

Okolona 1916  
Muscatine  
M  
E.

Okolona - 1916  
Lyon co - "  
Muscatine co - "  
Muddyface ca. 1917  
Crete - 1917  
Hamburg - "  
Blair "  
Dune Park 1916

Crete 1917  
Blair  
Hamburg



Muscatine 1917  
Dune Park 1916

**Note Book**

**No. 312**



B. Shimek  
Iowa City  
Iowa

529 Brown St.



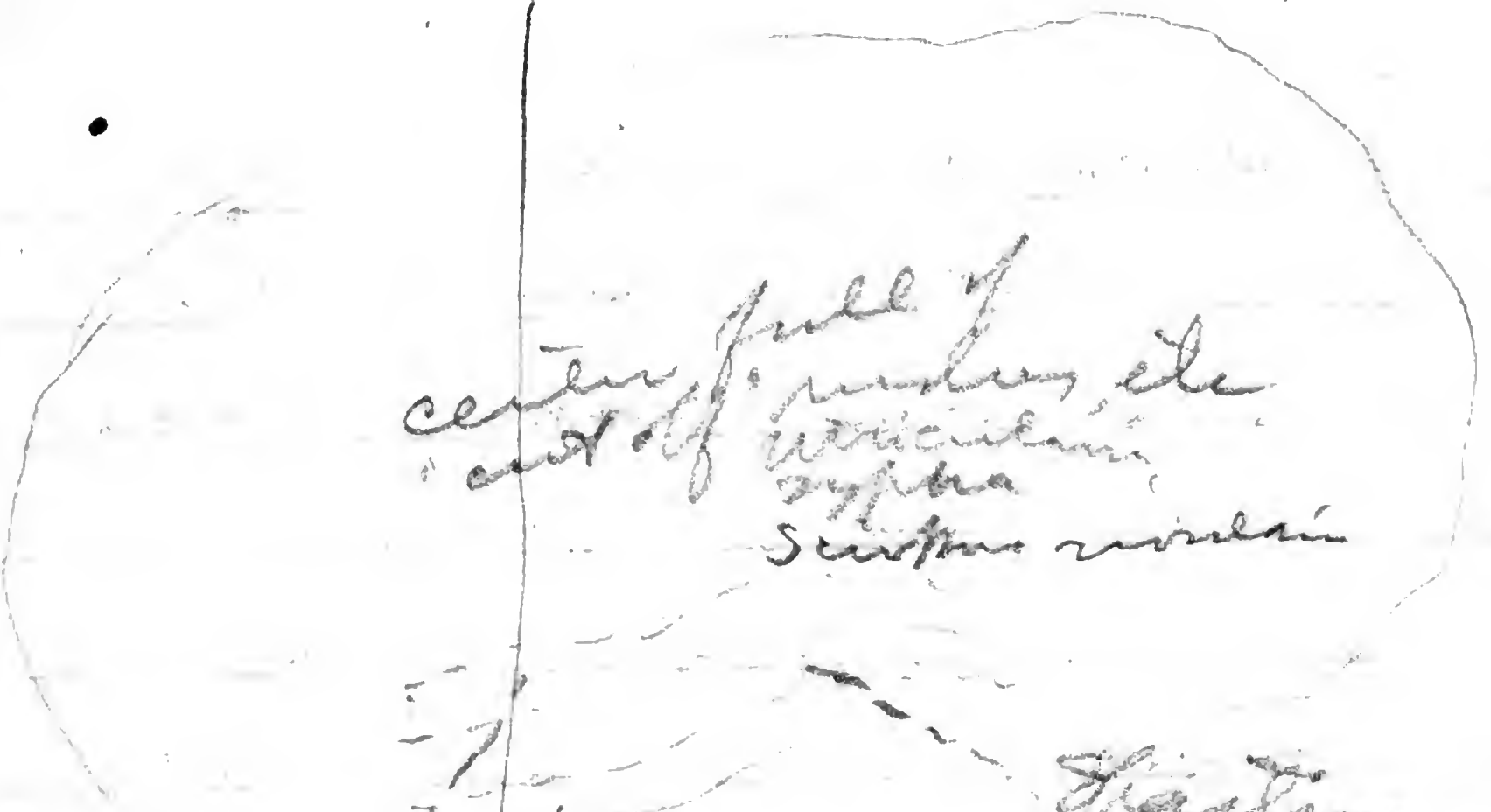
July 31, Mon. 1916

Aug. 1, Tuesday

Aug. 2, 1916 - Wed.  
Worked at plants all A.M.  
In afternoon walked N.W.  
at little hole (a) see 22,  
took photo (7) looking N.W.  
over little hole & oat  
field across towards  
Demuth's house.  
Took part of same little hole,  
looking E. at mudcrack  
(photo no. 8). There was a  
huge snapping turtle on  
the house.

Swamp containing *Potamogeton*  
*zosterifolius*, *Lemma triseriata*,  
& eggs have *Polygonum*  
*umbellatum* (fl.), *Martiana* (fl.)  
*Calamagrostis canadensis* (fr.) &  
*Phragmites* (fr.)  
*Utricularia* (fl.) is abundant  
out in water.  
The pond shows several  
years of vegetation?





center full of  
mud, etc.  
out of which  
*Typha*  
*Scirpus nodosus*

Habitat

Helianthus growth

Calamagrostis & Phragmites  
Polygonum multiflorum

Photo 9. is a small pig-infested  
hole just S. of house

Photo 10. S.E. side of house  
circular bottlehole  
stock tile

No. 3. N.E. shore of same  
bottlehole (carex sedge)  
showing belt of  
*Hydrodictyon*

The slope at the W. end  
of this hole has *Scirpus  
validus* in deepest water,  
then much *Scirpus  
nodosus*, then *Scirpus  
atrovirens*, then *Spartina*  
& then *Helianthus  
grows*. - then  
prairie.

Photo 4 shows this W. end  
swamp cut off by fence  
no stock - On E. side  
is bare shore, - stock

Photo 11. Barley in stock  
folding W.

Photo 12. One stock - low W.

Ridge N. of Gehm's  
house, W. side of road  
The bottlehole is eroded  
around broad margin  
with *Scirpus validus*  
& *Typha latifolia*.  
S. of road there is  
no open water.



covered with *Sium*  
*cicutifolium* Calamagrostis  
 etc. also *Cicuta*  
*maculata* in fruit.  
*Scirpus* in flower,  
 latter has ~~well~~  
 compound leaves.  
 The small little hole East,  
 on S. side road is crowded  
 with *Scirpus fluminalis*,  
 while on W. side are  
*Cicuta maculata* etc.  
 the large one just W. of  
 school has *Scirpus*  
*validus* in deeper part,  
 then *Phragmites* swamp,  
 then *Scirpus fluminalis*,  
 then *Calamagrostis* &  
*Phragmites*, then  
*Spartina*.

In open part *Trichloria*  
 that part of big hole west  
 of school which is East  
 hole S. of road, is

full of *Cicuta maculata* etc.  
 Photo 23 - Wheat field just

W. of school. Looking N.E.

Photo 24 ~~Oats field S. of~~  
 school 1 wheat shock.

Photo 31 Oats <sup>Looking SW</sup> S.W. of school

Photo 32 1 shock oats

Photos 29 & 30 - School - 1 baby  
 brook - not beaver  
 grass (mostly *Stipa*)  
 at window - *Asparagus*

Photo 15 - Looking N - compound  
 E. of school -

Photo 16 - Same, from  
 road leading S.

Photo 5 - Drains little hole  
 E. of school, NW. of turn N.

Overgrown with  
*Elymus canadensis*

*Spartina*  
*Helianthus* <sup>grain</sup>  
 Chubby part.



Oats had been sown here  
but doesn't amount to  
anything, you can hardly  
see it when in ~~partly~~

Photo 6 - the small  
drained bottle hole.  
N.E. from last, just  
W. of road.  
Shows same condition  
as in (5)

Photo 21 - N.E. across *Erigeron*  
bottle hole.

Photo 22 - S. along edge of  
*Cyperidium* bog

Photo 1 - W. of S. across  
drained bottle hole -  
Coarse sedge grass bog

A very hot, close day,  
somewhat hazy, with  
little wind.

Returned to camp & found  
Miss Maxwell.  
Spent evening in writing  
and reading.

Aug. 3, Thursday  
Storking in morning.  
Took care of plants all  
forenoon.  
In afternoon went to  
canal & to sand spit with  
Brook & Miss Maxwell.  
Found floating sheep head  
which had choked trying  
to swallow a perch.  
The sheep head was 4.7  
decimeters long & 1.7 dm.  
wide (counting dorsal fin).  
The perch was 1.7 dm. long.  
Took photos - 9 + 10 of  
fish.



Aug. 4, Friday

Left at 7 am for Orleans  
with Mr. Ross & Mrs. Maxwell  
got off at Spirit Lake &  
walked to Orleans.

Collected on beach &  
boggy lands S & SW of  
Orleans.

Found many Lymnaea  
modiolus on flats around  
remnants of ponds where  
excavations were made  
for fish hatching.

Found Succinea retusa  
very abundant along  
narrow beach & against  
low bank at head of  
East Lake.

Washed to Spirit Lake  
& took the Des Moines back  
drove at Spirit Lake  
dock.

Aug. 5, Saturday

Rained heavily at night.  
Spent forenoon in packing  
check from my board  
traps at the lake & the  
spring.

At 3 pm. took launch  
for Square Park  
Mr. Ross, Mrs. Maxwell  
& I collected on beach  
& then went by road to  
lake. Also collected on  
prairie S. of beach.

Got in before the  
Wildfowl party.

Found Ceratium  
noted.

Mr. & Mrs. Cratty came  
about dark.



1916

Aug. 6, Sunday  
Left at 5 am. crossed  
in launch to Hayward,  
Mary & walked to Spirit  
Lake.

Collected a few prairie  
plants on hill south  
of center lake road.

Met the folks (Ma &  
Miss Cavanaugh) at  
Spirit Lake & went  
to lake with them.

Mr. & Mrs. Cally were in.

Mr. Cally's school

Carex Crawfordii from  
Spirit Lake (also number  
C. nychuophala) &

Carex acicularis from  
Emmett Co. (1 pair  
also from falls)

Spent afternoon in visiting  
& taking care of materials.

with Cally, & Miss Cavanaugh & Maxwell

Aug. 7, Mon  
Rained a little at night  
In morning took class  
to school & spring.  
In afternoon went to  
Cove & Gull Pt.  
Found Wolffia very  
abundant in Duchesne  
marsh.

on Gull Pt: (Sand)

- artemisia canadensis fl.
- artemisia ludoviciana
- Pharbitis cryptantha
- Potentilla grandiflora (fr.)
- Agropyron spicatum
- Ambrosia leptophylla
- Allium stellatum
- Quercus macrocarpa
- Paspalum deltoides (1)
- Amorpha fruticosa
- Potentilla pentandra
- Rhus glabra (introduced by 1 or 2)
- Andropogon scoparium
- Eucalyptus - 1 tree



*Stipa spartea* <sup>sp</sup>  
*Cyperus schoutzianus*  
*Poa ~~truncata~~ <sup>capitata</sup>*  
*Salix longifolia* <sup>tr</sup>  
*Spartina vestimentalis*  
*Panicum brevifolium*  
*Phragmites communis*  
*Syctes rubellus* <sup>fl</sup>  
*Bidens frondosa* <sup>juv</sup>  
*Impatiens trifida*  
*Salix v. lumb.*  
*Erigeron canadensis*  
*Salix cordata* <sup>tr</sup>  
*Aquilegia vulgaris*  
*Aquilegia* (collected)

Found fine *Clavaria* in  
 woods - see spec. & photo.

Aug. 8 - Tues.

Crattys & Ella left at  
 7 am. Spent A.M. in  
 casing for material.  
 P.M. went to Green Slough  
 (by launch).  
 Collected *Wolfia*. Also  
*Pyzonia* on *Persea argentea*  
 Photo 25. Shows E. side  
 of *Erigeron* (green) Slough,  
 looking N. & S.  
 Photo 26 - Looking N. along  
 E. side of Green Slough  
 along shore is *Veronica*  
*hastata* - to right of  
 gap is a lot of  
*Veronica stricta*  
 among them. especially  
 between are the  
 hybrids.  
 Photo 3 - *Cirsium canescens*  
 clump near Green Slough.  
 Photo 4 - Green Slough  
 from row.



Walked back to the Lab.  
& spent evening in  
evening for materials.

The day was quiet &  
bright. Good  
for photos.

Aug. 9 - Wed.

*[Faint, mostly illegible handwritten notes]*



Aug 10 - Thurs.

Rained at night.

