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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.

1943-2



MEMORANDUM
BOOK

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R-210 Open Side
R-211 Open End

15

32 SHEETS

E. LUCY BRAUN
2702 MAY ST.
CINCINNATI,
OHIO

1943 - 2

July 13. Grayling - U.M.B.S.
July 15. U.M.B.S. to Mackinac
City - St. Ignace, Trout Lake -
Hubbert

Woods at Hubbert

July 16. M28 to M123, N. to
Paradise - to lower
Tahquamenon Falls
Woods along M123

July 17. Hubbert north
into Tahquamenon Ulden

July 18. Tahquamenon Falls,
river trip

" 19. Hubbert - Munising

July 13.-

Grayling - UMB S.

Sandy plains & rolling area like Grayling continues nearly to Gaylord Hills (moraine) visible in distance to side, have lots of hardwoods incl. some maple.

Appr. Gaylord, we rise onto a rolling moraine upland (1348 ft) of good farms & pastures. The woods are sprout woods of s. maple, beech, Tilia, & in some places much elm - but aspect is B-M.

This continues for about 23 miles N of Gaylord - except if

course, that low places
are wet or boggy, &
may contain spruce
or *vitae* and/or larch.
(S of gaylord - near Otsego
Lake, some hardwoods
& some pine)

About 23 mi. N. of
Gaylord & N. of Wolvone
more oak - white & red -
& some pine: wh. pine
occ. in low places &
with dec., & some jack
& red, but not much.
Red maple sprouts,
Prunus ser. sprouts (from
me base) white oak,
& red oak, with aspen

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& bassam poplar, all
scattered on sandy open
grassy ^{& fac. + gayl} Comptonia flat
indicate perhaps that
this had been white
pine land similar
to part of Hartwick pines.
Pines & oak cont. to
Burt Lake on #27

July 14 - Reese's Bay
& North Fishtail Bay

July 13
St Ignace - Hulbert

L.s. outcrops at
St Ignace.

Slopes facing Strait
w. Arbutus + spruce -
all conifer - + lots of
bluebells

Pass over first cresta
ridge + pine + aspen
starts. Up into another
+ then woods are M-B
with Julia, + good farms -
near Allenville + Moran
Lower + flat - arbutus,
birch, spruce, aspen.

Each higher ridge (w.
me of sand) is harder

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Ridge near Kenneth -
M + B again + some birch
(all spruce + small spec. a
few isol. trees. Farm

Miles of bog land - some
Thuja - Larix or spruce,
some willow shrub; some
Polytrichum - Chara etc;
+ some grass - bog shrub,
all with scattered Larix
pine (even Jack), Spruce,
etc. All indications are
toward final est. of spruce
on these areas.

Just north of Trout
Lake - first ridge narrow,
with M, B, Birch, then
some flats (mushy type)
then up to ridge, +
stays up (5-6 mi. N of
Trout Lake); forest

was recently cut.

N. Hardwoods - some
beech, red maple, hawthorn,
y. birch (some of these that
were left, very large)
Saw some Striple on ridge
when we first got up to
it, but here, seems to
be all red maple.
y. Birch was plentiful - it
is not cut.

Cornus can, Maackianum
Ostrya. Some little
fir trees, also red
maple hawthorn, birch
Sorbus, wh. pine
These were here before
cutting.

Then mile or more

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of sandy plain or
Jack pine + occ. red
wh. pine (both large)

Up to farm land
& Maple at jet. 28
& westward.

Just w. of Paradise rd.
a "roadside forest" of
large S. maple, but too
far apart what was
remained?

