of limestone cliffs are scattered Thuja occidentalis and some Tilia.

thenandras, Frederick E. 149

9. Cladonia
10. Phus toxicodendron
11. Galium triflorum
12. Holidays pubens
13. Crataegus cuneata
14. a seedling of oak
15. a seedling of Carya

large old shrub 2-3 m
tall, several m. wide.

On flats 30-40 m above river is mixed second growth oak forest.
1957 Virginia

Takes at foot of road near cliffs in shale

24849 Cornelling erecta common

15 50 Oxonella Anglicia laev. abundant

Aug. 14 - 1 mi. N. of Staunton on main highway
in main highway

59 51 Euphorbia marginata scattered on bare places around weedy waste place and on road side

Shenandoah Co.

Stems spreading & ascending; flowers bright purple, blue, lower petals white, thin in morning.

Herbs up to 1 m. tall, branched at base, petals bright yellow, androecium yinomorphic.

erect, tracts white.
Aug. 14 - south side of Cave Mt. slope, with rather open forest of large trees with thick straight trunks up to 6 dm. thick. There mostly oaks either Quercus falcata or Q. cocinea (could not be sure by habitat, probably both cocineae - lvs. broadest at second pair of lobes from tip), but large Q. prinus, 9, all twig, yellowing and Dicyodendron calyculatum, also common, not as large as Q. cocinea. Undergrowth is almost continuous Cornus florida, mostly 1-2 m. but scattered trees 5 m. Young Vitis thyone, common.

- Myrica seedlings
- Carya seedlings
- Vaccinium macrocarpon
- Chestnut sprouts
- Vaccinium vacillans

Farmers in very good shape, walls have good growth of Parthenocissus, Vitis, Ptelea triste.
Aug. 14 — North Creek, 3.5 mi. above Arcadia.

Flat canyon bottom
with large boulders

Large Thuja and Pinus stubs

dominant in forest on valley

floor, with some Quercus

a few Quercus alba and Fagus

Platanus. Substratum of

deep humus completely

filling spaces between the

boulders, covered by a

thin ground cover of

Mitchella repens, with

Moss on boulders.

Heubneria latifolia

Dioscorea elata

Chimaphila maculata

Acer barbatum

Viburnum acerifolium

a few tree seedlings

Polypodium vulgare

Mitella

Cath琳ea

Hydrangea arborescens

Dryopteris marginalis

Polystichum acrostichoides

Adiantum pedatum

Acer barbatum

Mitella repens

leaf veins outlined in white;

— rhizomes, creeping on

rocks and in humus;

— prostrate, leaves dull green;

fruit scarlet.
Aug. 15 - Parke's gap, Pine Mts.
Young mixed forest, principally Riocordia
Pines, red maple, T. virginiana.
Robinia in open places.
A few oaks, Carya, Diervilla, and red maple.

Aug. 15 - Blue Ridge Parkway, vicinity of Peaks of Otter.
Mainly Oak forest -
largely G. velutina -
G. alba with Riocordia
at lower alt., G. rubra
at higher. Near tops
of ridges & trees are
lower on west side,
taller, more luxuriant
on east side.
Road cuts & of Peaks of Otter completely bare.
Robinia slowly started along roadside. Parts of
@00 cuts have become
weedy and young birch
are grown to 1 m. or more tall,
Robinia from dense
belt along sides of
road.

Bathurst Co.-Bedford
Aug. 15 - Peaks of Otter station, Blue Ridge Parkway.
Bar of large trees.
Wooded hill just
above station, oak
forest, mainly Quercus
rubra and G. alba, with
a few Carya, Betula
Lenta. and many young
old chestnut stumps.
Canopy complete.
Perhaps 20 m. tall.
Second story 8-10 m. of
Cornus florida, some
Quercus prinus and
Amelanchier.
Shrub layer 0.5-1 m.
mainly Magnolias
pilosa, Rhododendron
(Cayalas), Myrica, Kalmia
latefolia, Ribes sp.,
acerifolium, and
Castanea spalnoc.
Under layer - Pyrola
americana, Chirinostota,
maculate, Parthenocissus
quinquefolia, Medeola,
etc.

Aug. 15, Sharp-tooth Peak, Peaks of Otter - Wooded
with Oak - hiding probably
G. alba, Quercus rubra,
Carya spp., some G. alba,
Aug. 15 - 100 mile marker on Blue Ridge Parkway, west of Potters Mtn.
Extensive area that has probably been burned not too long ago - now covered by a dense brush 1-2 m. tall, with small pine rigida trees scattered through it.