In morning I gathered snails from under boards at pumping house & spring.

Had ride with Judge Judge Hutchinson to Escalante. Discussed legislation for lakes.

Had member of legislature

who promised aid.

Afternoon, worked at plants & then materials in Lab.

Dredged in the Bay at depth of 8 meters, got jar of ooze with diatoms.

Worked rest of time in Lab.

Aug 11 - Fri.

Went S of mail box

Gathered fine *Eupatorium* prop. & *Aster umbellatus* in swamp N. of mail box

Photo 21 Prairie S. of mail box, looking S. Meadow part is cut.

Photo 22 - Similar - a little west.

Caught many frogs on upland prairie. They probably scatter out to feed.

Returned to care for materials.

Spent most of the remainder of the day at changing district, putting down materials, etc.

Found that *Oreocera* material had not been straightened, &



much of it was ruined.  
In afternoon I  
asked Miss Maxwell  
to work out prairie  
plants in front of  
Laboratory, for the  
purpose of becoming  
familiar with  
plants of that type.

Towards evening a  
storm came up from  
S. & we put up  
blinds in dormitory.

The night was  
stormy and rainy.

Port had gone off  
to camp, and I  
was left. He had  
been marking a  
cable by meters.

Early AM. showed Miss Maxwell woods prairie

Aug. 12-1916 - Sat.  
Spent forenoon on 2<sup>nd</sup> Lookout  
Collected seeds of *Castilleja*  
*seriflora* & *Oxytropis*.  
Former had little brown  
beetles.

The prairie on Lookout  
was cut for hay. The  
second Lookout is still  
intact.

Found fungi on *Proserpinaca*  
*acutata* & *Petalostem candidum*.  
Collected *Halimolobos*  
in fruit.

Afternoon went to Cove &  
Gull Pt.

Took photos of fairy ring of  
*Leucostoma lanuginosa*.

Ring 15 ft. in diam.

There were about 140 fungi  
& there about 35 were  
fresh.

Nearest is an imperfect  
ring of big puffballs (*Mycosclerolobus*)



probably 30 ft. in  
diameter,

Photos 1412 show  
Sagittaria along with  
Wolffia in all between  
shore grasses (Calamagrostis,  
Spartina, Carex vulpinoidea  
etc.,) & the Sagittaria  
in water. Myosotis

Sagittaria in clear water.  
The day was bright, but  
very windy.

Collected materials on  
Gull Pt. for pickling,  
also seeds.

Returned & cared for  
materials rest of afternoon  
& evening.

The water was so rough  
that at edges it was  
muddy.

Aug 13 Sunday

Spent forenoon in arranging  
materials.

At 1 PM. Max & Min Kessel &  
stated for here of Lake. We  
went to Arnold's Park first.  
At W. Orlowski's family was  
making hay. Used a back-  
rake, with horses & ran  
the stacks with a Ford!  
Met Mr. Hanna.

Went by rail to Orem,  
then via <sup>the</sup> Des Moines to  
Arnold's Park. Then Orlowski  
to Sun. Myosotis here in  
Meadow & Juncus, very

large crowd of many inches  
at Arnold's Park.  
At drawbridge a long  
line of water waiters on either  
side while we went through.  
Day cool & pleasant.



Aug. 14. Mon.

Rained in morning.  
Took care of materials.  
Blustering & not  
pleasant, - eat.

<sup>(Kudon, White)</sup>  
<sup>(1700, 1800, 1900, 2000)</sup>  
In afternoon went to Arnold  
Park & walked along  
shore towards <sup>the marsh</sup> ~~the marsh~~  
Crataegus LVII, LVIII, LIV  
etc. are <sup>N</sup> ~~are~~ <sup>truly</sup> affected  
by Rostelia. Tree LVIII  
is almost dead; lower limb  
all gone - upper yellow &  
brown, mostly dead.  
Found Gymnosporangium on  
cedar tree (small) on bank  
above.

Crataegus N. of LIV (C. punctata)  
is badly affected (see spec)  
also C. mollis N. of  
LII. The latter (LII) is  
also affected, but fresher.  
A double Crataegus  
punctata N. of LII  
is almost dead - Rostelia  
This is XLIX  
collected <sup>(?)</sup> in  
green <sup>(?)</sup>  
Found Perisporia fasciculata  
in considerable number N.  
of ~~the~~ <sup>the</sup> ~~marsh~~ <sup>marsh</sup>  
Spent evening in caring for  
materials & visiting.



Aug. 15, Tues 1916

Spent part of AM. in  
bay & along canal  
Found following on banks

along canal:

*Zonitoides nitida*

*Vitrea humilis*

*Planorbis*

*Cochlicopa lubrica*

*Succinea retusa*

collected much plants.

In afternoon took

photos

Photo 29 - Boys' camp,

looking N.

Photo 30 - Boys' tents,

looking E. of 2.

Photo 31 - View of beach -

looking S. E.

Photo 32 - View of beach,

looking W.

Photo 33 - View of beach

looking W.

Photo 34 - View of beach

looking W.

Spent some time at spring  
with Miss Maxwell,  
went in swimming.

Aug. 16 - Wed

In forenoon went to canal  
with Miss Maxwell &  
Maxwell. Collected mollusks,  
worms & parasitic fungi.

Mr & Mrs. Thonlin went  
to Spirit Lake.

In afternoon went to  
Hayward's Bay by Des  
Mouines, with Knolls, French,  
Whittle, Miss Gray, & Buchanan.  
Collected worms, lichens, etc.

The day was hot & dry.  
The east side is drier  
than west or W side.

Returned from Durr &  
spent evening with Ewert  
etc.

Took photos of Cedar trees, etc.







No 15 - Edwards Beach - Cooling E.

No 16 - Acorn Swamp / Sagittaria

(fore) - N. W. 1/4

No. 5 Towards Edwards Beach

from Acorn Swamp - N. E.

No. 6 - along N. across claim

& Sagittaria swamp.

Row of trees & causeway of

boulders.

No. 25 - 200 yds down

Acorn Swamp little

No. 26 - N. E. across

lower Acorn Swamp

collected in intention to

get summer. Mr. Archer &

Mr. White had called.

at 1 P.M. took boat for

Arnold's Park with

Proctor, left Arnold's

Park at 2<sup>30</sup> & waited

at Mendon until 5<sup>45</sup>

for train for Danbury

& Canton. Reached Canton

at 9 & put up at the Reddy

1916

Aug 19 Sat

Arrive at 4<sup>30</sup> took breakfast

at RR & went to hills opposite

the pasture strip which rises

gradually from the native

prairie just across river &

east of RR. has only a few

weeds etc. Verbena stricta,

Ambrosia artemisiifolia, Grindelia,

Euphorbia marginata, Taraxacum

officinale. The grass, clover etc.

all the plants seen to

towards Proctor's Station

are stunted.

Worked near holes near Proctor

Station. Then took road

about 40 ft below holes.

Another about 30 ft below

holes about 2 way below

holes & bench below.



There are few lichens  
 on the upper woods  
 at about 100 ft below  
 under a little opening  
 had 3 green ones, a  
 brownish & the clay  
 around it, & on all <sup>these</sup> the  
 lichens faced the opening  
 I made. I could not get  
 any more. I was on a  
 bank & the wood was 40'  
 thick. The slope  
 was abruptly  
 then followed a  
 slight descent to

- bottomland. I present  
 a list of plants:  
 • Basswood • Red Oak  
 • Redstart <sup>lawn</sup> • Blackberry  
 • Cryptotaenia • Sparganium  
 • Rappia rugosa • Epipactis  
 • Eupatorium <sup>white</sup>  
 • Campanula  
 • Sparganium • Birch

- For comparison with upper  
 are -  
 Symplocos  
 Ribes  
 Prunella <sup>truncata</sup>  
 For transition  
 Symplocos  
 Prunella  
 Eupatorium

- 2 - (middle station)  
 Prunella  
 Quercus  
 Prunella  
 Ostrya  
 Vitis  
 Rubus  
 Asplenium

Plants in station in the  
 ground had in move it up  
 to within 25 ft of ground.  
 Some were plants which were  
 also below, those marked x were killed:  
 x <sup>elmus</sup> Red Oak x Ribes <sup>gracile</sup>  
 Prunella x Symplocos <sup>truncata</sup>  
 x Menyanthes



*Raphanus virginicus*  
*Atriplex verticillata*  
 x *Passiflora*  
 x <sup>Fern</sup> *Asplenium*  
*Celtis*  
 x *Campylopusium*  
 x *Rudbeckia laciniata*  
*Andropogon furcatus*  
*Quercus*  
*Urtica dioica*  
*Helianthus annuus*  
*Conium maculatum*  
 x *Antennaria floridana*  
  
*Fern*  
*Euphorbia maculata*  
*Synanthus*  
*Verbena stricta*

*Prunella near* *Prunella*  
*Helianthus scaberrimus* fl.  
*Cirsium canescens* fl.  
*Glycyrrhiza canadensis* fr.  
*Eriogonum complanatum* fl.  
*Helianthus scaber* fl. x R.  
*Hordeum jubatum* fr.  
*Prunella angustifolia* fr.  
*Andropogon scoparius* fl.  
*Grindelia squarrosa* fl.  
 40 *Sida californica* fl.  
*Rosa* fl.  
*Solidago nemoralis* fl.  
*Solidago rigida* fr.  
*Portulaca oleracea* fr.  
*Trifolium repens* fl.  
*Andropogon furcatus* fl.  
*Linum sulcatum* fr.  
*Eriogonum complanatum* fr.  
*Ampelopsis* fr.  
 50 *Asplenium cylindricum* fr.  
*Hedysarum thymoides* fr.  
*Acta ptarmicoides* fl.  
 53 *Ornithoglossum* fl.



24 - *Schizanthus litoralis* (ne fl.)  
*Petalotum purpureum* fl.  
*Kuhnia* var. *concolor* L.  
*Oxytropis* *amblyotricha* L.  
*Ceanothus* *altissimus* L.  
*Lachnan* *pyramidalis* (L.)

30 - *Erigeron* *annuus* L.  
*Arenaria* *patula* L.  
*Abies* *milleri* (L.)  
*Ulex* *europaeus* L.

35 - *Ulex* *europaeus* L. fl.  
*Aster* *virginicus* L.  
*Artemisia* *ludoviciana* (Nutt.)  
*Aster* *laevis* L.  
*Panicum*

40 - *Quercus* *pauciflora* (Bordw.)  
*Euphorbia* *marginata* L.  
*Symphoricarpos* *occidentalis* (L.)  
*Artemisia* *neodora* (Nutt.)

45 - *Panicum* *brevis* (L.)  
*Panicum* *capitatum* (L.)  
*Achillea* *millefolium* L.

49 - *Stachys* *retrofracta* (L.)  
 50 - *Desmodium* *prostratum* (L.)  
 51 - *Petalotum* *candidum* (L.)  
 52 - *Artemisia* *verticillata* (L.)  
 A low bushy plant just  
 out, showed 4-7 rings of  
 growths, diameter 1 ft  
 from ground was about  
 7 in.

On lower prairie near  
 the bridge.

5 *Stachys*  
 1 *Artemisia*  
 3 *Petalotum* *candidum*  
 6 *Panicum*

2 *Artemisia* *neodora*  
 4 *Panicum* *capitatum*

*Cirsium* *altissimum*  
*Helianthus* *scaberrimus*  
*Helianthus* *lanceolatus*  
*Schizanthus* *litoralis*  
*Artemisia* *ludoviciana*  
*Erigeron* *annuus*  
*Artemisia* *neodora* (L.)  
*Astragalus* *canadensis*  
*Panicum* *capitatum*







Red clay, green ash &  
grasswood. Smaller  
plants, water, as noted  
The afternoon was clear

and hot.

At base saw a little  
at center this morning  
a more slight exposure  
Most of specimens were  
a lot of *Helianthus*  
*occidentalis*

Aug. 20, Sun

Spent most of day in arranging  
& packing material.

In afternoon took plants

1 & 2 *Tamnicum virginicum* <sup>S. of Pal</sup>  
also four of *Rhus glabra*  
asleep.

Went in bathing.

The day was clear  
and quiet, & hot.

In evening I wrote  
letters & arranged  
my papers.

Didn't get to bed  
until about 2 o'clock  
AM.



Aug. 21, Mon.  
Windy & cloudy,  
thunder rain.

Blow a gale all  
day & cleared up  
only partly.

Went to head of lake  
with trunk, stomach  
dish, whistle &  
Miss Maxwell.

Went to the prairie  
N. of West Okoboji &  
collected eggs on  
Glyceria, rusts, etc.

In the bog I found  
fruiting *Habenaria*  
*leucophora*, *Lilium*,  
& flowering *Gentiana*  
*crinita*. Latter also  
in bog just S. of  
W. Okoboji.

