



E: 2 Iowa City July 14-15

Swamps

Sagittaria latifolia

Salix cordata

Najas atrovenosa

" *validus*

Sium cicutaefolium

Asclepias incarnata

Gium virginicum

Ambrosia trifida

Helianthus grosseserratus

Verbena halimifolia

Stachys palustris

Ranunculus macounii

Galium tinctorium

Carex crinita

Lytium alatum

Sparganium angustifolium

Stemodia longifolia

Gentiana andersonii

Pentstemon rupestris

Zizia latifolia

Euphorbia

Protium artemisioides

Salix lasiolepis

Amarna - July 9, 1910

alluvial prairie.

- | | |
|---|------|
| <i>Cirsium altissimum</i> | ends |
| <i>Asclepias tuberosa</i> | fls. |
| <i>Apocynum cannabinum</i> | fls. |
| <i>Juncus canadensis</i> | fls. |
| <i>Asclepias tuberosa</i> | fls. |
| <i>Achillea millefolium</i> | fls. |
| <i>Rudbeckia hirta</i> | fls. |
| <i>Arnica montana</i> | fls. |
| <i>Hypericum</i> <small><i>cristifolium</i></small> | fls. |
| <i>Thymus occidentalis</i> | fls. |
| <i>Lespedeza capitata</i> | fls. |
| <i>Helianthus scaberrimus</i> | fls. |
| <i>Oxycanthus flexuosus</i> | fls. |
| <i>Rosa pratincola</i> | fls. |
| <i>Galium humile</i> | fls. |
| <i>Euphorbia corollata</i> | fls. |
| <i>Azusa americana</i> | fls. |
| <i>Lupinus perenne</i> | fls. |
| <i>Compositae sepium</i> | fls. |
| <i>Oxalis stricta</i> | fls. |

Epilobium *sp.* fr
Cassia *sp.* fr
Erigeron *sp.* fr
Colobium *sp.* fr
Panicum *sp.* fr
Sonchus *sp.* fr
Practica *sp.* fr
Fragaria *sp.* fr
Plantago *sp.* fr
Asclepias *sp.* fr
Fibula *sp.* fr
Lactuca *sp.* fr
Ambrosia *sp.* fr
Eryngium *sp.* fr
Desmodium *sp.* fr
Ammon *sp.* fr
Ruellia *sp.* fr
Silphium *sp.* fr
Tragus *sp.* fr
Equisetum *sp.* fr

Verbena *sp.* fr
Comandra *sp.* fr
Helianthus *sp.* fr
Viola *sp.* fr
Pentstemon *sp.* fr
Erigeron *sp.* fr
Lycium *sp.* fr
Artemisia *sp.* fr
Petalostemum *sp.* fr
Ceanothus *sp.* fr
Artemisia *sp.* fr
Prunella *sp.* fr
Coccyzus *sp.* fr
Parthenium *sp.* fr
Potentilla *sp.* fr
Pedicularis *sp.* fr
Antennaria *sp.* fr
Vitis *sp.* fr
Artemisia *sp.* fr
Podocarpus *sp.* fr

Petalostemum candidum Lws
Arenaria Florida Fr.
Solidago rigida Lws
Helopsis scabra Fr.
Silphium integrifolium Lws.
Spinaria radiceifera Fr.
Stachys palustris Fr.
Clematis discolor Fr.
Opuntia purpurea Lws.
Thymus brevis Lws.
Poa pratensis Fr.
Lithospermum canina Lws.
Polygonum ramosissimum Lws.
Physalis viscaria Lws.
 75 *Achillea millefolium* Fr.
Polygala complanata Fr.