Composión of scrub:
- Quercus ilicifolia
- Rhododendron catawbiense
- Kalina latifolia
- Corylus
- Hamamelis
- Castanea dentata var. f. var. Myrica pensis
- Mégacarpia pilosa
- Pieris floribunda
- Vaccinium vagans
- Gaylussacia

and occasional Prophyrospin, Lasafrax albidum, Aesculus, Quercus prinus, Eumalachis

- dense shrub 1.5 m. tall.

- low deciduous, 0.5 m. tall;
- fruit black, edible
- same
- shrub 0.7 m. tall.

Rhododendron catawbiense, mid.
important component of scrubs on old burned slope.

57 Gaylussacia baccata (Wang. Koch) K. Koch
common in scrub swd. burned area

58 Gaylussacia. baccata (Wang. Koch) K. Koch
same

59 Pieris floribunda (Parsh) D. H.
important component of scrub on old burned slope.
Aug. 16 - Apple Orchard Mt.
Trail from Blue Ridge Parkway at 3950' to top at 4260'.
Top, excepting cleared area, a solid forest of dwarf red oak trees, trunks 2-3 dm, dbh, and about 6 m. tall, with some Betulaceae.

Under larger trees is a carpet of Dennstaedtia punctilobula. Between trees a thick scrub of Rhododendron catawbiense about 4 m. tall, with no ground cover at all. In shade of enormous granite boulders are ferns (Denn. sp.) Polyphodium vulgare, Heuchera, Clintonia, Allium triquetrum.

34860  Nedytis purpurea var. longifolia
common along trail

32  61  Galium latifolium Michx.
common in woods on slope

62  Nedytis purpurea var. latifolia
common along rocky trail

63  Nedytis purpurea var. latifolia
common along rocky trail

64  Nedytis purpurea var. longifolia
along trail

65  Aenothera tetragona
common along trail and
in woods

On summit ridge is now
Corylus, scrub (C. amar.), and
in open part Allium cernuum
is abundant, with weeds.

Just below summit flat
the forest gets taller, but
is still mostly red
oak (Q. rubra), with
open underbrush of
Corylus, Acer pennsylvanicum,
Castanea, Fraxinus, Tramnus.
A thick herb layer about
1 m. tall many species,
but principally Epipactis
helleborine, Euphrasia,
Euphrasia, Collinsia, Coladina,
Dennstaedtia, Ascelpia
phylosacodes, etc.
Nedytiis, Campanula, am.

caespitose.

3950' 1206 m.

4100' 1250 m.

4240' 1398 m.

4500' 1592 m.

4200' 1280 m.
carpet.

caespitose, flowers
lavender.

caespitose

carpet.

caespitose, flower lavender.

plants erect, noticeably

glamorous.
Campanula americana
occasional in woods
Saxifraga
occasional in woods
Saxifraga
common in thinner places in herb layer in forest.
Acer campestre
common in forest
Umbilicus
abundant on great granite boulders
Neuchera
occasional in shade of great boulders
Allium
rare in shade of great boulders
Cernus occidentalis
occasional in Craig's scrub on summit ridge.


Bedford Co.

3.00 feet flowers blue violet
Shrubs 2.5 m. tall, leaves very glaucous beneath.
Shrubs 1.5 m. tall. Leaves very glaucous beneath.
Tall arching heads up to 7.5 m. long. Flowers deep violet. Niagona creeping. Flowers white.
Leaves: fruit green.
Shrubs 1.5 m. tall. Fruits in clusters, red, mostly without fruit.

Centaurea Ground layers may be seedlings & Panthenium. Where slope is gentle in broad ravine and a boulders fans in canyon bottom comp. of all layers become richer. In bare rock slopes Sedum, Telphium, and mosses are abundant.
Aug. 17 - north side of Rocky Top, Shay Run, next to 3.437.0 Datura stramonium L. on fill below road.

77 Polygonum tenue on roadside at base of cut.

77 Paracyphella montana (Burt) R.H. on bare road cut.


Second growth, mixed wood.

79 Viburnum prunifolium L. uncommon

80 Celtis occidentalis L. uncommon.

Aug. 17 - 2 mi. S. of Rocky Top. Overlooked cliff at head of Big Run. Low cliffs of greenstone, shaded by oaks and hickories.

81 Helianthus tricolor L. Mill. in dense tangled herbaceous undergrowth, under trees at foot of cliff.

82 Umbilicaria abundant on greenstone cliffs.

83 Umbilicaria abundant on greenstone cliffs.

84 Carex in shaded ledge on cliff.

85 Hedyotis punctata var. longifolia shaded tine on foot of cliff.
Virginia

Augs. 17. - Big Run Overlook

38 Oenothera biennis L.

common on roadside, road-cut, and talus

90 Cheilanthes lanosa (Michx.) D.C.

ledges of rocky roadway, road cut

91 Lanicula marilandica

occasional in shade of woods along trail

Augs. 17. - Pinefields Shelter

92 Oenothera biennis L.

common on road cuts and embankment

93 Crataegus crus-galli L.

common in Musley flat
168.