Then worked along  
rows of willows on  
beach W. of

Edwards, & found  
many lichens on the  
willows (*Salix fragilis*?)  
and mosses both on  
willows & on sandy  
ground.

Then dredged in lough  
W. of Edwards & by  
sweeping *Limnaea triouletii*  
masses I got a few  
large *Planorbis* like shells  
a few *Plan. eximius*,  
a good many *Plan. albus*,  
& of *Physa* *vagans* (the  
latter with spotted  
animals), also a few  
*Amnicola*.

By dredging on bottom  
I got a few large

*Physa*  
Returns after 4 PM.  
Worked on material in the  
evening.



Aug. 22 - Tues

The day was cloudy & blustering in the morning. It had rained some at night. Gave up trip to Spirit Lake & washed up. Was on material also made dryness. In afternoon was clear but nobly windy, until evening which was comparatively calm. It was cool all day. Most work in morning.

Spent evening in arranging materials.

Aug. 23, Wed.

Day fairly clear, not very windy, warm.

Left at 7 AM for Orleans & took row boat & dredged (with French & Irish) mine Carver & Maxwell worked along lake shore & Buchanan & Whittle did sweeping.

Dredged in Spirit Lake.

- no. 1 - Diatoms, etc. at a depth of 5 1/2 M. N. of Hotel Orleans
- no. 2 - Mollusks from no. 1.
- no. 3 - Vial - surface towing near same place.
- no. 4 - Vial - surface farther North
- no. 5 - Diatom - off. Stoney Pt. about 1/3 way across to west & a little North. 7 M. deep
- no. 6 - Surface towing - on way to no. 5
- no. 7 - Diatoms, etc. 7 M. about 1/2 way across W. of Stoney Pt. also package.



No. 8 - Surface trace on  
way to 7.

No. 9 - Straight W., about  
 $\frac{1}{4}$  way E. from W. side.  
Depth 7 m.

No. 10 - about 400 yds  
E. of Temple Park  
7 M.

No. 11 - N. W. of Orleans  
6 M.

at the Des Moines  
landing N. end of  
East Okoboyi  
obtained 3 vials of  
Reverdin by  
lowering from boat.

Returns to Orleans & took  
Des Moines at 3:30

Aug. 24. Thurs.

a little windy, cold  
in morning. Day clear  
& cool.

In morning went to Elm  
Crest woods.

Collected parasitic fungi  
& prairie plants in the  
open bar oak woods E. of  
canal.

Found *Asplenium filix-ferre*  
in junipers. One plant.

Collected leaves stem &  
acorns of scrub bar  
oak E. of canal - about  
 $3\frac{1}{2}$  ft. high.

Spent afternoon in caring  
for materials.

Out very late.



Aug. 25, Fri. 1916

Calm, clear morning

Night was cold.

Took photos:

Spring

Ambrosia trifida

Black looking trees

Hotel

Black looking trees

dark Yucca

Eden

Lab. looking NW

College " SW

Started for Gas

Lake at 8<sup>30</sup>

French, Miss Carver,

Maxwell, Hastings &

Maider, Thomson,

Whittle, Duke

Buchanan

Became slightly

cloudy

+ parallel

Collected *Asplenium* *diaphanum* -  
mostly at very base of *Urtica*  
leaves & stems.

Collected lichen *Jungermannia* on E  
side Lower Gas.

Photo 9 - looking SW (towards

valley) across Cove and

of Lower Gas. Rocks in foreground

Photo 10 - same.

Photo 15 - looking NW

across Lower Gas

A threatening storm drove  
us home. Rained a little.

Miss Carver found a  
number of new mooses, -

particularly on the northern-  
most bank (wooded) near

outlet of Prairie Lake

entrance. It is empty

here.

Stormed a little

when we got home.

Beautiful clouds - mostly  
drab but in combination fine  
appeared here.



Aug. 26. Saturday  
Spent forenoon in  
caring for materials,  
after taking Miss  
Maxwell to Arnold's  
Park in the launch.  
A very cold morning,  
the sunrise was beautiful.  
In the afternoon went  
to Arnold's Park on  
the Des Moines & worked  
along Upper Fox.  
Found seeds & fungi &  
Miss C. collected more.  
Returned & took the  
Des Moines. A German  
American couple onboard  
had a boy of 5 or 6.  
He misbehaved a little  
& his mother in reprimanding  
tried said: "Was willst  
der Kaiser sagen?"  
She was evidently more  
German than American.

Fell asleep after supper  
Went to bed early, but  
first viewed the  
remarkable aurora  
borealis. Sheet of light  
shot out like from  
huge search lights &  
extended far south  
of the zenith.  
This was the finest  
aurora I ever saw.  
The wavering & shooting  
out of streamers  
were its most striking  
characteristics, and  
from its size & extent.  
This is certainly  
worth remembering.  
The night was very  
cold, - the coldest  
we have had so far  
up here during this  
summer.



August 27, Sunday  
morning cold. Later  
cloudy. Late afternoon  
clear & quiet, but  
cool.

Spent the forenoon  
in arranging materials.

Took dinner with the  
Campfire girls.

Returned to my work,  
and at 4 PM.

Talked to the Campfire  
girls.

What do you see first, - good weed  
Cumbular. Gap story.

Picking wild flowers.

Returned to my work.  
Misses Maiden & Hastings  
left by auto.

Spent evening in  
arranging materials, etc.

August 28, Monday

Took row boats down canal  
to Emerson's Bay.

Towed & got vial A - across  
Miller's Bay.

Vial B - Upper end of Canal, above  
first turn.

Vial C - About  $\frac{1}{2}$  way down

Vial D - Near open water near lower  
end of loop in canal.

Vial E - Open brown water in  
canal below loop.

Vials (2) F - In swamp off canal  
below loop.

Vial G - Outlet of canal into  
swamps at lower end, &

part of swamp near

Vial H - Towing from Cove to  
Elm Creek - surface

Bottle I - Surface towing near  
shore - Elm Creek

Bottle J - Surface towing near  
shore - Elm Creek

Vial K - Scraped from granite  
boulders - Elm Creek



Vial L. Towel near above  
Blum Creek to Wab's cottage,  
Sunshine.

Vial M. Towel, m. p. a.,  
to our dock.

Returned to care for  
materials.

Miss [unclear] got some  
good news at Blum Creek.  
The day turned out  
very windy and it was  
fortunate that we did  
not try to dredge. We  
rowed to the Crescent by  
canal & returned around  
Gull Point. Pretty rough!  
Found a weevil in absence  
of *Scirpus lacustris* &  
another (same) in seeds of  
*Iris versicolor*. - Gave them  
to Buchanan.

Aug. 29, Tues.

The day opened quiet & cool.  
Later a breeze came up  
and blew (not strong)  
all day.

Spent forenoon in passing  
plants & arranging material.  
Took the Des Moines, with  
French & Whittle, to Arnold's  
Park & walked down track  
to Milford. Collected  
ants on my big Camp,  
*Calamagrostis canadensis*, &  
*Juncus* on *Linum catharticum*,  
*Lechodrya septentrionalis*, etc.  
*Helianthus maximiliani*  
is in full bloom.

Also from *Scirpus lacustris*  
in prairie (rather flat) along  
R.R. south of Arnold's Park  
walked to Milford, then to  
Pocahontas Pt. & home.  
Collected on little frame W. of  
Green Slough



Aug. 30, Wed

Started at 9 am. For  
the Little Sioux

French wanted to leave at

7 but boat did not leave

we (Whittet & I) walked

along prairie just N. of

Crescent Dam.

Gathered seeds, etc.

Took photos:

No. 15 Looking E, toward

Crescent Dam. Foreground

cut prairie. Back prairie,

No. 16 Looking to. from

same point across

cut prairie.

Just opp. stack is a

dry little hole.

Photo 9 - Pasture with

only *Solidago rigida* left

snaps

Photo 10 Home, young group, etc.

in NW. cor. 20 1/2 by NW 1/4

acc 34

Photo 29 Home & barn in  
NW. cor. 20 1/2 by NW 1/4 sec. 33

Photo 30 - same as (10)

Photo 7 - looking N. of W. across

Little Sioux, diagonally across

line 1/2 mi. south of river line

of sec. 33

Photo 5 - Looking NW. from same

point.

Photo 31 - looking S. E.

" 32 - " " "

from line 1/2 mi. from

N. side of 33, etc.

Photo 25 - S. from middle of  
valley, from same point

Photo 26 - looking S. E. from

near E. & W. 1/2 sec. line -

Photo 5 - same.

" 6 - looking SW. from same point

" 7 - same as (6)

" 4 - Buckle, horse pads.

" 1 - looking N. from near bridge  
(spoiled)

" 11 - Almost same as (1)



Hillside bog at base

- Eupatorium purpureum
- " - perfoliatum
- Helianthus scaberrimus
- Salix discolor
- Helianthus grosseserratus
- Scirpus atrovirens
- mix with Zigania spicata
- Delphinium bipulchrum
- Solidago canadensis
- Scirpus cespitosus
- Cirsium vulgare
- Solidago verticillata
- Polygonum aviculare
- Rudbeckia laciniata
- Hesperis matronalis
- Aster latifolius
- Zizia aurea
- Aster umbellatus
- Sharp grass
- Thalictrum dasycarpum
- Horror grass
- Panicum (like vipers)

- Carex
- Eupatorium biflorum
- Epilobium
- Agrostis
- Helianthus autumnalis
- Verbena hastata
- Agrostis alba
- Rd Wd grass
- Scirpus leucostachyus

Photo - Hillside bog, looking SW.

Photo 22 - same place, looking SW

Photo 23 - same place, looking SW

Photo 24 - looking SE - gentle slope from NW near cement bridge

Photo 25 - looking SE towards bridge

Photo 26 - Looking SW from same point walked home



Aug. 31, 1966. Fri

Took photos around Lab.  
In afternoon rowed  
Whittle to Arnold's  
Park & then rowed  
to Lower Gas Lake &  
collected many *Aneyla*  
*diaphana*, - nearly all  
on very base of stem  
& petioles of Nuphar,  
& also about 300  
*Aneyla parvella*,  
nearly all farther up  
on petioles & stem  
of same plants.  
Returned (towed by  
Des Moines from Choboy)  
& arranged & packed  
material. Was  
up all night, & barely  
finished packing.

Sep 1<sup>st</sup>

Drove away at 8<sup>07</sup>  
am., & young Livingston  
got us to Montpelier  
in time for train  
(due 8<sup>12</sup> - came 9<sup>12</sup>)  
Shipped stuff &  
Miss Carrough, Melrose  
& I took train.  
Hot & crowded.  
Got home at 8<sup>20</sup>  
PM., safe.



Oct. 13 - Friday 1916

Left Iowa City at 8<sup>30</sup> AM  
for Davenport (fare 1.08)

Then, at 10<sup>50</sup> got train for  
Massena (fare 5/10)

Young + Bert had gone  
ahead.