Small - S.M., blue,
(S.M. of all sizes); a little
farther on - large elm &
y. birch with maple;
some small ~~maple~~ in
a prairie; prairie full
of ostrich ferns, lady
ferns, interrupted fern

big red maple in
June; beech (big
& middle size); birch
hemlock, too -
i.e. the "roadside
forest" is maple-birch-
beech-hemlock, &
elm

Turn north to Hulbert,

Just before reaching H., go
down a rather steep hill,
(perhaps 50 ft or more)
[see notes of July 18]

30 acres of various hardwoods
on edge & slope of this
hill. This woods not
all the way to top; i.e. another
rise after flat this starts from

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Hulbert

30-acre woods

Maple-B-birch woods

Sambucus rac.	Troll. grand
maple, s.	Habenaria rot
beech	Smilacina rac
Ostrya	Trentales
Compositae	Viola blanda
Corylus	Asp n t
elm (few)	Asp. spin
Yucca	Betula nig
	Achaea alba
	Polygonat. pal
	Callirhiza
(The beech has litch.)	
Aspl. across	Phegopt. Duff
Small clay	Galium sp
Rubus am	Y. violet

Canopy trees

~~### - 90~~
~~S. maple ###~~
~~###~~
~~beech ###~~
 30
 Y. birch ###
 elm ||

about 6-8 ft in
class

Smaller, 2nd layer

~~S. maple ###~~
~~### - 44~~
~~beech ###~~
~~### - 50~~
 Y. birch ### 7
 Filix |
 elm | fir ||
 Ostrya ||
 stuff remains layer

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A cont. layer + 1-3' ft
 maple. (a good many)
 (very small beech, esp. in pine)
 Near edge, an occ
 small fir + wh pine
 fir inside too.

- name {
- Siv. cyclop, sm
 - Impatiens
 - Arisaema cf
 - Adiantum
 - Cercaria alp
 - holc can
 - Cyrtopollenium?
 - Maianthe
 - Mitchella
 - Lycopodium

half creeping, off lvs
 (the S. maple is all S.M. not regular)

Topogr. of woods -
sloping, with several
ranches; no steep
slopes; no difference
in comp. in relation
to position in front.

Forest floor very
irregular & hummocky,
as though the humps
might have been formed
at some time in the
past by windfalls.

The continuous maple
layer is striking, but
above this 3-4 feet,
maple no longer an
overwhelming dominant

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July 16.

N. on M123 from M28.

Return Trip

Just N. of mouth of Tiquam
Iron River, along shore of
Whitefish Bay (bet. rd & shore)
lots of red maple & some s.m.
with y. & wh. birch, in dist.
woods. i.e. deadens spp.
here come down to Lake Sup. The
large marshes adj. to river
mouth.

S. of Tiquam river, some
ext. flat with Cham. & spruce,
larch, etc., but poor land
is rolling & occ. by hardwoods
here cut off. Then come up
onto a higher level, all hardwood.
This woods extends some miles
along M123, & is maple-
beech-y. birch. Only locally
any hemlocks.

A flat area, then staying

small	
<u>maple</u>	asp. spin
beech	<u>Life</u> <u>luc</u>
Ostrya	" obsc
red maple	Maianthe
Linnaea	Mitchella
fer	Trillium
hemlock	Aralia nud
Sorbus	Smilacina
Hazel	Clintonia
	Oxalis mont
	Cornus can
	Trichostema

fir larger than last 6 in
is dead

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Big	(a)	Middle
Maple		
beech		
"		
y. birch		
"		
red maple		
"		
hemlock		
"		
wh pine		
fer		

In this sample, the
y. birch + hemlock the
largest trees; hemlock
more or less localized;

①

Another sample 2nd page

60					
S. maple					
46					
beech					
red maple					
y birch					
fir					

Small
s. maple
red maple
beech

This area has very little Lycopodium; no Thalictrum; otherwise like other samples

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The above changes to woods like first sample (at south edge where disturbed) then with spruce, then hemlock-spruce with Thuja, then hemlock drops out + Larix begins. This cont. for sev. miles - until rise to M 28, which is hardwood.

200 ft P. marsh + bog
spruce bog after in place

hardwood

①

②

Ridge ② is at M 28 + seems to be same one that was studied at Hullbert

July 17

Hulbert - 11 mi. N.
+ into Tahquamenon border
Ridge ness.
Ligno. anast.

birch
hemlock
red maple, with
understory same.