Botrychium virginianum (L.) Sw.
occasional in wooded ravine

94 Botrychium dissectum var. dissectum
occasional in bottom of wooded
ravine

95 Botrychium dissectum f. oblimum
common in bottom of
wooded ravine.

96 Hedysorus squamiger var.
common on rather wooded
slopes under thin woods.

97 H. canadensis var.
common in rather thick
woods on slopes

98 Handroanthus coriaceus
common in rather thick
woods on slopes

99 Physocarpus sp.
Marsh.

in bushy open field.

Aug. 18 - Hemlock Springs
roadside in woods

34900 Helianthus decapetalus L.
common in edge of woods

41 Hypericum punctatum Lam.
in edge of spring

42 Equisetum sp.
around spring at
edge of road

saw a wild cat cross

road here at about 5:00 p.m.

Shenandoah Park

169

(mult)70cm.
only sterile plant, seen

not caespitose.

erect.

small shrubly tree
4-5 m tall, fruit, green.
3-4 in a cluster.

erect, rays, and disk

bright yellow.

erect, flowers pale

yellow (almost green).

stems erect.

(out of range of van, breaks
but has bunched branches.)
Aug. 13 - Big Meadows Bog surrounded by dense thicket

34903 Hypericum punctatum Lam. rare in edges of thicket, low ground.

04 Rosea xerophyta var. excelsa in thicket

05 Agrimonia quinquenervia Willd. rare in edges of thicket

16 Lycopodium uniflorum rare in wet ground under trees in thicket

07 Cincta maculata L. common in open part of bog

09 Aster umbellatus Willd. local in open part of bog.

09 Elychaca obtusa (Weld.) Schult. local in muddy open place in bog.

10 Elychaca dominant in muddy open place in bog.

11 Isoetes angulatamii in muddy place thinly covered by sphagnum in bog.

Rosa palustris common in open bushy part of bog

13 Botrychium dissectum rare in low ground in thicket

The sandhills Nat. Park

Erect.

Erect.

Erect, stem reclining; flower whitish.

Erect herb 1.3 m tall, with strong oily odor.

Forming dense colonies, several m across.

Erect, ray white, disk male yellow.

Leaves subangular, glossy (eaten off by animals)

Shoot 1 m tall, flowers rose pink, leaves slightly glaucous beneath.
1953 Virginia

1. Osmunda regalis var. spectabilis (Walt.) Gray
   rare in open wet part of bog

4. 15. Dryopteris thelyptera
   var. subescens (L.) Gray
   abundant in open part of bog, in sphagnum hummocks

16. Galium trifidum var. linnaeanum (L.) Gray
    occasional in sphagnum hummocks in wet part of bog

17. Ilex verticillata (L.) Gray
    occasional in bog

18. Vernonia noveboracensis (L.)
    occasional in open part of bog

19. Trisetum textinum
    occasional in moist low ground in thicket

20. Botrychium longum var. silifatum
    in open meadow around edges of thicket

Aug 18 - Skyline Drive
The Pokahoke pseudo-acris, which lines the drive in many places in rather brown at this season from the attacks of an insect which eats the mesophyll tissue of the leaves.
1953 Virginia
Passage Creek,
Aug. 23 - Fort Valley, near
Johns Road, Massanuten, Md.
Fimbriatula autumnalis (ss.) Rvs.
on gravel in low spot in dry part of stream
bed.

Aug. 23 - Fort Valley, 1 mile
about organization camp, Road
Massanuten, Md. a very small patch of
Liriope virginiana
leaves of oak sapling
common, occasional
Amelanchier.

Ground layer of
1. Sphagnum proserum
2. Luzula canadensis
3. Rubus
4. Veronica officinalis
5. Antennaria plantaginea
6. Potentilla simplex
7. Sarracenia quinguaflora
8. Leucobryum
9. Bartramia?

Aug. 23 - Elizabeth Furnace
Colony of C descending angulate
at foot of shale cliff of road cut. On many
hundreds of plants examine the free tip of the calyx
in unexpanded bud vary

Shenandoah Co. 175

from erect to divergent
at as much as a 45° angle,
and from straight to
incurred. Therefore the
main character separ-
ating this species and
two others (FengetStatusCode and
grandiflora) from the
rest of subg. Omega
will seldom work in
this way, at least. The
divergent character
of the capsule is
evidently good - no
exceptions noted - base
stand out at 45° or more
from stem. Leaves always
relatively crowded, linear-
clavate, subulate
androecium pygynomphic.