U



Started N. along road  
 from Grayford  
 A big oak (Red?) on  
 E side road, near home,  
 30 in diam, low,  
 branching,  
 measured leaves, No. 1

Oak 2, W side of road  
 also very small  
 oak 2 1/2 in diam  
 low, bushy

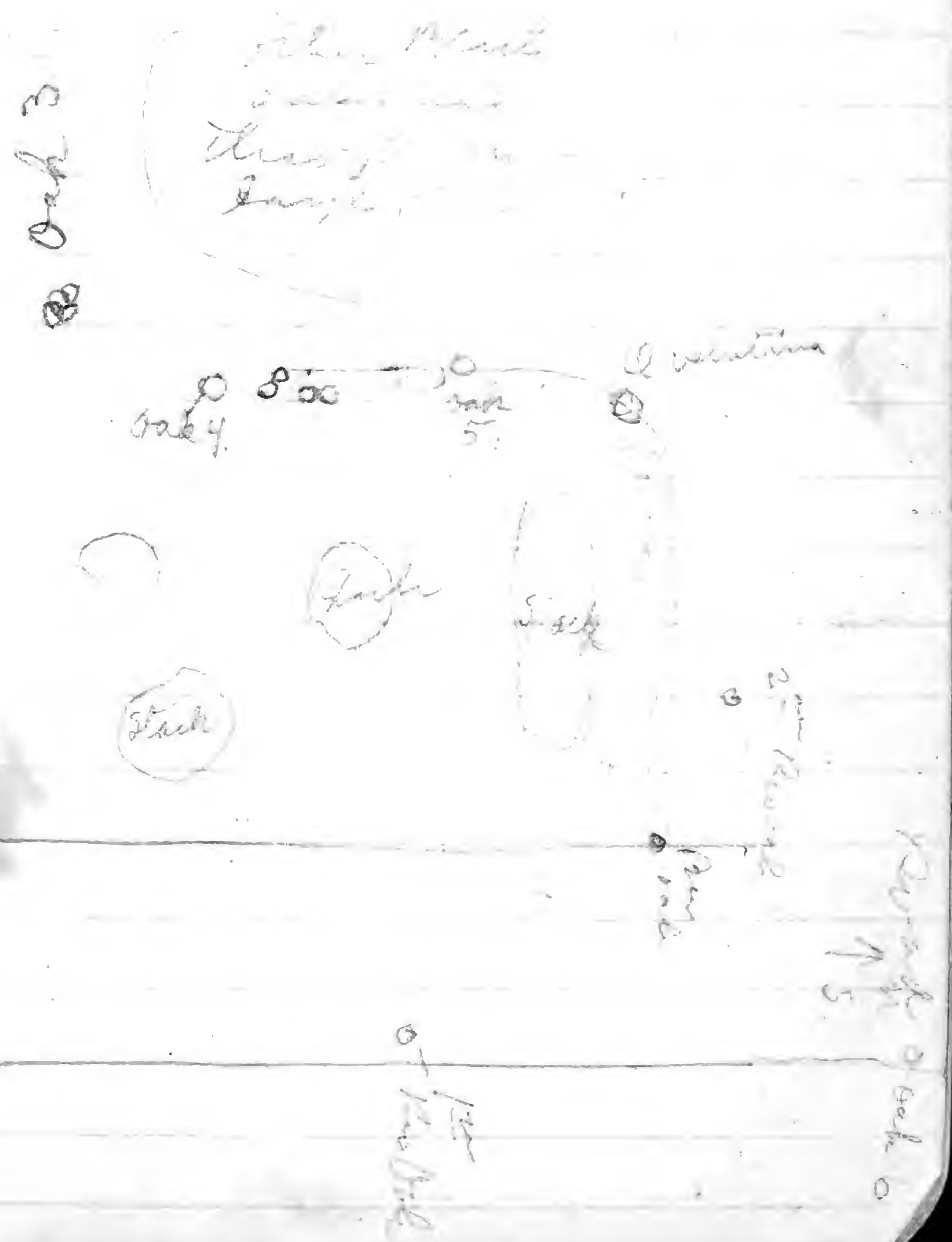
Oak 3 - a *Q. velutina*  
 with 12 inch leaves at  
 base, low, spreading,  
 trunk, 12 in diam  
 on E side of road  
 is at E edge of grass,  
 see low & acorn

Oak 4 is of the broad  
 black oak type

Oak 5 - *Q. velutina*  
 see low & acorn

Oak 6 is on E side of road  
 as entrance to Jos. M. Huber's  
 house, - at shed.  
 in low & acorn

Photo 3 - oak (1)  
 4 - looking N. at house  
 photo 25 - oak near building





Old dunes, No. 1, Duff

- ✓ Euphorbia corollata
- ✓ Helianthus scaberrimus
- ✓ Panicum subserotinum
- ✓ " virgatum
- Lespedeza capitata
- ✓ Andropogon scoparius
- ✓ " lucidus
- ✓ Solidago nemoralis
- ✓ Ambrosia psilostachya
- ✓ Liatris scariosa
- ✓ Aster multiflorus v. exiguus
- ✓ Pappus perennans
- ✓ Compositae pectinatus v. spectabilis
- ✓ Cereus carolinensis
- ✓ Elymus caput-medusae
- ✓ Rosa pratincola
- ✓ Oenothera biennis
- ✓ Thalictrum aquilegifolium v. caput-medusae
- ✓ Xanthoxylum commune?
- ✓ Iva axillaris
- ✓ Crataegus capitata
- ✓ Carex cephalophora
- ✓ Thymus rhomboides

- ✓ Eryngium canadense
- ✓ Scirpus verticillatus
- ✓ Gnaphalium polycephalum
- ✓ Sorghum virgatum
- ✓ Cirsium palustre
- ✓ Helianthus rugosus
- ✓ Cornus canadensis
- ✓ Athysanella americana
- ✓ Medicago hispida
- ✓ Artemisia canadensis
- ✓ Polygona lachrymans
- ✓ Chenopodium leptophyllum
- ✓ Rhus typhina
- ✓ Junonia sulcata
- ✓ Desmodium canadense
- ✓ Artemisia canadensis
- ✓ Eryngium canadense
- ✓ Stachys americana
- ✓ Helianthus grosseserratus (dy)
- ✓ Achillea millefolium
- ✓ Polygona communis
- ✓ Galium ludovicum
- ✓ Liatris pycnostachya
- ✓ Solidago speciosa v. angustata (6)



- ✓ *Helicopsis pinnata*
- ✓ *Solidago graminifolia*
- ✓ *Ceanothus americanus*
- ✓ *Asperula tomentosa*
- ✓ *Malva sylvestris*
- ✓ *Rudbeckia* <sup>nb</sup>
- ✓ *Scilla maritima*
- ✓ *Antennaria dioica*
- ✓ *Asperula tomentosa*
- ✓ *Cyperus Schweinichii*
- ✓ *Polypodium graveolens*
- ✓ *Monarda mollis*
- ✓ *Veronica filiformis*

56 - 4.

Plants 26 - 27  
 Run through  
 ...  
 ...  
 ...

Plants 33



Stewart (off Interurban)  
 along Muddy Jay

May 5, 1917

Bright, but cool, after  
 week of dark, rain.

along road, edge -

Linum catharticum  
 (few)

Linum catharticum

Helianthus

(all flowers)

Mosses

<i>Urtica dioica</i>	<i>Fragaria virginiana</i>
<i>Urtica dioica</i>	<i>Urtica dioica</i>
<i>Urtica dioica</i>	<i>Rumex crispus</i>
<i>Urtica dioica</i>	<i>Aster multiflorus</i>
<i>Erythronium</i>	Ground Hog <sup>White</sup> <i>Glechoma</i>
<i>Delphinium</i>	<i>Delphinium</i>
<i>Polygonum sanguinale</i>	on black oak sticks
<i>Lythrum hyssagifolium</i>	Wild cherry
<i>Aster multiflorus</i>	Red oak

Vernation

Straight

*Urtica dioica* *Urtica dioica*  
*Urtica dioica* *Phlox divaricata*  
*Urtica dioica* *Salix humilis*  
*Urtica dioica*  
*Arenaria latifolia*

Inflexed

*Urtica dioica* (conduplicate)  
*Urtica dioica* (conduplicate) *Urtica*

Conduplicate Red Clover (Clover)

*Prunus cerasus* - *Urtica dioica*  
*Plantago major* - Crab.  
*Rosa rugosa*  
*Strawberry* (conduplicate) *Urtica*  
*Urtica dioica*  
*Urtica dioica* (conduplicate) *Urtica*  
*Urtica dioica* (conduplicate) *Urtica*

Plicate

*Potentilla canadensis*  
 Raspberry (conduplicate) *Urtica*  
 Currant (pale) *Urtica* - *Urtica* plicate  
 Dog Elder *Urtica*  
 Burdock *Urtica*  
*Urtica* - *Urtica* *Urtica*  
*Urtica* - *Urtica* *Urtica*  
*Rubus occidentalis*  
*Ribes gracile* *Hieracium*  
 Hazel







Cincinnati

Valuate



Sandy soil

*Hedysarum canadense*

*Plantago canadensis*

Mullein

*Ambrosia artemisiifolia*

*Tragopogon virginicus*

*Asclepias*

*Antennaria canadensis* (?)

*Carex pennsylvanica*



June 1, 1917

Went out to prairie along  
R.R. E of Iowa City

Found in flower:

*Phlox pilosa* ~~abundant~~

*Lilium* ~~canadense~~

*Comandra* *reuteri*

*Sisyrinchium* *campetris*

*Thymus* *triflorus*

*Prunella* *sp.*

*Viola pedatifida*, - mostly past

*Ranunculus macconnii* - wet.

*Senecio* *platensis*

*Scrophularia* *leucantha*

*Heuland* *lanceolata*

*Opalis* *violacea*

*Sisymbrium* *caerulescens*

*Ellisia* *mytilica*

*Pedicularis* *canadensis*

*Potentilla* *occidentalis*

*Anemone* *cyathifera* - just appearing

RETURN AFTER FIVE DAYS TO

Mrs. Bertha Melleker

Instructor District No. 15

Mellman, Iowa

88.



Trip to Crete, etc. 1918	
Taxi, Iowa City	.25
RR. to Omaha	6.50
Pullman	1.50
Breakfast, Dinner	1.15
RR to Crete	1.50
RR. Lincoln to Omaha	1.10
Aug 27 RR to Plain	80
Breakfast - Plain	50
Lunch	30
Supper Plain (dinner)	50
RR to Omaha	50
RR to Hamburg	1.00
Car fare - Col. Wash	1.10

Aug. 26, 1917 - Sunday  
Left Iowa City at 12<sup>05</sup> am  
for Omaha & Crete.

At Omaha changed to  
B & M. Found Kutak & Mik  
going, & at Lincoln  
Bussell was on train.

Reached Crete at  
12<sup>30</sup> Met Gen. Hastings  
(the Dean's brother), May  
John Tully & later,  
Chancellor Avery

The crowd was very large  
and very good-natured and  
well behaved. Several  
remarks on the improvement  
since liquor has been  
prohibited.

The program was  
long and tedious, and  
I got through about  
6<sup>30</sup> The crowd

diminished very much,  
went to Lincoln with Chancellor Avery, Bussell  
Kutak & Mik.



I spent the night  
at Busset.  
I got up at 5<sup>30</sup> <sup>am</sup> & left  
quietly.

1917  
| Aug. 27. Monday

Went to Blair from  
Webster st. station  
4 mi. N. of Florence  
we passed the Withaway  
farm where Mrs. Withaway  
was murdered by a negro.  
Reached Blair at about  
7<sup>30</sup> & took breakfast  
at the Clifton Hotel.

Walked to Blair bridge.  
The watchman wanted to know  
all about me. He said that  
at night a patrol of  
& two guards watch  
the bridge. —  
I walked across.

Sand along road on flat  
Sporobolus cryptandrus  
Panicum virgatum  
callicarum  
Alaria glauca  
Cymbopogon acuminatus

Bunches among cottonwoods (some  
4-6 in diam.)

Cynops brevicauda - dominant	
Sporobolus cryptandrus	Verbesina stricta
Lygodesmia sp. (small)	Thysanotus lucidus
Grindelia sp.	Ranunculus
Cenchrus	Crotalaria
Sporobolus cryptandrus	Euthamia (small)
Muhlenbergia	" (42 mi)
Chenopodium	Rhus glabra
Orthocentrus	Panicum scribneri



<i>Polygonum</i>	<i>Corynephorus</i>
<i>Polygonum</i>	<i>Suaeda</i>
<i>Setaria</i>	<i>Artemisia</i>
<i>Elymus</i>	<i>Elymus</i>
<i>Lepidium</i>	<i>Alhagi</i>
<i>Xanthoxylum</i>	<i>Elymus</i>
<i>Hedysarum</i>	<i>Astragalus</i>
<i>Desmodium</i>	<i>Trifolium</i>
<i>Panicum</i>	<i>Chenopodium</i>
<i>Vitis</i>	

Most of the dunes also  
flatter plain (except very low)  
are covered with *Cassia*  
*chamaecrista* - mostly in bloom,  
some very old.

An occasional fresh dune  
has *Cassia chamaecrista* or  
in some *Artemisia* cryptantha  
or in one *Artemisia* - but  
first *Artemisia* appears.

The dune with lying yellow  
moss has none. It is more  
or less covered with *Cassia*  
& grass (fine ones).

My big smooth *Artemisia* is also  
somewhat common.

Very little local sand appears.  
The big cottonwood in old wood  
measures better than 2 ft in  
some cases.

On flatter sand

*Rosa* -

*Artemisia verticillata*

~~*Artemisia*~~

*Artemisia* -

*Artemisia tridentata*

The other dunes in some  
places are covered with  
moss.

There is very little  
loose, drifting sand. The  
most seasons since 1907  
seem to have produced  
a marked effect, and  
vegetation has developed.

The most striking feature  
of the vegetation is the  
great predominance of  
*Cassia chamaecrista*. Two  
crops seem to be in evidence,  
one brown and dead (mostly  
on the larger dunes) and



another fresh & flowering  
On only a few dunes  
in the sandbar common  
I found a "sail-willow"  
out on flat.

The flat between the  
dunes and river is quite  
wide (must be nearly a mile)  
and is not very sandy, but  
more like the transcontinental  
wind (somewhat sandy) of  
the Missouri.

