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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

194 MICH

Memorandum

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12

E. LUCY BRAUN

Univ. of Mich. Biol.
Station

Cheyboygan
Mich -

4 2702 May St
Cincinnati, Ohio

July 15-16 Cin to Mich

17 rain + east on lake

18 Gorge

19 - Grapevine pt.

20 - Mud Lake Beech Maple

21 - Cecil Bay

22 - Larix Bog + Mud Lake

23 -

24 Reese's Bay

25 Mud Lake - Beech Maple

26 Machinee Id

27 P.M. Reese's bog

28 Carp Lake Hardwoods

July 20, 1942

Beech-maple off
mud lake

beech

maple

hemlock

Tilia

Betula lutea

See also notes
of July 25

Trillium
 Viola can
 Asp. spin
 Macanthem
 Osmorhiza stracheyana
 Botrych. v. v. v.
 Arisaema, glaucous
 Rubus, red leaf
 Cirsium alp.
 aspl. fl
 Adiantum
 Agrostis sp
 Thalictrum glab. Acer sp.
 Apocynum nud. Rubus, big
 Ranunc. lvs
 Cyst. lvs Cornus alt
 Allium tree
 Lycopodium
 Sclerophylloides (in black
 soil)
 sm. yellow violet

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Discard →

~~beech IIII 1
 maple III IIII IIII IIII IIII
 Tilia IIII IIII II
 Hemlock IIII
 Betula lutea II
 Frax americana 1
 Frax — 1~~

Several distinct communities -

one in lower portions wet & very black soil -

is maple, Tilia hemlock linch

In on higher rolling land is

beech - maple -

hemlock - very

sparse undergrowth

A layer of duff by leaf mold 1-3 in. thick & transition to sandy

soil. i. e. podsol profile

In this - mostly maple refr

but also -

Tilia

Corylus

beech

Ostrya

Abies (occ) with Thuja

hemlock (acc)

Trillium

Geum

Urtica can

asp. spur

Mulicella

Strophopus

Caulophyllum

maianth

Black soil (lower) areas
with more
maple-hemlock-birch

Picea densa maple ref

maple

hemlock

Tilia

hemlock

Asp. pines

Ribes, big lvs

Arisaema

Maianthemum

Mitella

Phacelia dryif

corolla

Pipera

Bulbilla?

Lonicera

Clematis

prola com

Medeola

Cirsium aff

Ranunculus

Viola blanda?

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Some Thuja in lower
part

Lycopodium lucid

Polygonum. bifl

Cornus alt

Rubus amer

Coral Bay, July 21

Larix bog - July 22

Larix
Thuja

Spice

Cornus stolonifera

Lonicera oblongifolia

Chamaedaphne

Andromeda

Ledum

Betula pumila

Salix spp

Rhamnus alba

Cranberry

Rubus trif

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Calla pal.

Aster pumila

Thalictrum (dasy?)

Solidago ulig &

Fragaria

Sanguinaria

Osmunda regalis

Peperomia

Macauburn

Valeriana

Habenaria - tall many-
flowered yellow

Cornus canadensis

Cypripis (biss)

Dicentrales

Ground all areas + humpy
& very mossy, with
Sphagnum hummocks
+ there

Mud Lake - July 22

Open water + juncus lilies

Shrub border with
Chamaedaphne
Pyrus melanocarpa
Salix
Aspid. thelyp.
Ledum

Grows out at edge +
with Sphagnum. In
in rh. is Maianth. +
Clintonia from
Thuja border
Tall alders

Thuja comm.
Thuja

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Clintonia

Cypripedium

Maianth.

Cheilanthes

Trout lilies

little Epipactis

Aralia nudica (not
much)

little Intella

base tall

Then some spruce comes
in

Elsewhere at the border,
a floating mat of
Sphagnum with
Chamaedaphne various Carex
grass Potentilla palustris
Camp. aparin.
Lysichiton

occ. pitcher plant,
3-lobed leaf

occ. notes in woods
with Calla

Calla in wettest
parts of woods

This mat started in
dry year, 1916. One or
two Cham. clumps from
pieces washed in by creek

Some hardwoods
back of conifer border
include

s. maple

Fern + Abies

Aspen

Acer spec.

Reese's Bog
July 24

Thuya bog

Some Lush
aloes

Betula lutea

Taxus Frax nigra

Rhamnus?