Plate 33 & 34 - prairie
 N. of river.
 Plate 304 - looking
 up river from
 bridge - Cambridge

Alluvial

Prunus americana
Ulmus "
Glutina triacanthos 1
Pyrus rostrata
Populus deltoides
Juglans nigra
Cornus paniculata 2
Vitis vulpina "
Acer saccharinum
Altis occidentalis
Platanus "
Fragaria virginiana
 (*Salix purpurea*)
 " *longicarpa*
Corylus americana
Rhus typhina
Ptelea nigra
Psidium guajacum
Quercus prinus
Acer negundo

Prunus rubra
 " *massoniana*
Merrilliana canadensis
Salix amygdaloides
 " *nigra*
Viburnum acerifolium
Xanthoxylum arpa
Rubus occidentalis

Upland woods

Populus grandidentata - Sam

Ostrya virginica - "

Quercus alba - "

" velutina -

Ulmus fulva

Tilia americana

Fraxinus americana

Ulmus americana

Artocarpus canadensis

Pyrus ussuriensis

Quercus rubra

" macrocarpa

Corylus americana

Rhus glabra

Crataegus mollis

Eupatorium rugosum fl

Syringa

Populus tremuloides

Carya alba

P. americana

Prunus serotina
Croton tomentosus
Claytonia cordata

Oak openings

Poa pratensis fr.
Panicum scrubum fr.
Lactuca canadensis lvs.
Ambrosia artemisiifolia lvs.
Potentilla canadensis fr.
Oxalis stricta fr.
Aster multiflorus fr.
Eriogonum canadense lvs.
Agrostis alba fr.
Verbena hastata lvs.
Plantago rugelii fr.
Verbena stricta fr.
Triplicium repens fr.
Pyrola asarifolia lvs.
Eriogonum canadense fr.
Sparganium angustifolium fr.
Asplenium platyneuron fr.
Lepidium apetalum fr.
Artemisia vulgaris fr.
Hesperis matronalis fr.

~~Phentella canaliculata
Rusticella hirta
Junco tenuis fr.
Zizania villosa
Lepidoptera capitata
Cynchala polycephala
Cynchala aurata fr.
Rusticella hirta fr.
Lolita obliquata fr.
Ploceus sanguineus fr.
Hirundo lunifrons
~~Vireo palmarum~~~~

alluvial trees

Blacks - July 23

1910

Acer negundo

Ulmus americana

Fraxinus lanceolata

Betula nigra

Vitis vulpina

Eurostyrium stygium

Cornus mollis

" *tomentosa*

Saxifraga nigra

Ampelopsis

Acer saccharinum

Celtis occidentalis

Sedum triacanthum

Quercus alba (one)

Rhus toxicaria (low)

Mercurialis annua

Cornus aspera (one)

Prunus americana

Rosa blanda

Solidago canadensis

Salix longistylis
Carya amara
Salix cordata
Quercus macrocarpa
Prunella virginiana
Populus deltoides
Lilium americanum
Juglans nigra
Sambucus racemosa
Asplenium virginicum
Prunus serotina

Des Moines, May 23/91

At NW. side (N side)
The yellow loess ends
rather abruptly +
back (E.) of it
gray mixed alluvium
for about 35 ft.
Then about 50 +
feet of blue loess
below with some
marl stuff
above + then
yellow drift
sandy + pebbly
in places.