This flat probably forms  
the sand for the dunes.  
Dune growth as it prevents  
new dunes from forming.  
Cottonwoods have also  
been planted, - clumps in  
rows parallel to river,  
and this has had its  
effect in checking new  
dunes. Altogether the  
transformation is very  
striking.

Walked back to Hair,  
noting incidentally the  
low, broad (almost dome like)  
beach of sand which  
irregularly extends to  
Hair. Several cuts  
in RR show laminations  
some nodules or a few  
fragments of shells. Did  
not examine closely this  
time.

Went to the Clifton Hotel,  
had supper & left for  
Omaha at 6<sup>15</sup> (only 6<sup>30</sup>)

On reaching Omaha  
Took car for Cornish  
Bluffs.

Pressed plants at  
W & Q. depot, & left  
at 11<sup>30</sup> for Hamburg.  
Reached Hamburg at  
1<sup>30</sup> AM & put up at the  
Julien Hotel.



Aug. 28 / 1917, Tues.  
arrived at 8 am.!

Went up on ridge at Hamburg.  
The top is for well  
occupied by *Salso. Bar.*  
*Melilotus alba* & *Setaria*  
*viridis*.

On slope going up I found  
*Euphorbia heterophylla* (in bunch)  
*Syntherisma pallens* (rare) "  
Near top of ridge, between  
water reservoir & forest the  
following were noted:

- Agrostis* - fr.
- Melilotus alba* - fr. - common
- Helianthus annuus* fl. - not seen
- Setaria viridis* fr. - common
- Galium halei* fl. & fr. - common
- Leptochloa paniculata* - some - low
- Bouteloua* - acc. common - very common
- Elymus virginicus* - some, fr.
- Veronica novboracensis* - fl.
- forficulata* fl.

10 *Solidago speciosa* var. *yellowish* fl.

- Euphorbia marginata* - several fl.
- Aster sp.* *paniculatus* - fl. not many
- Lycopodium complanatum* - common - fl. fr.
- Solidago* - <sup>complanata?</sup> *narrow leaf* - low
- Chenopodium* - some - low
- Aster multiflorus* - some - some
- Solidago canadensis* - low - some

Towards edge of <sup>in slopes</sup> *shaded*

- Monarda glazioviana* - fl. seen on top
- Campanula artemisiifolia* - fl. not rare
- Arisida* *virginiana* - fr. - common
- Panicum capillare* - fr. - common
- Helianthus scaberrimus* - fr. - few
- Cirsium discolor* - fr. - few
- Verbena stricta* - fr. - few
- Ceanothus ovata* - fr. - several
- Prunella pennsylvanica* - fr. - "
- Verbena cuspidata* - fr. - "
- Adiantum nigricans* - fl. well up
- Hemlock* - fr. - fr.
- 30 *Pentstemon variegatus* - fr. - fl.
- Large grass - *oriz.* - fr. 3 clumps
- Hedera hispida* - fr. - fr.
- 30 *Petalostemum purpureum* - fr. - fr.



- 34. Euphorbia - small - fl. 1
- 35. Euphorbia - on top - fl. com
- 36. ~~Amorpha~~ - fl. - com

in say M. - still high, but  
just in the middle of the address:

- Amorpha canescens fr.
- Euphorbia corollata fr.
- Astragalus fr.
- Alnus fr.
- Rhus glabra fr.
- Plantago fr.
- Asclepias verticillata fr.
- Verbena fr.
- Phlox fr.

At marriage M. address

- Gerardia aspera - fr.
- Andropogon scoparium fl. com
- Aster laevis - bud - com
- Equisetum hyemale - several
- Aster ageratoides - fr. com
- Monarda hispida fl. " "
- Solidago nemoralis " "
- Dalea " " "
- Oxytropis " " "

- Lactuca scariola - 1 fl. - small
- Ruellia rosea - 1 fl.
- Eriogonum canadense (small) fl. few
- Oenothera occidentalis fl. of
- Solidago rigida fl. small
- Petalostemum candidum fr.

(60) Castilleja occidentalis fl. - small  
a little dry less small  
first before reaching highest hills  
N. (N. of beach where), by  
so means the highest point  
here, has the following  
very characteristic flora:

- Adiantum nemorosum
- Verbena stricta
- Dalea
- Euphorbia maculata
- Petalostemum candidum
- " "
- Solidago nemoralis
- Lactuca pumilata
- Oxytropis californica
- Astragalus
- Gerardia aspera
- Aristida hirsuta (L.)
- Mercurialis annua (few)
- Castilleja occidentalis
- Syntherisma occidentalis



*Veronica serotina* L.

Added on high ridge - north

61 *Cassia chamaecrista* 1 sterile fl  
(seed)

*Verbena hartwegii*

*Zinnia* -

*Adiantum verticillatum*

*Eryngium yuccifolium*

*Cypripedium pubescens*

*Verbascum*

*...*

*...*

*...*

*...*

*...*

*...*

*...*

*...*

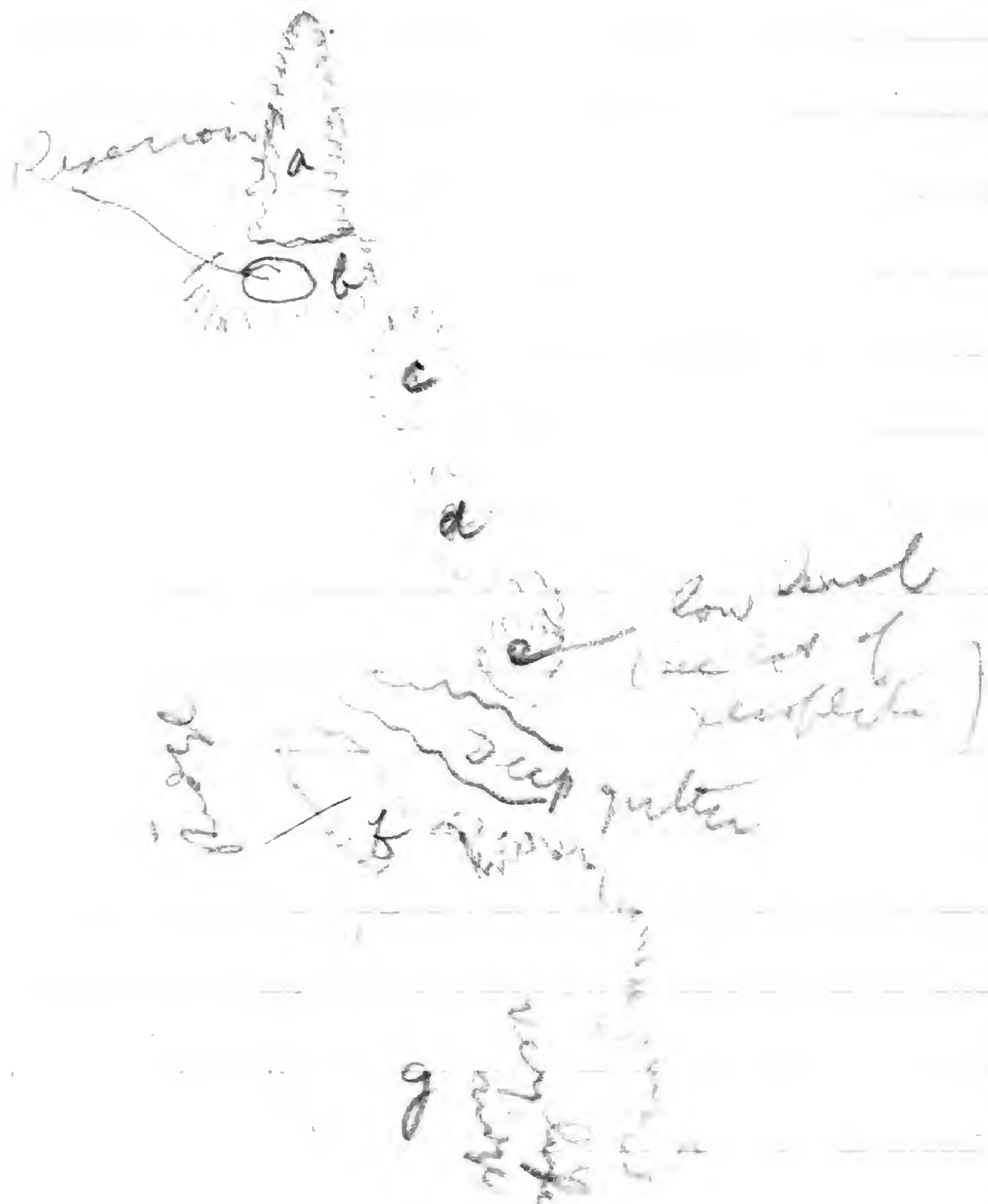
*...*

at (B)

*...*

*...*

S  
↑  
N



a = sharp, narrow ridge at end.  
 b = lower flat part (mostly excavated), which has reservoir  
 c, d & e are part of a lower ridge running down from c to d. c is a shade lower than b.

f is ridge running down towards d-e



g. is a high level  
 of bluff running from  
 N. a little west.

Some large *Conium maculatum* was  
 very common in places  
 on this

Down the valley the best lots ✓

found following.

- Solidago nemoralis* fl. very common
- Verbena stricta* fl. fr. quite
- Ambrosia artemisiifolia* fl. <sup>(very abundant locally - there)</sup> scattered
- Bartelera undulata* fl. <sup>very</sup> common
- Liatris punctata* bud - "
- Verbena subulata* bud - not "
- Helianthus scaberrimus* bud - common
- Astragalus* - low fl. rather common
- Solidago nemoralis* fl. quite "
- Horsenia argentea* fl. (few fl.) <sup>rather</sup> common
- Castilleja occidentalis* fl. - occasional
- Euphorbia* - small smooth fl. <sup>very abundant</sup>
- Melilotus alba* fl. <sup>(very abundant)</sup> not rare
- Andropogon scoparium* bud - common
- Parthenium capillare* fl. - few
- Bartelera undulata* fl. - frequent

- Lycopodium junceum* - fl. - frequent
- Euphorbia maculata* fl. - scattered
- Salsola* - fl. - scattered
- Hedeoma pinnatifidum* (dry) few
- Quercus agrifolia* fr. - scattered
- Rhus glabra* fl. mostly lower (few)
- Zaraxium*
- Bartelera* - fl. scattered
- Solanum rostratum* fl. scattered
- Erigeron canadensis* fl. scattered
- Delosia viridis* fl. scattered
- Ambrosia psilodonta* fl. - common
- (moss) - fr. - few
- Verbena stricta* fl. - few
- Philosium* - fl. - scattered - few
- Dysosma pedunculata* bud - some
- Helianthus annuus* fl. <sup>scattered</sup>
- Rumex crispus* fr. - 1 plant
- Quercus* <sup>var. on N. slope</sup>
- Ambrosia artemisiifolia* - fr. - few
- Andropogon scoparium* - on N. slope
- Salsola* *triacanthos* - scattered
- Oralis stricta* fr. - scattered
- Ceanothus ovatus* fl. - common on N. slope
- Euphorbia purpurea* - fl. - scattered
- " - fl. - common small



*Aster luteus* (var?) fl. yellow  
*American cowslip* fl. purple edge fields  
*Cerastium* — fr. " "  
*Ornithoglossum* *versicolle* fl. yellow  
*Linum sulcatum* fl. blue  
*Cacalia* *torulosa*  
*Ranunculus* *terrestris* fl. yellow  
*Plantago* *virginica* fr. low

This upper part is much  
 pasture, & locally woods filled  
*Asplenium* *adnigrum* A. *peristichium*  
*Euphorbia* *marginata*, *Dryopteris*  
*Psidium* (barn spots) *Tuber*  
*gemmae*.

*Melilotus* *alba* & *Ambrosia*  
*artemisiifolia* (A. *peristichium* less  
 so) are badly water in  
 open. In the valleys  
 they are better.

Native plants are fewer.  
*Euphorbia* — & *American*  
*cowslip* are also water  
 in the open.

Corn runs up from No. 9  
 is stunted at edge at top.  
 A few stunted *Cassia*  
 in pasture — at top.

On the very point of (9) *Verbena*  
*stricta* is water (leaves drawn  
 — to stem)

Hunt down along (7)

added:  
*Helianthus* *divaricatus* — fl.  
*Asclepias* *verticillata* — fl. common  
*Desmanthus* *virginicus* fr.

The day was dry & windy,  
 though the wind was not.

I returned to the hotel  
 & waited for my train,  
 3:50 PM.