Smaller stuff
same + fir

Streptopus	Clintonia
Saxifrage	Trentalis
	Clintonia
	Prasanth
	<u>Oxalis mont</u>
	<u>Cornus can</u>
	Gaultheria

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	Ridge	camp ①
hemlock	###	/ /
y. birch	###	/
red maple		/ /
Thuja		/
Spruce		/

add this to next
page.

(10a)

Still ridge but over

44 Hemlock IIII IIII IIII IIII IIII IIII
 25 y birch IIII IIII IIII IIII IIII IIII
 18 red maple IIII IIII IIII IIII IIII IIII
 fir IIII IIII IIII IIII
 S maple I
 Arbutus IIII
 beech I
 W pine I
 Spruce I (Picea canadensis) I

Smaller lay
 of birch, red maple,
 spruce, fir, hemlock
 + occ. s maple + occ. beech
 Stumps w pine? - III

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Maianth
 Anem. Cornus ~~San~~
 Sorbus Oxalis
 Corylus Coptis
 Lonicera Clintonia
 Rubus Trenula
 Acer spic. Asp. spum.
 Mitchella Melicope
 Viola blanda? Aralia nud.
 Lycop. luc. " clayt.
 Lycop. obs. Cyper. acule.
 Mossy large y birch
 base with Oxalis +
 Lycop. annot. about 2 ft of
 largest arbutus are dead.
 Forest floor all hemlock
 + more Oxalis + Lycop. on " ; they
 go up over mossy logs, too

Mossy hemlock cr.
 Cryptotaxus, Comae,
 Clentman

Ridge at

5	5
8	7

 (2)

Hemlock		
y. birch		
red maple		
beech		
s. maple		
fir		
Shuya - 1		
wh pine 1		

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more little maple than
 in first

not so much *Dyaleis* etc
 Lycopodium
 Lycopodium
Dyaleis
 Maianthemum
 Aspidopteryx
 Medicago
 Cyperus aculeatus

more open on ground,
 not the wealth of
 n. herb. undergrowth

Low boggy -
Arbovitae (large)
w. spruce
small black ash

~~Acers pinnatis~~
Picea (~~like Picea's~~)
P. flexilis
" of Dry Larch
Rubiaceae
Cercocarpus
Dialium
Tilia
Silla, and
little Herb
Sennae

Sheep
Cathartes
Democritus

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Asp. spin.

At end of cut: ③

Thuja IIII IIII IIII IIII IIII

1111
spruce IIII IIII

hemlock III

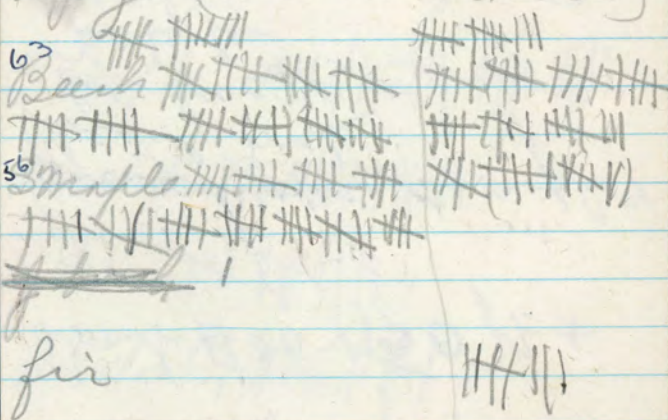
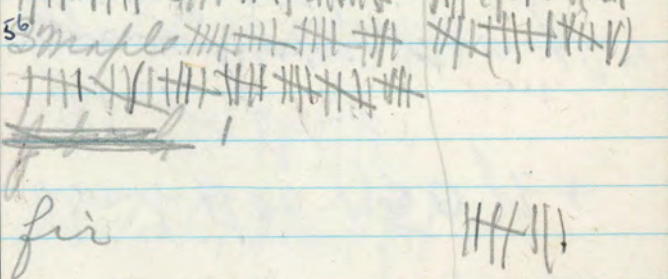
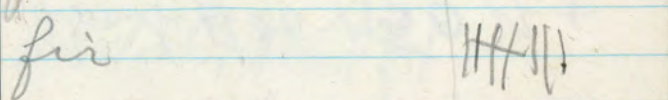
fir II
black ash III