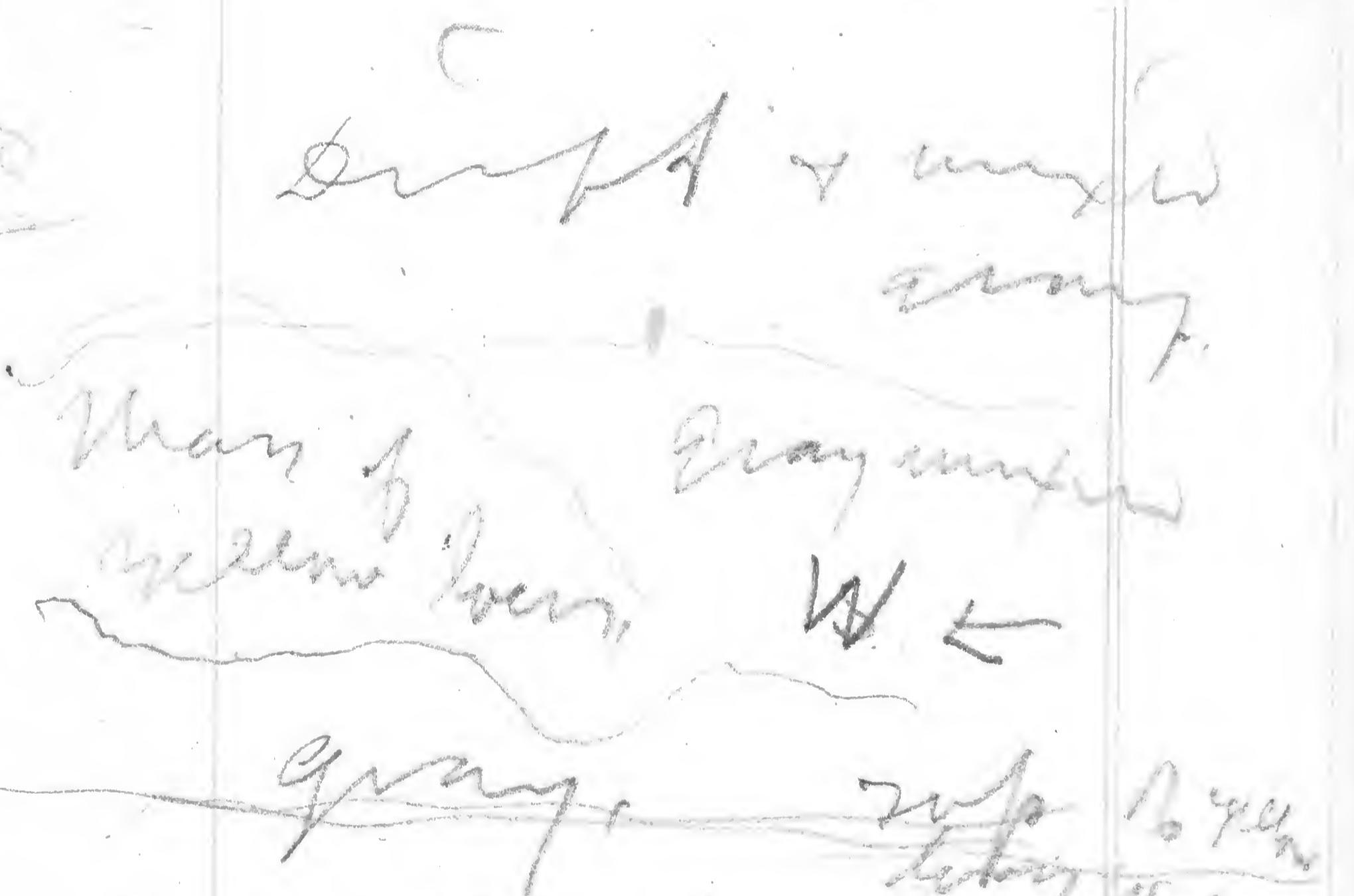
Cross



15 ft

about 50 ft.