The bluffs show up finely.  
 The timber is in valleys  
 & pockets, except where  
 orchards are planted.  
 There around the first big  
 bend in bluffs is a cove  
 with hops trees covering  
 much of the way. Beyond that



The front is again treeless.  
Parts of the bluffs between  
Pacific and the station  
south and lower, less  
deep & not covered on  
the face.

Above Pacific on the  
bluffs are quite woody  
for a distance. Then a  
broad, - a valley, - +  
more woods.

Then the RR. comes close  
to bluffs which are steep  
mostly bare on face, with  
wooded valleys. This is  
just before 1<sup>st</sup> station N. of  
Pacific Pt.

This little station looks  
good, both woods & bare bluffs



Muscatine, Nov. 16, 1917.

Left Iowa City at 2<sup>44</sup> PM,  
& reached Muscatine at 4<sup>30</sup>  
via Wilton. Put up at  
the Hotel Muscatine.

In the evening I spoke  
to a good audience at  
the Public Library, Miss  
Chapman presented me  
for the Ethical Club  
talks 1 1/2 hours.

RR .84 05

Suburban .75      To Springfield .16

Hotel 2.00      To Iowa City

Breakfast .60

Porter .15

---

4.34

84

---

5.18

1.00 new crown

---

6.18.



1917.

Nov. 17 - Bayfield.

Outline of my talk:

Changes in 3 yrs. - abrogation

3 yrs ago, - none now.

Show those who see <sup>the</sup> German situation in Europe.

German duplicity - & disregard of rights

Austria -

Why we are at war.

Sinking of vessels, loss of  
over 200 lives

Bombing

Intrigue - Mexico, etc.

Dumb

Fight for Democracy.

Applause continued long, - and as  
an encore

Met Miss Hudson; Quanta &  
Miss Titus (McIntosh) were  
present.



1919

Trip to Okoboji - May 11-12

Left at 9<sup>45</sup> AM for Cedar Rapids  
with Mr. Fisk. Left on  
Rock Island at 11<sup>05</sup> AM  
for Montgomery.

May 12 Left Livingston  
met us at Montgomery &  
drove to Lab.

Bus only show small leaves  
& very young catkins.

Flowers everywhere very few.  
Arnica montana in fine flower on  
bank. Few *Urtica* (hairy)  
in some near main forest.

*Asplenium* in bud on  
banks.

The forest showed a good  
many *Antennaria* <sup>neglecta</sup> not in flower  
in fine flower, a very few  
*Anemone patens* & *Astragalus*  
*caryocarpus*, & quite a lot  
of *Carex* (as is *peruviana* or  
*tetana* & *media*?)

Okoboji May 12, 1919

Took in the air

Went full on

Squaw

2 saws -

Chisel -

Wrench

Shears -

Draw knife

Stone for scythe

Saddle

Plane -

Pinch bar

In Livingston yard I found  
a few small *Carex* stendyfle  
in flower.

On the drive to Selk's farm  
& Milford saw very few  
flowers. There was a poor year  
for *Anemone patens* & *Astragalus*



*carystus*.

Left Milford at about  
3:30 PM for Spirit Lake.  
At Arnold's Park found  
*Uvularia grandiflora* just  
in good flower, with  
leaves small.

Left Spirit Lake at  
4:23 PM.

Along RR on flat  
Wisconsin plain are rather  
few flowers. Some good  
patches of *Pedicularis canadensis*  
a very few *Lithospermum*  
*canadensis*, a few *Prota*  
*pedatifida*, some *Antennaria*  
on the whole very scant.



Trip to Des Moines & Gowie  
May 15, 1919 left at  
4:35 am,

About 5 min. ride W.  
of Grinnell, on N. side,  
is a patch of prairie  
with *Viola pedatifida* (?) and  
*Pedicularis canadensis*.

Just as we were coming  
to Des Moines, opposite  
State Fair grounds, saw  
many *Lithospermum*  
*angustifolium* in flower  
along RR.

Few flowers along  
line so far  
*Pedicularis canadensis*  
*Sisymbrium officinale*  
*Fragaria virginiana*  
*Lithospermum canescens*

Story Co.

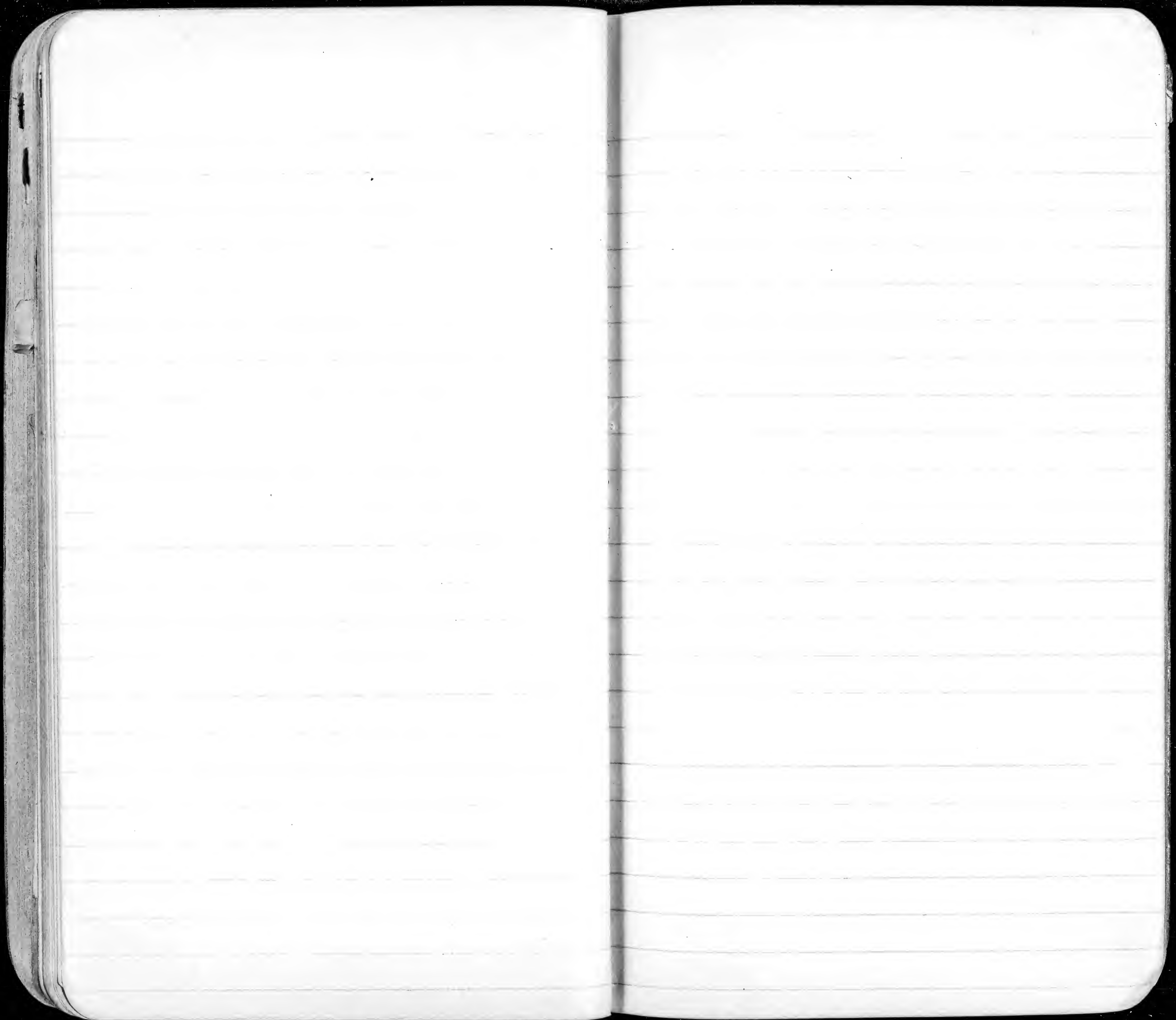
At Kelley saw in fl. -  
*Oxalis violacea*  
*Lithospermum canescens*  
*Viola pedatifida*  
*Fragaria virginiana*  
*Lithospermum angustifolium*  
Dandelions many

Just outside of Boone  
a pond had a good many  
*Ranunculus multiflorus*  
with flowers standing 2 or  
3 in. above water.

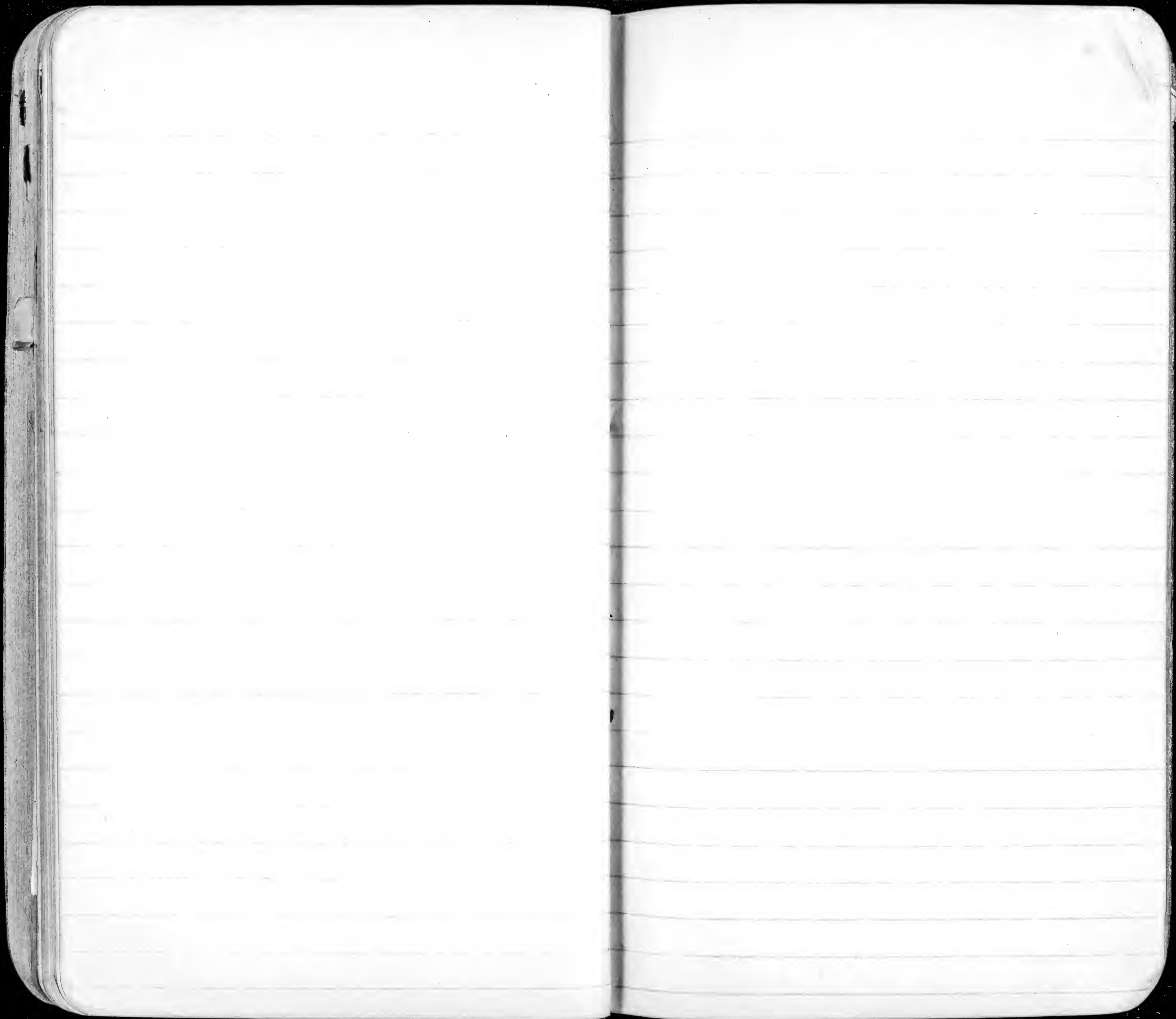
Greene Co

At Hope took  
*Sisymbrium officinale*  
*Lithospermum canescens*  
*Fragaria virginiana*  
*Oxalis violacea*  
Also saw  
*Antennaria neglecta*  
*Lithospermum angustifolium*  
*Viola pedatifida*  
*Silphium laciniatum* (lf.)