brake IIII

red maple I

This goes up to
hemlock - y. brack -
red maple

Top of highest hardwood
ridge (where WPA Shack) ⁽⁶⁾

63 Beech 
56 Maple 
~~1~~
fir 

Small -
beech, 2 maple
strya

Sparse ground cover
H. b. + s. m. + Rye luc. etc
toe. medea

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lots of little s. maples
(this year) is dying - dry
surface, peeling beech
are OK

Substr here is red-brown
sand & silt + small
pebbles)

Humus - 2-3 inch
of root leaf duff

Down a little more
then B-M with a
few hemlock + y birch

(7)

Beech ||||| ||||| ||||| |||||

|||
S maple ||||| ||||| ||||| ||

hemlock |||||

y birch ||||| |||||

red maple |

Hemlock increases

Then

or down into an
oak - birch - black ash
place like farther
one

Trigloph up out of
it into hemlock

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A Low Place - oak -
with lots of Sphagnum
& other mosses

Coptis
Valerian - single berries ^{some}
Cornus can. ^{Oxalis}
Chrysothrix - ferns
Tridentata - Cyp. ac
Demodulium

Sedges in between
mossy hummocks

Little Thuja, spruce
red maple, few on
moss with above list

Spruce		
lob pine		
hemlock		
Thuja		
red maple		
y birch		
beech		

Part of this is not out
 Thuja + Sphagnum
 + more hemlock +
 lob pine

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Driving back, we
 end of good rd: ~~the~~
 nr. Takquamenon R +
 east fork

Woods is mostly very
 large elm or smaller
 red maple, black spruce,
 ash, sugar maple (esp in 3rd layer)

elm		
s maple		
ash		
red maple		
y birch		
Spruce		
Thuja		

Inocera Ladyfern
 Ostr. ferns grasses
 Impatiens Carex
 little s. maple
 Onoclea L. Sambucus
 Cypripedium Corylus
 red raspb
 In similar place
 before this, a birch oak

Lots of red & s maple
 saplings, ash

Bur oak w. elm within
 sight of river:—

elm		
ash		
sm		
red m		
wh bark		
spice		

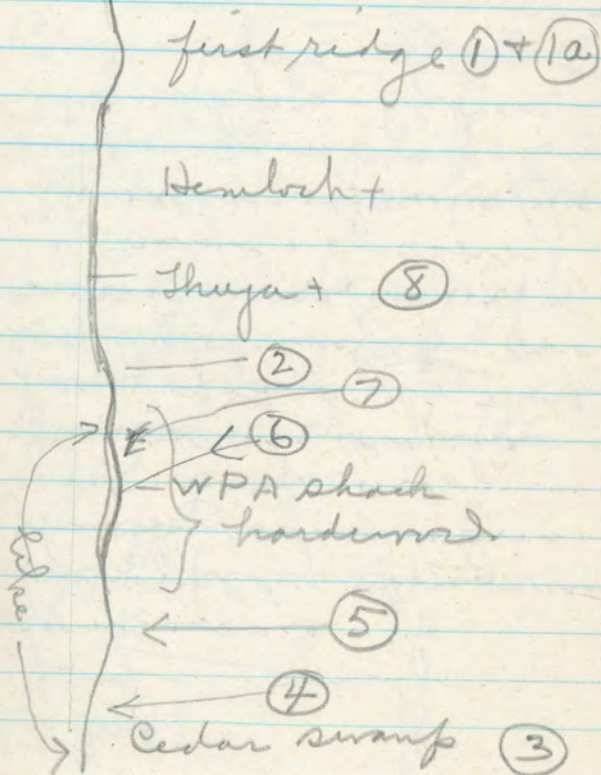
Lot of alder along
 banks of river.