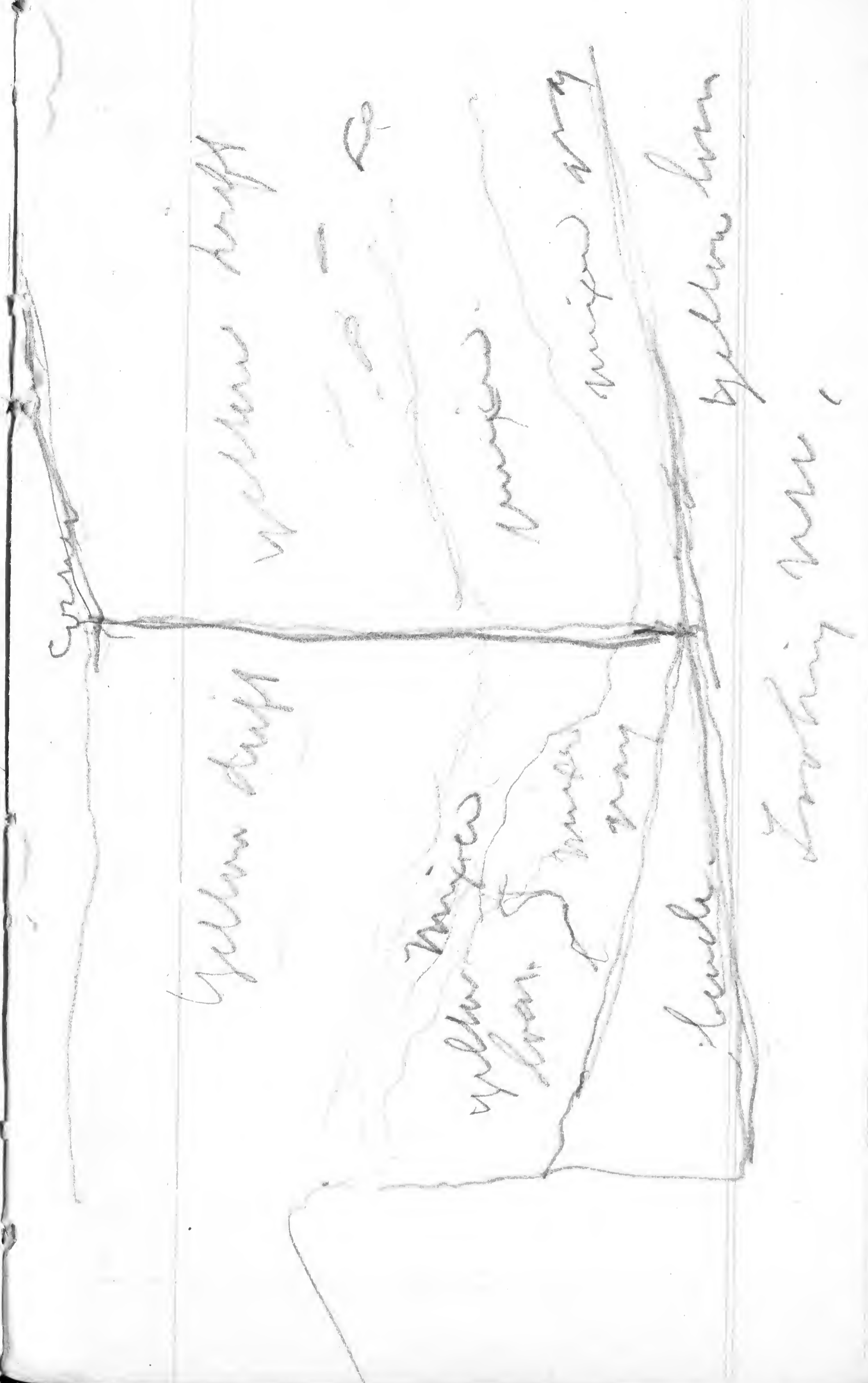
The passage went to building just above gray layer mixed (at W. end)



Evidently the yellow loam was further above than here -

At E. end - 4. side
 The cellar is about
 15 ft deep.
 Over 50 ft of blue
 loam is exposed
 toward E. side
 (500 ft. long).

This is located
 S. of Walker street
 + just E. of 13th St. Court
 the passage between
 N. 5. & heating plant
 at 13th St. Court
 All these notes
 are for heating
 plant (+
 today some
 for passage)



North

Plaza

Wall

Parade



13th - Dr. Court is
 a street N. x S.
 street. 1 block
 long.
 The high school
 & heating plant
 are on highest
 part of a well

In passage way it
 appears as if yellow
 brick masonry had
 been pushed forward
 & upward, with
 many unexcused
 over & back of
 it.

This location is
the highest point
for some distance
around.

13th St. Court is
1 block east of
E. 13th St.

The street on S.
side of H. School
(1 block south
of Waller St.)
is Maple St.