Sheldon account

RR to Cedar Rapids	.86
RR to Cambridge	5.99
Pullman & porter <sup>25</sup>	1.87
Breakfast, Waterloo	.65
RR to Sheldon	<u>1.95</u>

\$ 11.32

H 11.32 coming

1.57

10.71 return

\$ 9.45

H 22.03

and

1.26

10.71

RR to Waterloo 6.94

Supper dinner .65

RR to Cedar Rapids 1.71

RR to Iowa City .86

10.10

5.86  
 5.99  
 1.87  
 .65  
 1.95  
 -----  
 16.32

5.86  
 5.99  
 1.87  
 .65  
 1.95  
 -----  
 16.32



1919

To Sheldon, Ia. May 18-19  
Left Iowa City 9:45 & Cedar  
Rapids at 11:05 - went to bed  
May 19,  
near Emmetsburg

A few good patches  
of very small *Pedicularis*  
*canadensis* - a few  
scattered patches of  
very small *Fragaria*  
*virginica*, and one  
or two *Lithospermum*.  
A few *Sisyrinchium*  
(white).

Walked E. along C. W. - RR  
Found a few low *Tradescantia*  
in bloom on RR gravelly bank

Saw a couple of patches of  
*Pedicularis*, a number of  
*Lithospermum canescens*, a few  
*L. angustifolium*, scattered  
*Vicia pedunculata* & *V. circulata*,  
a few *Gilia anemifolia*, a few  
*Scrophularia leporella* in bud,

quite a lot of *Fragaria*  
*virginiana*, a few *Hypoxis*  
*hirsuta*, *Vicia anemifolia* in bud,  
*Lithospermum canescens* in bud,  
*Oxalis stricta*, quite common  
*Antennaria <sup>neg.</sup> canadensis* rather  
old, *Senecio filifolius*, a  
few, hardly open.

Along RR west I saw

- *Lithospermum canescens* - few
- " *angustifolium* - more
- *Pedicularis canadensis* - <sup>common</sup> beds
- *Antennaria <sup>neg.</sup> canadensis* - <sup>common on knolls</sup> - bunches
- *Vicia pedunculata* - scattered
- " *circulata* - "

*Oxalis violacea* - bunches

- *Ranunculus <sup>septentrionalis</sup>* - lower ground
- *Sisyrinchium* - mostly white
- *Lithospermum* - <sup>var. *angustifolium*</sup>

Saw some with few *Ranunculus* - mostly

- *Ajacis caryophyllata* - several
- *Antennaria racemosa* - bunches



✓ *Fragaria virginiana*  
*Hypoxis aurea* - yellow  
*Ranunculus* <sup>large</sup>  
 All in flower, & clear to  
 Ruthven.

West of Ruthven  
 These seeds were seen to *C. triflorus*

West of <sup>mostly flat</sup> Sheldon <sup>North</sup> <sup>field</sup>

<i>Agrostis</i>	✓	com	✓	✓	✓
<i>Astragalus</i>	✓		✓	✓	✓
<i>Antennaria</i>	✓	✓	✓	✓	✓
<i>Taraxacum</i>	✓	✓	✓	✓	✓
<i>Hypoxis</i>	✓	✓	✓	✓	✓
<i>Fragaria</i>	✓	✓	✓	✓	✓
<i>Litho. canescens</i>	✓	com.	✓	✓	✓
" <i>angustifolia</i>	✓	✓	✓	✓	✓
<i>Pedicularis</i>	✓	✓	✓	✓	✓
<i>Ranunculus</i> <i>lanceolatus</i>	✓	✓	✓	✓	✓
" <i>septentrionalis</i>	✓	✓	✓	✓	✓
<i>Desmodium</i>	✓	✓	✓	✓	✓
<i>Vicia pedunculata</i>	✓	✓	✓	✓	✓
" <i>canadensis</i>	✓	✓	✓	✓	✓
<i>Anemone patens</i>	✓	✓	✓	✓	✓
<i>Senecio</i>	✓	✓	✓	✓	✓
<i>Oxalis violacea</i>	✓	✓	✓	✓	✓

*Caprilla* in flower at  
 Emerald Bay, mostly with sand.  
 Ranunculus *lanceolatus* at Emerald  
 at Hartley the pastures & <sup>also Ranunculus</sup> *lanceolatus* of  
 way are yellow with sandstone.  
 Ropy grass W. of Hartley  
*Compositae* along W. of "  
*Agrostis* on hills, with  
*Astragalus*  
*Anemone patens* common  
 between Sandborn &  
 Sheldon, several in fl.

Reached Sheldon after 12  
 Had dinner at Hotel  
 Took in afternoon on  
 Excursion  
 Left via Ill. Cent. for Waterloo  
 at 5 PM



Ill. Cent.

from Sheldon

Agoseris  
 Antennaria  
 Astragalus  
 Anemone  
~~canadensis~~  
 Fragaria  
 Hypoxis  
 Lithosp. ramosa  
 " angustifolia  
 Oxalis stricta  
 Pedicularis  
 Ranunculus formosus  
 " repens  
~~Lemna~~  
 Sisyrinchium  
 Viola cucullata  
 " pedatifida  
 Taraxacum  
 Cirsium <sup>bulbosum</sup>  
~~altissimum~~  
 Sisyrinchium canescens

	Bringham	Sage	Calumet	Lambert	Cherokee
Agoseris					
Antennaria	✓	✓	✓	✓	✓
Astragalus	✓	✓	✓	✓	✓
Anemone		✓	✓	✓	✓
<del>canadensis</del>					
Fragaria		✓	✓	✓	✓
Hypoxis		✓	✓	✓	✓
Lithosp. ramosa	✓	✓	✓	✓	✓
" angustifolia					
Oxalis stricta					
Pedicularis	✓	✓	✓	✓	✓
Ranunculus formosus		✓	✓	✓	✓
" repens	✓	✓	✓	✓	✓
<del>Lemna</del>					
Sisyrinchium	✓	✓	✓	✓	✓
Viola cucullata	✓	✓	✓	✓	✓
" pedatifida	✓	✓	✓	✓	✓
Taraxacum	✓	✓	✓	✓	✓
Cirsium <sup>bulbosum</sup>		✓	✓	✓	✓
<del>altissimum</del>					
Sisyrinchium canescens					✓

Bringham & Cherokee Co.

Rev. Geo. F. Barrows  
 Whitney  
 Iowa  
 Wants Calumet 2<sup>nd</sup> paper

Print of Barrows  
 folds  
 Guide to Museum in  
 Ark. Museum

Mr. Barrows speaks of  
 end with drift at base  
 & loam above between  
 Sioux Center and Maquokette  
 Iowa, or Gr. Northern.



2.14  
11.35  
398 6-63

To Brighton July 1, 1919

Taxi, Iowa City	\$0.35
RR to Grinnell	2.14
Hotel - Grinnell	1.55
RR to Burlington	2.57
RR to Iowa City	2.14
Taxi	.35
	<hr/>
	9.12

Wes

Brighton, July 1, 1919

Left Iowa City at 11:50  
Remained in Grinnell

July 2 -

Left Grinnell at 9:30 AM

Area - prairie

Keokuk Co.

*Andropogon furcatus* fl. very com.  
*Erigeron annuus* fl.  
*Fraxinus americana*, all over  
*Rubus cuneifolius* fl.  
*Erigeron annuus* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.  
*Rhus glabra* fl.

Given when timber the  
 strip also RR is prairie  
 except where ditches)

*Salix humilis* fl.  
*Poa pratensis* all fl.



*Veronica filiformis* H

*Lespedeza spicata* Lind

*Tripsacum daniellii* H

*Sida acuta* L.

*Asplenium platyneuron* L.

*Thalictrum flavum* L.

*Hordeum jubatum* L.

(all thin & slightly broken  
plants)  
to Ollie - same on →

*Plantago lanceolata* L.

(station)

*Andropogon furcatus* L.

*Eriogonum fasciculatum* L.

*Rhus glabra* L.

*Cnicus altissimus* L.

*Hordeum jubatum* L.

(*Scirpus atrovirens* L.) var

*Lespedeza pumila* Nutt

*Asclepias syriaca* L.

*Veronica filiformis* H

*Convolvulus sepium* L.

*Trifolium caeruleum* L. (low)

*Asclepias tuberosa* L.

*Achillea millefolium* L.

*Veronica virginica* L.

*Desmodium illinoense* Torr.

*Claytonia virginica* L.

*Thymus occidentalis* L.

*Asplenium platyneuron* L.

*Andropogon furcatus* L.

*Lespedeza spicata* Lind

*Poa annua* L.

(*Trifolium repens* L. var *virginicum*)

to Richmond

*Achillea filiformis* H

*Eriogonum fasciculatum* L.

*Rhus glabra* L.

*Convolvulus sepium* L.

*Veronica filiformis* H

*Asplenium platyneuron* L.

*Rhus glabra* L.

*Salix humilis* L.

*Veronica virginica* L.

*Rhus glabra* L.

*Eriogonum fasciculatum* L.

*Poa annua* L.

*Lespedeza spicata* Lind



- + *Hordeum jubatum* fr
- + *Vulpagium lupinum* fl
- + *Aster multiflorus* var. *laevis*
- + *Melilotus alba* fl.
- + *Phlox pilularis* fr
- + *Trifolium pratense* fl
- + *Patrinia scabra* fl. sp
- + *Ambrosia trifida* fl
- + *Vicia villosa* fl
- + *Asclepias syriaca* fl.

Washington Co.

- Helianthus grosseserratus* fl
- Lepachys pinnata* bud
- Rosa pratincola* fl
- Asclepias tuberosa* fl
- Elymus canadensis* fl
- Tradescantia virginiana* fl
- Ceanothus americanus* fl
- Cyperus alatus* - low

Saw the following in  
order of numbers.

July 3-1919 - Between Downes  
and Jossite - N. side RR

- 7 *Rudbeckia hirta* fl.
- 16 *Elymus canadensis* fl
- 25 *Euphorbia corollata* fl
- 10 *Desmodium illinoense* fl bud
- 28 *Lepachys pinnata* bud
- 18 *Tradescantia virginiana* fl
- 21 *Achillea millefolium* fl.
- 1 *Hordeum jubatum* fl. + fr
- 20 *Asclepias syriaca* fl.
- 34 *Elymus canadensis* fl
- 12 *Aster multiflorus* bud
- 11 *Helianthus grosseserratus* fl
- Rosa pratincola*
- 23 *Asclepias tuberosa* fl
- 30 *Convolvulus sepium* fl
- Phlox glabra* fl
- 3 *Trifolium repens* fl
- Melilotus alba* fl.
- 22 *Patrinia scabra* fl. sp
- Lepachys capitata* bud
- Andropogon furcatus* fl
- 2 *Phlox pilularis* fl



4 Poa pratensis fr.  
 Carex americana fl.  
 Veronica virginica fl.  
 Desmodium canadense  
 Henchelia hispida fr.  
 26 Eriogonum arvense fl.  
 " " fr.  
 31 Agropyron benthii fl.  
 Bromus arvensis fl.  
 33 Salix humilis fl.  
 9 Bidens bipartita fl.  
 Sigesbeckia alba fl.  
 Baptisia <sup>carolinensis</sup> fl.  
 Liliun canadense fl.  
 27 Artemisia ludoviciana fl.  
 Urtica vulpina fl.  
 5 Ambrosia trifida fl.  
 " artemisiifolia fl.  
 6 Cirsium tuberosum fl.  
 \* Conyza americana fl.  
 102 Phacelia dasy <sup>carolinensis</sup> fr.  
 27 Silphium laciniatum fl.  
 19 " integrifolium fl.  
 29 Bromus tectorum  
 " grass fl.

14 Bromus pallidus fl.  
 17 Pastinaca integrifolia fl.  
 8- Goupheland sepulchralis fl.  
 18- Halimolobos laevifolia fl.  
 24- Anemone americana fl.  
 25- Verbena thapsus fl.  
 32- Helianthus scaberrimus fl.  
 35- Eryngium yuccifolium fl.