In a good
pine patch - Liriope virginiana
1-2 dm, dbh, 20-25 m tall
5 cm, stuff on surface of
light gray soil, 2-3 m tall
Second story of mixed
oak saplings with a
few Pinus densiflora sapling
Fraxinus sapling elm
seedling occasional
Carya floridana Vitis sp.
shrub layer about
1 m tall others, of tree
245
seeding and
- Vaccinium vacillans
- Sassafras seeding
- Gaslyussiac dissecta
- Kalmia latifolia
- Viburnum farrifolium
- Acer rubrum seeding
- Amelanchier
- Picea canadensis seeding
- Rubus toxicodendron
- Crataegus sp.
Ground layer of very sparse
- Clethra alnifolia
- Chinarhiza maculata
- Parthenocissus quinquefolia
- Polytrichum commune patha
- Achillea mosaete
- Veronica officinalis

Aug. 30 - Elizabeth Furnace Fort Valley, Manannah, Va. along brook in small savin
34922 Equisetum pratense Ehr.
65 Photographed small colony, closely pressed
22 Equisetum hyemale var. affine forming dense beds

Lynchburg Co.
176
- Chrysoglossis mariana
- Steganthus
- Leucotrichum cushion
- Paragies cushion
- Potentilla canadensis
- Chimaphila umbellata
  (large dense patch, 10 dm. acc.)
- Antennaria neglecta
- Aspera hypericoides
- Desmodium nudiflorum
- Lepidago procumbens
- Lythrum salicaria
- Galium vitreum
- Hedysarum gracile
- Linum 36

stems erect. nut retained
Sept. 16

"fat maws" Fern
Rason with scatted
shrubs & trees.

Botelnum biganta
1. Cynipendula
there is apparently a complete random
segregation. There is absolutely no
correlation of depressed
habit with degree
of exposure. One low
bent tree, looking like
a wind-bent tree of
coastal bluffs or rocky
top, even on a slope
oriented exactly opposite
to what might have
been expected if the
prevailing exposure
had anything to do
with this.
Lept. 6/2 n. of Arena, Iowa. 4.
Open prairie with scattered pine patches.
S. bankiana - s. square
mile x 8.

Mainly grasses:
- Eutrichospora cynogetum
- Andropogon gerardii
- Panicle s. ind. 'Prairie Grandiflora'

Several Campanula

- Calamagrostis ramosa
- Carex pensylvanica
- Koeleria macrantha
- Monarda fistula

- Helianthus annuus
- Polygala s. elongata
- Hypericum longifolium
- Polygala s. polygala
- Rhexia
- Vireya
- L. s. purpurea
- L. s. x. 'tall'
- Persicaria capitata
- Ambrosia s. artemisia

Wide meadow
of mixed herbs
- 3 m. tall
Sept. 10 s.w. of Arena, Iowa.

"gold main" open.
Le the 90-60.
Bouteloua hirsuta
B. curtispendula
Lepidium
Andrographis
Inghamia ruthen
Euphorbia stellata
Osteoseris 6172. others

Sodium
Kuhlmia superfiode
Poiraria
Potentilla arguta
Artemisia
Euphorbia serriola
Petalostemon
Amphora canescens
Gerandio

Invasion spread to
off. by Populus tremuloid and sparingly by
Hum. betula alba, oblong.
V. M. juniperus nig.
Ruby Corylus
Anthoxylum
186 1953 Wisconsin

Dext. to half way bet. Black Earth and Ridgeway, Iowa.

J. H. H. 34924

S. a. f. faberii Henn.

Common generally along roadsides and in edges of fields.

Great Tracing and somewhat collapse, panicles moulding.
Oct. 4 - Between Bull Run and Guineaville, r. side of main highway.
Forest of Pinus virginiana.
Trees, pine stand, Trees 10 cm. 5 thick, 15 m. tall. Very little undergrowth.
A few seedlings and saplings of Quercus, Fraxinus, etc. and
some small Casius floridus.
Thick ground cover of Chymaphila maculata,
Resedea procumbens.
Galium triflorum
Galium pilosum

Polystichum acrostichoides
Gerardia sp. (Gympsea?)
Rhiz tus tristem
Rubus (dewberry)
etc.

Thin net of Conicea garynie, est. near edge.
The humus layer is thin, 3 cm.+, thicker near base of trees.
The whole thing is dry as tinder at this season.