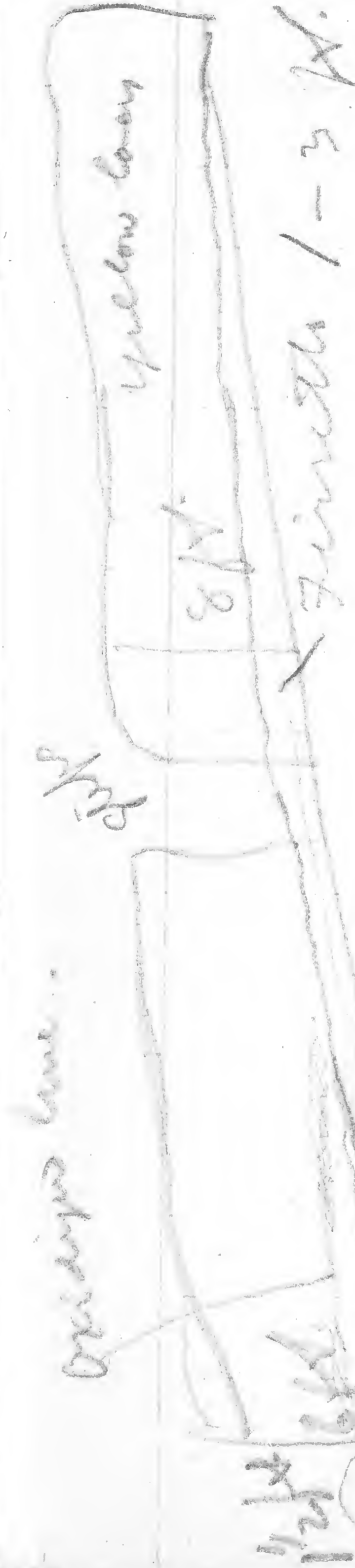
On the W. side of E.
6th St., & on the
S. side of Des Moines
St. W. of E. 6th St.
(this along W. 1/4 of
same block) shows
a row cut - 8 ft
or more clearly
exposed. A red
ferretts show for
1-2 ft. & follows
slope of street up
toward north.
The lower part is
gray, with white
upper yellow, with
blue streaks below.
As far as I could
see the line is
not sharp.

Further up the
hill (with)
the cuts
appear & show
mostly yellow
loam, blue
streaks below
N. of Des Moines
the cut
was deep -
probably 20 ft.
but upper part
is now terraced,

On N. side Des Moines
W. of E. 6th street
the ferrites shows
(probably) for 2 or 3
ft. On it rests
a brown gray

westward but many
clumps yellow with
blue streaks (see
sample). The
shells were collected
2-4 ft. above
ferrites (see box)
A very few large
mosses (roundish)
were. (One one)
At the top of the
bank (which is
lowest terrace)
there is a layer
with a few
pebbles, etc. but
there is black soil
& brown pieces of
brick with it so
that it is

evidently hauled in,
 This is all below
 the side walk,
 Above the walk a
 yellow loam (see
 sample) now fairly
 rises 10 or 12 ft.



gray loam
 This is $2\frac{1}{2}$ blocks on W. side
 Sample 7 E. 6 the part S. of Dec. 1891
 etc.

South of valley is a small exposure
 which is shown on next page

not very sharp.

yellow loess 1 ft

4 ft gray loess
brown tubular
nodules, etc.

Ferrite

6-8 in.

with photos 15-16
23 & 24.

This blue loess is
continuation of
blue loess in valley. It grows
thicker downward.

The ferrite contains
scattered pebbles.

and bank rises about
4 ft. higher.

I think the ferrite
loess on N. side of
Des Moines etc.
is all later than
post Kansan. Hence
it is nearly
gray.

Within this bank
shows at least 4
or 5 ft. of reddish
brown drift with
few pebbles -
Wisconsin. It
is probable that
all the other top
terraces are capped
with this drift.

The yellow loam
in this section
is not as clean
as further
up the hill.