Where orig. veg. has
 been opened up, more
 wh. birch; larch, &
 arbutus, also.

This elm forest appar-
 ently gives way to
 the Thuya - spruce -
 red maple - y. birch.

From Hullbert, good rd.
 for 9 miles; not so
 good for 2 miles.
 Right of way cut
 thru forest for 2 1/2
 miles more; this

is forest we went thru
 on a N-S line, 2 1/2 mi.
 ← Park at snow plow



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Of all of these forest communities, the hemlock - y. birch - red maple forest (area 1a) has richest underground more variety of species, + more of each.

Of all, the B-M has poorest, both in sp. + in number, except for numbers of little SM + B.

July 18
Trip to Tanquamenon
Falls

5 1/2 mi. on Tonawanda
Trolley, across swamp
& bog.

Bog sphagnum &
thousands of bog shrubs,
Redum, Chamadaphne,
& Kalmia folios. are
most conspicuous.
Sedges incl. cottongrass.
Pitcher plants,
Spruce & some Tamarack,
singly or in little groups.
Swamp sedge & willow
& alder - seems to
be nearer river &

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wetter than bog. Few
bog shrubs.

2) miles on river
Vegetation shows
signs of recent high
water (4 ft. more on July 4)
all foliage killed to the
line.

Overflow land is
occupied by ash, silver
maple, red maple (?),
willow bushes and alder;
royal ferns form an almost
continuous layer from
river margin back thru
maple-ash.

Where banks rise a
little more, can see
spruce & white pine.

Thuja comes to river
edge in places.

Occ. bur oak with maple + ash; also white birch (some as large as the largest trees)

Where banks rise more steeply, more variety because trees of above flood level come nearer to river margin - spruce, hemlock, white pine, y. birch, Thuja, wh. birch, silver maple, red maple, elm, ash, S. maple (just a little ways back) bur oak.

Elm on river flats above flood line

White pine (large) in groups on a cabinet.

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where bank rises steeply about 10 ft.

Bur oak on flat just above the present high water level.

At about the island, a change - yet above flood level. More elm on flat.

Soon get into uncult area. Big hemlock + y. birch nearby, + sugar + red maple.

Slopes rise steeply into forest - a hardwood ridge.

Then not so high for some time; then another ridge comes to river on right + seems to determine course of river, making it go around the end in

a huge bend. This seems to be the hardwood ridge we were on on July 17.

Then to the Falls, at the Falls - outcrops of ss

North face, moist + with moss + liverworts, Asp, sp. n., Carex alpina, hemlock, s.m., y. birch.

Woods is B-SM-y, birch with a few hemlocks, more ferns than in most of the areas but otherwise just the same.

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July 19

Hulbert to mining

Hulbert to top of hill is 90 ft - there elev. is 687 ft.

On M28, go down steeply off of hardwood ridge to west into flat swamp of spruce (black), Thuja + Larix. Many of the trees quite large, esp. Thuja, up to 15 in. dbh.

This area never lumbered (acc. to Mr. Hunter at Hulbert) very wet, with some localized flow. much grass + sedge, incl. cotton grass

Rhamnus alnifolia
Ledum + various bog things;
C. alba. Locally more Thuja.

A low sandy mound rises out of swamp + is

red pine, wh. pine & spruce
with Vaccinium, a few
Clintonia, Cladonia.

Drops right down into
spruce bog. Bog open
enough for a green ground
cover. Dried.

2.2 mi. along thru the
bog, a creek. Conifer
bog gives way to elm &
ash. Whole flat 2.8 mi,
across.