Moss mats of Sphagnum^{sph}
big-leaf Menyanthes
Thuidium, Hylacomium,
fern-like liverworts

Chrysozonia

no Macaranga

Clematis

Mitella

Viola (like blanda)

Pennaceae

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Trentalis

Drosera Aspidocroton

Cypripedium reginae

Cypripedium parviflorum

Rubus triflorus

Moneses

Pyrrola

Cornus canadensis

Aralia nudicaulis (not very
abundant)

Polygala pauciflora

Caltha in wettest places

Juncus in open places

Cystopteris bulbifera

almost in water

Dec. mounds with tr. articles

Pennaceae in open mounds
+ some

Mud Lake Stand
July 25. 2/2

(higher parts) ~~|||||~~
~~|||||~~

¹⁰¹ beech ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

⁷⁵⁺⁷⁸ Spruce ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

³⁰ Tsuga ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

~~|||||~~

⁷ Bet. lutea ~~|||||~~ |

Tilia ⁹ ~~|||||~~ | |

Tsuga stump ~~|||||~~

~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

maple (cont) ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

elm |

Fras amer |

Belm ^{4-10 in} 10 in group -
in - sample areas

³⁶ beech ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

¹⁴ hemlock ~~|||||~~ ~~|||||~~ || |

²² maple ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ||

elm |

Tilia ||

birch |

see also notes
of July 20

Hummocky raising
somewhat darker humus
Soil darker

maple ⁴² ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
beech ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
⁷⁰⁺¹⁹ maple ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
³⁹ Tsuga ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
Betula ³⁰ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
Tilia ⁶² ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~
elm ⁹ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~

hemlock? ~~###~~ ~~###~~ ~~###~~ ~~###~~

maple (cont) ~~###~~ ~~###~~ ~~###~~ ~~###~~ ~~###~~

Frag. amer ~~###~~ ~~###~~ ~~###~~

Where maranthem slips

Stroph. Mitchel

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Clintonia violacea

Frag. nigra 1

Acer rubrum 11

Smaller,

beech ~~###~~ ~~###~~ ~~###~~

maple ~~###~~ ~~###~~ ~~###~~ ~~###~~

hemlock ~~###~~ ~~###~~ ~~###~~

birch 1

elm 11

Tilia ~~###~~ ~~###~~ ~~###~~

D

Higher part:

beech	101
maple	153
Tsuga	30+4
Tilia	9
Betula lutea	7
elm	1
Frax. amer	1
	<hr/>
	306

Sample of 4-10 in group:

beech	36
maple	22
Tsuga	14
Tilia	2
y. birch	1
elm	1
	<hr/>
	76

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Hummocky part -

beech	42
s. maple	89
Tilia	62
Tsuga	39+4
Betula lutea	29
elm	9
Frax. amer	3
Acer rubrum	2
Frax. nigra	1

80
2

Sample of 4-10 in. group

s. maple	9
beech	4
Tilia	5
hemlock	3
elm	2
birch	1
	<hr/>
	24

306
280

586

Maskanaw Id

July 26

On trail beyond Arch Rock,
a good area of B-M on
a north slope

Beech - 24

Maple - 20

Middle size trees -

In sample area:

Beech 3; M - 6; fir 3;

Ostrya 1

Smaller trees -

beech, Thuja, Ostrya,
Abies, maples, Tilia

Plenty of herbaceous
growth & shrubs, gives
forest aspect of that of
Ohio!

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Sambucus rac

Acer penn.

Cornus circ

Corylus rostr

Prunus virg

Taxus - local only

Aster - big leaf

Solidago latif

Viola, yellow, with sev. stems,

but pub. stems & very pub. caps.

Arisaema

Cypr. par.

Hepatica acut

Actaea rubra

+ f. white

Phegopt dryop

Aralia rac

Actaea alba

Cyst. bulbif

Osmorhiza

Botrych. virg.

Aquilegia

Streptopus

Fragaria

Trillium grand

Fir + Thuja forest with
beech herbless herb

growth with more Epipactis;
Chimela, Actaea rubra, Trillium

are prominent

Some areas are
beech, y birch + fir.

Areas of just Thuja (drop)
have very little undergrowth.
etc. locally, much Carex elastica

South of Reese's Road,
+ west of British Landing rd,
trail thru' woods (a
high part of woods)
Large white pine

2nd layer is s. maple
3rd " " is maple + beech,
with fir, Ostrya, Acer penns.

Maianth	Tricentalis
Streptopus	Aster - big leaf
Hepatica abt.	y. violet, pul + gl, pods
Osmod.	Corylus
	Lonicera

July 28
Camp Lake Hardwoods

Enter from little rd. on north

	95
beech	95
S. maple	28
red maple	31
hemlock	50
y. birch	14
red oak	1
Tilia	4
lbrs	1
Betula lenta	1
Frax. amer	1

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Small: 226

- beech
- S. maple
- red maple
- hemlock
- Acer penn
- red oak (2 fs)
- Amelanchier

	68
beech	68
hemlock	11
y. birch	5
red maple	21
S. maple	31
	136

Aralia nudica vib. Pentag
Clematis bor Somnerd
Medeola Rubus, red rasp
Trentales Sambucus
Maianthe
Gaultheria
Trolla blanda
 Indian pipe
Chamaepitilium
Mitchella
Polygala pauc
Saxifraga not cyl
Cyper. acule
Eleocharis
Cornicularia
Habenaria orbic.
Polygonatum pub.