This drift is a
reddish joint
clay with blue
pebbles - see sample.
The drift is found
now & then on
gray loam.
Probably 6 ft.
deep (the drift)

June 12, 1911

To Muscatine.
Drove along foot
of bluffs SW
at (a) in N. part of
sec. 5, T. Miller's Trp
a road cut up hill
N. of RR. shows
a mass of yellow
drift, with layers
& beds of gravel,
more or less
mixed. More
seen below.

All along the
bluffs, which
become rougher
there are bare
places showing
the reddish (or

yellow drift
Much of the timber
is cleared & the
result is pitiful.

Spring appears
at base of bluffs
here & there

Near center of
sec. 27 in T. Miller's
Trp. I took
sample of drift.
drift about
8 ft. above road.
Here, as elsewhere
along the bluffs
it is reddish
yellow & looks
in part as if
water-washed.
It has few

small boulders,
and with a very
granite matrix &
containing streaks
of pebbles, sand.
The road just
above bottom is
sandy much of
the way & the
stream coming
out of the hill
all carry sand.

The last cut (a
cut one) on the
Newington N.T.S.
just at bluffs is
probably 45 ft. deep.
The upper part is
reddish yellow
illuminous, irregular,
shales, etc.
Then a low joint
clay running out
west.
At E. end about
20 ft. of sand
under yellow
joint clay.

more or less bands,
(with sand)
12 ft yellow drift.
Illustan?

Chocolate heavy
8 ft clay.

Gray heavy clay
3-4 ft.

Very dark
silt clay
(met.??)
25 ft

RR.

This layer 6'-8' is
almost shaly.

Pebbles & small boulders
& in places sand

W1

Reilly & Stratton water front
Lester Lake

yellow joint clay

9

Row of run
20 ft

(Blue dark)
joint clay

PK

N. side cut

On N. side a
completely log
(2 ft?) shows
about 5 ft.
above PK.
Above sand?
Below sand. +

The section below
says cut is
45 ft. deep.
He says blue joint
clay below a
mat of sand.
Says no sand on
blue clay.



Prarie - G. E. -

June 29, 1911

Aster multiflorus - bud
Rosa woodsii? fr + fl
Achillea millefolium fl
Veronica stricta fl
Lactuca canadensis - bud
Euphorbia corollata fl
Monarda scabra - bud
Equisetum intermedium L
 " *arvense* - bud
Solidago nemoralis - bud
Oenothera biennis - bud
Ceanothus americanus fl
Potentilla arguta - bud
Solidago canadensis - bud
 " *serotina* - bud
Helianthus grosseserratus L
Eryngium yuccifolium fl
Rudbeckia hirta - bud

Cirsium palustre fl + bud
Aster laevis - bud
Lepachys pinnata fl
Rudbeckia hirta fl
Brauneria pallida fl
Petalostemum candidum fl
 " *purpureum* fl
Eryngium yuccifolium - bud
Cirsium hillii fl
Amorpha canescens fl
Bouteloua curtipendula fl
Panicum scribneri - bud
Andropogon furcatus - bud
Cirsium altissimum - bud
Rhus glabra - bud
Apocynum cannabinum - bud
Achillea artemisioides fl
Achillea integrifolia - bud
Andropogon scoparium - bud
Oxalis stricta fl

Achillea discolor L.
Antennaria racemosa L.
Aspernathum ~~multiflorum~~ ^{multiflorum} L.
Labella spicata L.
Lactuca scariola L.
Stachys palustris L.
Parthenium integrifolium L.
Dosmodium album L.
Carex festucacea L.
Dosmodium complanatum L.
Asclepias sullivanti L.
Baptisia pauciflora L.
Rudbeckia sublobulata L.
~~*Aspernathum*~~ ^{*Aspernathum*} ~~multiflorum~~ ^{multiflorum} L.
Solidago laciniata L.
Cassia tuberosa L.
Oenothera patens L.
Helianthus scaberrimus L.
Elymus canadensis L.
Erigeron phillyria L.
Asclepias speciosa L.
Rumex crispus L.