Prairie

E. Iowa City RR July 16, 1919

- Rosa pratincola fl
- Actinella micropetala fl.
- Canna laurifolia fl
- Elymus sanguineus fl
- Lepachys pennata fl
- Desmodium fl
- ~~Lepachys pennata fl~~
- Desmodium illinoense fl
- Petalostemum candidum fl
- Desmodium purpureum fl
- Euphorbia corollata fl
- Cirsium Hillii fr
- Bootteltonia verticillata fr
- Solidago nemoralis herb.
- Eryngium yuccifolium fl
- Elymus canadensis fl
- Conoclinium album fl
- Helianthus scaberrimus fl
- Zizanthium <sup>alatum</sup> fl (low)
- Cicuta maculata fl (very comp)
- Apyrum canadensis fl
- Verbena hastata fl
- Silphium integrifolium fl

- Oxalis filipes fl
- Hyssopus integrifolius fl
- Pyrola rotundifolia fl
- Hordeum jubatum fl
- Helianthus annuus fl (1)
- Centaurea (very) fl
- Acerata viridiflora var. lanata fl
- Cacalia tuberosa fl & fr
- Salix humilis fl
- ~~Desmodium (various)~~ fl
- Prastium leucophloeum fl
- Asclepias tuberosa (fl) (mud)
- Aquilegia canadensis fr
- Veronica virginica fl
- Siphium laciniatum fl (very)
- Desmodium canadense fl (few)
- Eryngium yuccifolium (fl)
- Potentilla norfolcensis fl
- Asclepias tuberosa - fr
- Carex festucacea fr
- Stemona alata fl
- Sarothrum integrifolium fl
- Potentilla arguta fl
- Koeleria cristata fr





- Asclepias syriaca fl
- Heuchera hispida fl
- Linum sulcatum fl
- Asclepias verticillata fl
- Scrophularia leporella fr
- Mimulus ruber fl
- Verbena stricta fl
- Eriogonum flavum fl
- Physalis peruviana fl
- Sida acuta fr
- 58 Anemone cylindrica fr & fl
- Polygonum virginicum fl
- 60 Pectanum canadense fl
- Polygonum pennsylvanicum fl
- ~~Trifolium~~ clover fl
- Melilotus alba fl

Carex festucacea was scattered here & there.

See people Petalostemi & Lythrum were in patches; also Filipium canadense & Eryngium, latter very abundant.



To Dune Park - Sep. 23, 1916

A. = Sand, B. = usually sandy, C. = waste place, D. = weed.

List of my dune plants:

Aster ptarmicoides  
Aster dumosus 8/30 1909.

- " sericeus
- " sagittifolius
- " linearifolius
- A acerates floridana
- Asclepias syriaca
- A Ammophila arenaria
- B Artemisia caudata
- ~~arctostaphylos~~
- Anemone cylindrica
- andropogon furcatus
- " scoparius
- Antennaria plantaginifolia
- C Ambrosia artemisiifolia
- Asclepias tuberosa
- D Aspidium thelypteris
- Bromus purgans
- A Cyperus Schweinitzii
- A " filiculmis
- Coreopsis tripteris
- B. Commelina virginica
- Chenopodium leptophyllum
- ? Campanula rotundifolia
- Ceanothus ovatus
- Coreopsis palmata
- A. Cycloloma atriplicifolia
- B. Cynhrus carolinianus
- A Cakile maritima

Desmodium canadense  
 " sessilifolium

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

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Elymus canadensis

Euphorbia polygonifolia

C. Echinochloa corollata

Equisetum hyemale

Erigeron ramosus

" canadense

D Eupatorium

Fragaria virginiana

Galium pilosum

Gerardia aspera

Gnaphalium polycephalum

D Gerardia tenuifolia

Hieracium umbellatum

" longipilum

Helianthemum canadense

Helianthus hirsutus

" occidentalis

Henckera hispidula

D Iris varicolor

D Junco Torreyi

Kuhnia eupatorioides var

Koeleria



- Lobelia Nuttalli
- Lactuca canadensis
- C " scariola
- B. Lithospermum Guelinii
- Liatrix pycnostachya
- " scariosa
- " cylindracea
- B. Lupinus perennis
- Lepidium apetalum
- Lespedeza capitata
- D Lythrum alatum
- D Lycopus sinuatus
- Monarda mollis
- A Mollugo verticillata
- C Melilotus alba
- A Monarda punctata
- D Nuphar advena
- B Oenothera rhombifolia
- " biennis
- A Opuntia Rafinesquii
- D Osmunda regalis
- A Polanisia trachysperma
- 2 Polygala cruciata
- Pycnanthemum flexuosum
- Pedicularis canadensis
- Phlox hirta

- Panicum Scribnerianum
- A Polygonum tenue
- D " amphibium
- D Prunella vulgaris
- Rudbeckia hirta
- C Rumex crispus
- Solidago nemoralis
- " graminifolia
- " speciosa v. angustata
- 2 " racemosa v. Gillmanii
- Sorghastrum nutans
- Smilacina stellata
- Salix humilis
- D Setaria viridis
- Stipa spartea
- Scrophularia leporella
- A Strophostyles helvola
- C Salola hali var.
- D Scirpus angulatus
- D ~~Spiranthes~~
- D Spiraea salicifolia
- D Steironema quadrifolia
- D Stachys
- D Scirpus validus



*Sarrubras*

- Tradescantia reflexa*
- A *Tephrosia virginica*
- C *Trifolium pratense*
- D *Zyphr latifolia*
- ? *Xanthium commune*
- Bizia aurea*
- Verbena craccosa*
- " *angustifolia*
- " *hastata*

A = Sand	14	+
B = Usually sand	6	
C = waste places	8	+
D = Wet	19	
- = Prairie	59	-
? =	6	

<i>Aspertholus</i>	112
<i>Polygonum</i>	
<i>Rubus</i>	
<i>Panicum</i>	
<i>Rudbeckia</i>	
<i>Sisyrinchium</i>	
<i>Sibira</i>	
<i>Abies</i>	

Left on N.Y. Central suburban train for Dumont Park. (Fare, round trip \$1.72). Day clear & cool, at Robertsdale are weed patches, evidently introduced native flora. Many R.R. tracks. To this it is all into. Shows much the same to ~~east~~ Puffington. Opposite side at Puffington is scrub growth, some pines, etc. No oaks? Visit the sometime, also groups. At Pine are more trees & a flat traversed by railways. Looks better for trees. Looks very good. Good all the way to Gary. Lots of scrubby black oaks just beyond Curtis. This is the place to go for Oaks.



Beyond Gary quite  
dry, & with more or  
less scrub woods, - oak

pine, etc.

At Millers & near  
woods of low oaks,  
Quite dry, & dense  
will cover!

At some place (W. of Gary) a  
valley with some scrub

RR signs for Gary

*Geranium maculatum* com.

*Lythrum hyssagifolium* "

*Aspidin thelypteris* "

*Lonicera virginiana* "

*Juncus* - rather "

*Poa* (like *canadensis*) "

*Desmodium illinoense* "

*Lythrum* - "

*Andropogon scoparius* "

*Salix longifolia*

*Aster* (dwarf?)

*Lactuca*

*Stachys*

*American* (shrub?)

*Juniper*

*Asplenium*

*Lythrum*

*Desmodium*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum* - *Lythrum*

*Lythrum* - *Lythrum*

*Lythrum* - *Lythrum*

*Lythrum*

*Lythrum*

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*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*

*Lythrum*



*Andropogon furcatus*

*Rosa*

*Andropogon furcatus*

*Panicum*

*Andropogon furcatus*

P

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Ambrosia*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Eragrostis*

*Andropogon furcatus*

*Andropogon furcatus*

*Solidago* var *Gollum*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Pyrus (nutans?)*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*

*Andropogon furcatus*



From road, about 1/2 mile

*Geranium asperum*

*Sparganium angustifolium*

*Sparganium*

*Sparganium*

*Sparganium*

At the station & beyond

Just above station on flat

down road about 1/2 mile

about 1/2 mile down road

to station & 1/2 mile

just above station on flat

down road about 1/2 mile

about 1/2 mile down road

to station & 1/2 mile

just above station on flat

down road about 1/2 mile

about 1/2 mile down road

to station & 1/2 mile

just above station on flat

down road about 1/2 mile

about 1/2 mile down road

to station & 1/2 mile

just above station on flat

N. A. R. R. - low dunes - flat

*Sparganium angustifolium*

*Sparganium angustifolium*

*Sparganium angustifolium*

*Sparganium angustifolium*

*Sparganium angustifolium*

*Sparganium angustifolium*

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*Sparganium angustifolium*

*Sparganium angustifolium*

*Sparganium angustifolium*











(all below this are  
trees in lowest  
passage)

Ballast road.

open area - after flat the  
of lowland - very low

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

Pseudotsuga  
saxifraga  
Salix

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

of some grass

- ✓ Plot 11 - subshrub, very open
- ✓ Plot 12 - sandy, low
- ✓ Plot 3 - near point N,
- ✓ Plot 4 - <sup>near point</sup> on lake shore
- ✓ Plot 21 - <sup>low topped</sup> tall grass
- ✓ Plot 22 - <sup>anemophilous</sup> 2 species







(Ship 3 pages)

Expenses -	Photopia	
Elect. tape	Aug. 26-	.05
2 poles - dredges	Aug. -	.30
Nails, <sup>10</sup>		

Brook - 2 meals	
French - 8 meals	\$ 1.50
Buchanan 5 " + 4	1.50
Whittle 11 "	<del>2.00</del> 1.85
P.S. 11 " + 4	2.50
	<hr/>
	37.00
	8
	<hr/>
	45

Living exp.	
Bread - Muffin	.30
Yeast	.15
Oatmeal	.10
From Miss Warden	3.90
Arnolds Park -	
Bread	.20
Crisco	.30
Butter	.60
Milk - 14 quarts	1.00
Wheat flour	.35
	<hr/>
	6.88

Coffee - little	1.50
	1.85
	<hr/>
	3.35



List of plants in Formalin alcohol

- I - Scrub from oak along canal 8/24/1916
- II - Hippuris (?) W. side Upper Gas 8/26/1916
- III - Nuphar adloc. ~~8/26/1916~~ <sup>8/26/1916</sup> <sub>float</sub>
- IV - " " " " <sub>along water</sub>
- V - Zosteria acuminata S. of Smiths 8/27
- VI - Poltonia - high leaves 8/29

(con from 3 pages back)

✓  
 ✓  
 ✓  
 ✓  
 ✓  
 ✓

Returned to [unclear] & found  
 that [unclear] [unclear] just left.  
 [unclear] that [unclear] [unclear] [unclear]

noticed [unclear] [unclear] that  
 [unclear] [unclear] [unclear] [unclear]

Took [unclear] to [unclear] [unclear] [unclear]  
 when I was [unclear]. I took  
 train at [unclear] [unclear] [unclear]  
 [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]  
 [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]



(see last page in book)

Muhlenbergia mexicana

Oenothera racemosa

" muricata

Oxalis

"

"

"

Oxybaphus

Panicum capillare

"

"

Parthenium

Pentstemon

Physalis peruviana

Plantago

Poa

Polanisia

Polygonum

Polygonum

"

Potentilla

Prunella

"

Psoralea esculenta

Pycnanthemum

Quercus

Ranunculus

Rhus

Ribes gracile

Rosa

Rubus occidentalis

Rudbeckia hirta

Ruellia

Rumex

Salix

Salvia

Scrophularia leporella

Senecio

Senecio

Sisyrinchium



Silphium  
Sisyrinchium  
Sisymbrium  
Sulcatum  
Solanum

Solidago artemisa  
" gigantea  
Specularia  
Sphenopholis striata  
Spiraea polycephala  
Sporobolus

Stachys galustis  
Strophostyles  
Symphoricarpos  
Ternstroemia  
Talinum  
Ternstroemia canadensis  
Thalictrum  
Trichostema

"  
Trifolium

||

Verbena  
"  
"  
Veronica  
Viola

"  
Xanthoxylum  
Yucca  
Zizia  
Zygadenus



Prairie Plants - for pickling.

Sept W. R. Hanson  
Certify that 6 weeks  
Burlington

Asclepias sullivantii  
Aster novae-angliae  
" oblongifolius  
Baptisia  
Bontelona oligostachya  
Cassia tuberosa  
Carex festucacea  
Cenchrus  
Cirsium Cratogeomichi  
Crocus tripteris  
Cuscuta glomerata  
Cyperus filicollis

Cyperus Schweinitzii  
Galium enneandra  
Equisetum  
"  
Erigeron divaricatus  
" philadelphicus  
Euphorbia corollata  
"  
"  
Fragaria vesca  
Santiana virginiana  
Sarcocolla caroliniana  
Silybum  
Sindelia  
Hedeoma pinnatifida  
"  
Helianthus  
Helianthus Maximilianianus  
"  
"  
Hemlock  
Hirsutum



Dr. G. W. Root  
Peoples Gas Bldg.  
Chicago, Ill.

*Hieracium puberulum*

*Hypericum*

*Hypoxis*

*Iva*

Ralph Whittle

*Juncus*

1326 Penn Ave

*Koeleria*

Des Moines

*Krigia*

Iowa

*Lactuca*

Chas. Scholzi Bull

"

Loess Paper

"

Iowa Fruit Co

*Lappula*

conservation

*Lathyrus venosus*

artificial Peas

*Lepachys columbiana*

Pioneer Food

*Lepidium alatum*

*Liatris cylindrica*

*Liatris scariosa*

*Lilium philadelphicum*

*Lilium canadense*

*Lilium sulcatum*

*Lithospermum bachelianum*

*Lobelia leptostachya*

*Lobelia puberula*

*Mollugo*

*Morinda fistulosa*

Spach A. P.