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Stem link appears to be
 somewhat localized, & almost
 dominant on the Camp
 Lake beach ridge

Less *Clematis* & *Gaultheria*
 where hard wood ground

In area of recent windfall
 hickory & maple growth
 as much as 4 ft thick yr

About 2-3 inches of good
 humus, but drift on
 sand. The sand has some
 black mips in

Some areas all seed, & have
 B-M (mostly p.m)

a local area that is
 B-M (can be added to gen^{er}al count)

Beech										56
Sm										60
hemlock										2
										<u>118</u>

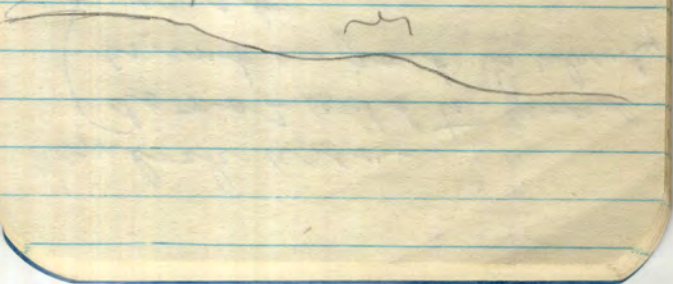
2nd size class:-

Beech										55
Sm										26
Birch										2
hemlock										1
										<u>84</u>

- | | |
|-----------|-----------------------------|
| beech | <i>Aralia nudicaulis</i> |
| s. maple | <i>Smilacina vac.</i> |
| Ostrya | <i>Polygon. pub.</i> |
| Acer penn | <i>Troutletia</i> |
| red oak | <i>maranth</i> |
| Lonicera | <i>Mitchella</i> |
| Tilia | <i>Trollius grand.</i> |
| | <i>Merckia</i> |
| | <i>Clintonia v. marian.</i> |
| | <i>Asp. spec.</i> |

The above B-M area is on
 the highest part.
 It is more open below

Soil Profile;
 loose litter
 Duff - 4 in
 pale sandy podsol 8-12 in
 yellow sand
 (data from woodfall
 BM)



hemlock area

(do not add to general count as part is already in it)

hemlock	####	17
beech	####	9
s. maple	##	2
red maple		1
elm	1	1
But lints	1	1
y birch		1
		<hr/>
		32

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Another area - just north of Leavenworth, 1 mi. does not have as many large trees & no hemlock

more hilly
20 Beech - Maple + some Tilia

lots of Trill., grand Yew
Caulophyllum

226

136

118

84

32

596

Colonial Point, Burt Lake
July 31.

Thal. divaricum
Urtica grand
Viola can
Viola, sm. y
Trollium grand
Hepatica acuta
Aralia nudica - not much
Solidago caesa
Desmodium, smooth + short style
Hystrix (m. mag)
Smilacina rac
Galium, fls
+ hooked seeds
Macarthemis
Polygonatum pub
aster, big leaf
Aquilegia
Asp. Spira

Larger trees are
lilac

s. maple

red oak - one very large,
about 4 ft D. ^{plum}

A few old wh. birch ⁱⁿ me
hemlock

Tilia wh. pine

Betula lutea

Smaller: -

Acer sacch Lonicera

Prunus serot (a few small)

Amelanchier Ribes cyn

Ostrya Prunus berg

Fagus Sambucus

wh. ash red raft

red elm Corylus

Acer penn vit. acery

hemlock

y. birch (very few + no very small)

a few red maple, small

[revised, next day]

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Mitchella

Streptopus

Habenaria orb

Corallorrhiza

Actaea alb

Aralia rac

monotropa

Medeola

Trientalis, few

Circaea lute

Conopholis

Carex sp

Botrych. var

Pedicularis can

Herbaceous (from former
upturned trees) with

Leucobryum

Cythara

Theracium scop

Apparently there were
former diff. in stage of
develop. which resulted
in diff. in cutting

Where beech is largest,
little disturbed

Lower areas with moder-
ately old wh. pine + red
oak and about 6 in. beech
prob. were succ. less
developed + more cut,
or perhaps were hemlock?
(most of large oak)

Clintonia - in wh. pine
area

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Old part of forest -
near large oak, - has
very large beech +
here beech is dominant
in B + SM dominant
in understory

Colonial Point

Aug 1.

I Community in which large beech are prom.