Then up to aspen
(formerly cleared) with wh.
spruce & fir coming in
under. In such places
Lyc. clavatum & Gaultheria.
.6 mi. then spruce -
Thuja swamp again for

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2.6 mi. Then up to
hemlock - y. birch - red
maple with s. maple repr.

And on up to Soojet
rd, which is on a hardwood
ridge. Road crosses this
hardwood ridge for 2.2 mi
with only one slight interrupt
to hardwood.

Strip forest left along
highway - not even under-
growth disturbed

S. maple	48
Tilia	16
Elm (part. part)	15
y. birch	10
Beech	10
Hemlock	6
red maple	6
wh ash	3

A white pine about 200'

✓
Further along than
above counted

Undergrowth -

All canopy trees in all size classes.

S.M. most abundant. Tilia elm, y. birch, beech, hemlock, red maple, white oak, bl. ash (in local wet spots), ferns

Corylus, Acer spicatum, Cornus alt. Ribes sp.,

Lonicera, Sambucus, Lycop. luc.

Maianthemum, Brachyelytrum

Aralia nudica Pteris aquilina

Aspid. spec. Galium sp.

Streptopus Clintonia

Pyrola secunda A thick mat of Botrych. virg. humus (up to 6 in) y. violet held together by roots, Mitchella on top of gummy Osmonhiza, sm. clay soil; l.s. blocks, not boulders, evidently returned in road construction.

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Another sample, a little farther along: -

S. maple - 59

beech 19

y. birch 7

elm 6

Tilia 3

wh. pine 1

red maple 1

This sample about 600 ft long, on same ridge as first but sep. from it by a narrow spruce stand.

Undergrowth -

Botrych. virg. Lonicera

Lycop. luc. Streptopus

Urtica y. violet

Trillium grand. Galium

Actaea alba Osmonhiza sm.

Canada violet asp. spec.

Polygonatum
Smilacina
Cornus alt.

Newberry ridge is
hardwoods; -

maple-beech-Tilia,
A gravel pit (from which
red material taken) is in
one of these ridges & contains
many large boulders, 1 ft.
in diam, many of them l.s.

Twin Lakes. Some
red clay on ridge here.

Lakes surrounded by
hardwoods; only a few spruce
in lake. Slopes rise
fairly steeply.

Long ridge S. of

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Twin L. keeps on going
a long way to west.

Highest ridge - west
of East Lake, is B-M
woods, with undergr. some

Herbs are -

Streptopus
Smilacina Polygonatum
Habenaria, tall,
blue violet
Aralia nudica
" racem.
Maianth. (afem)
Actaea alba
Osmorhiza
Botrych. virg
Trillium grand ? or com. ?
Lonicera
Asp. sp. in
Galium sp.
Monotropa unifl

It seems is a matted
layer bound with roots,
overlying leached pale
sandy soil - podzol.
Very poor ground
layer.

Come down part
way off of high ridge
going N to McMullan.
then overlooking Tahq.
swamp. Then west, &
staying low on hill.
Then thru a little area
of hemlock - birch (wh.
is above a swamp); swamp
now appears on south,
& we come down to
East Branch of Fox R.
River swamp (like

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all the others around here)
is willow, Spargania,
grass, sedge; then
to bog for a long
way, some of it very
open, only low shrubs,
& occ. low (3-4 ft)
mounds of sand with
a few pines (wh, or red)
& spruce. Sometimes
so small that only one
pine.

Bog cont. for long
distance. Then, nr
Seney, slightly higher
& flat to slightly rolling
sandy plains, with
groups of red pine on
hills.

From Seney To
Seney

Shingleton, sandy
Jack pine + red pine;
wh. pine in some
places.

Then come up
to hardwoods, with
white pine (occ.) inter-
mixed.

Hardwoods cont.
to increasing

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Hullbert - for place
to stay for Tag

Mrs. Abigail Roberts
Marquette

Food properly
bet. Jet #1#26 + Lth house

Porcupine - green (tom)
may be flat to day

Ironwood north clay
Bl. 1 B