(D) near entrance on trail to right:

beech	53
s. maple	3
red oak	10
hemlock	3
red maple	3
	<hr/>
	72

Middle size trees: -
(about 4-10 in)

Beech	25
s. maple	15
red oak	6

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Ostrya	6
Tilia	1
Betula lutea	6
red maple	4
hemlock	2
Amelanchier	1

Small: -

s. maple	Trillium
beech	Polygonat.
Ostrya	Streptopus
Tilia	Carex (spurs)
Frag. amer	Sol. caesia
Amel.	vit. acerif
Acer penn	Mitchell
y. birch (very few)	Panicum
hemlock	Epifagus
Prunus serot	Medeola
	y. Corollorhiza
	red " ja
	Pyrola

Chimaph. umb.
 Aspid. spin.
 Aralia nudica
 Maianthem.
 Polygala paucif.
 Medeola
 Monotropa
 Aspid. spin.
 Clintonia
 Actaea alba

Soils: -

- (1) 2-3 in. of duff
- (2) 2 or 3 in of pale sand
slightly darkened
with humus
- (3) then yellow sand

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To left of road (2)
 slopes perceptibly to
 left, to Burt Lake
 Big: -

Beech	57
S. maple	5
red oak	8
hemlock	1
red maple	18
wh. birch	1
y. birch	3
wh. ash	2

Middle size trees; -

beech	22
S maple	27
red maple	5
red oak	3
Ostrya	5
wh birch	1
Frag amer	2
hemlock	1
Y. birch	2
Prunus serot	1

Small

<u>S maple</u>	Lonicera
beech	Polygonat
ash	Trollium
Ostrya	Carex
Acer penn	Maianth
Prunus serot	Mitchell
Amer	Hab. orb
red oak	

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Frag. amer	Streptopus
Lilia	Viola - accub.
Y. birch	prob. blue
	Medeola
	Aralia nud.
	Circaea lut.
	Asp. spin.
	Glyceria nerv.
	Ranunc. recur.
Arisaema triph.	
Urtica grand.	
Smorhiza	
Botrych. virgin.	
Soll. caesia	
Viola blanda	
Corallorrhiza, red	
Hentaria, hetero	
Lycop. luc.	
Hab orb.	

Further west
on trail (3)

Big

Beech	45
S maple	2
red oak	8
red maple	5
y. birch	4
hemlock (old stump)	(3)

2nd Layer.

beech	16
s maple	4
y birch	6
red oak	5
Prunus serot	2
Frax amer	2
red maple	3

Small

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<u>s maple</u>	
<u>beech</u>	Trellium
<u>Acer penn</u>	Medeola
<u>Prunus serot</u>	Mitchella
<u>Amer</u>	
<u>Frax.</u>	Aralia nudic
<u>Tilia</u>	++

An old secondary (4)
area; trees about 10m

beech	18
red maple	27
y birch	7
white ash	1
s maple	4
Ostrya	1
white pine	31
red oak	28
Prunus serot	2
hemlock	1
An occ. large beech - 3 & y. birch, 1	

Long slightly elevated
lands where were
very old logs

This place had some-
thing happened at
long ago

Not much herb. growth

Medeola

Epipactis pub. (lots)

• Smilacina rac

Aralia nudica

Conopholis

Abies - 3 ft

Lili

S. maple

beech

Ostrya

Acer penn

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Lonicera

Monarda

Haben. orb

Pteris (very little)

Cypr. parv

Pedicularis

Hepatica obtus

Aquilegia

(5) Just to right of rd + more or less // to it, then way off + to "Old Hemlock Trail"

Beech	123
Hemlock	81
red oak	11
red maple	19
s maple	4
y birch	9
Tilia	1
wh elm	1

Smaller;

Beech	45
red oak	3
s maple	29
red maple	18

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ash	1
y birch	16
hemlock	22
Prunus serot	1
elm	1

Small.

<u>S maple</u>	<u>Maianth</u>
<u>beech</u>	<u>Aralia nudica</u>
<u>hemlock</u>	<u>Medeola</u>
Prunus serot	<u>Pyrula</u>
Acer penns.	<u>Strept</u>
abies	<u>Lyc. luc.</u>
red oak	<u>Hab. orb.</u>
Amal.	<u>Trentol</u>
Tilia	<u>Epipactis</u>
	<u>Clinton</u>

Locally, Japan

⑥ A younger area
of apparently the
same thing 10 in ±

bush	26
red maple	13
hemlock	20
y birch	3
s maple	1
big bush	3

Lots of small hemlock

Lower places -
that would be boggy
if it had rained
recently -

more small abies
" Thuja

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Drosera

Osmonda Clayt.

Frag. nigra

ever spec.

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60.6 at Round Lake Rd.
61.35 at choke cherry
69.4 - bank of
71.7