Phlox pilularis L.
Viola pedatifida L.
Anemone cylindrica L.
Besseyia platensis L.
Gastrophysa arvensis L.
Veronica virginica L.
Asclepias tuberosa L.
Conium maculatum L.
Silybum maritimum L.
Rhus copallina L.
Hemlockia hirsuta L.
Acrotaphus longifolius L.
Lepidoptera capitata L.
Pedicularis canadensis L.
Amphispiza bilineata L.
Ambrosia psilostachya L.
Staphylea trifolia L.
Oxypetalum virginicum L.
Lepidium apetalum L.
Senecio ~~multiflorus~~ ^{multiflorus} L.

~~Asphodelus luteus fl.~~
~~Andrena pulchra fr.~~
~~Anthoxanthum pratense fl.~~
~~Antennaria dioica fr.~~
~~Polygonum convolvulus fl.~~
~~Cassia chamaecrista fr.~~
87 ~~Asclepias verticillata fr.~~
~~Poa pratensis fr.~~
~~Antennaria dioica fr.~~
90 ~~Euphorbia pectinata fr.~~

Mountain words

July 1-1911

Prunella americana fr.
Corylus americana fr.
Cornus paniculata fr.
Populus tremuloides fr.
Prudena quinquefolia fr.
Quercus macrocarpa fr.
 " *rubra* fr.
Aster occidentalis fr.
Caulophyllum thalictroides
Oenothera longistylis fr.
Galium triflorum fr.
Ambrosium artemisiifolium fr.
Dioscorea villosa fr.
Carya alba fr.
Circaea lutetiana fr.
Eupatorium angustifolium fr.
Geranium maculatum fr.
Prunus virginiana fr.
 " *serotina* fr.

Rumex album fr.
Asplenium filix-foemina fr.
Viola pubescens fr.
Anemone thalictroides
Polygonum commutatum fr.
Phytolacca heterophylla fr.
Agrostis fr.
Saxifraga montana
 (*Pilea pumila*) fr.
Vitis vulpina fr.
Rubus occidentalis fr.
Erigeron atrorubens fr.
Eupatorium purpureum fr.
Polygonum perfoliatum fr.
Ampelodesmos rupestris fr.
Lactuca virginiana fr.
Galium aparine fr.
Sambucus canadensis fr.
Solidago herbacea fr.
Desmodium illinoense fr.

Adiantum pedatum fr
Menispermum canadense fr
Crataegus bitorulosa fr
Panicum ^{latifolium} (var) fr
Pyrus ioensis fr
Arisaema triphyllum fr
Rubus alleghensis fr
Populus grandidentata fr
Podochilus virginicus fr
Carya amara fr
Rhus glabra fr
Cirsium altissimum ? fr
Cryptotaenia canadensis fr
Fragaria virginiana fr
Actaea rubra fr
Silene stellata fr
Urtica dioica fr
Boraginaceae fr
Caryophyllus fr
Erigeron annuus fr

Hystrix hystrix fr
Quercus alba fr
Pteris aquilina fr
Elymus striatus (small) fr
Artemisia canadensis fr
Osunda claytonia fr
Achillea millefolium fr
Silene americana fr
Sargassum canadense fr
Cyperus puberulus fr
Hepatica acutiloba fr
Gerardia canadensis fr
Polypodium septentrionale fr
Habenaria bracteata fr
Samolus virginicus fr
Claytonia virginica fr
Bristle (grass) fr
Quercus rubra fr
Solidago nemoralis fr
Rosa blanda fr

Dell Hill. July 7/1911

Ruellia ciliosa

Triplaris eupatorioides

Andropogon furcatus

Poa carolinensis

Achillea millefolium

Ambrosia artemisiifolia

" " fida

Thymonanthus nutans

Portulaca oleracea

Arctostaphylos

Plantago virginica

Verbena stricta

Rhus glabra

Hedeoma pulegioides

Cirsium discolor

Morinda tomentosa

Andropogon scoparius

Ampelis caryocarpus

Kochia cristata

Eragrostis canadensis

Rosa woodsii(?)

Cirsium discolor

Lupinus albus

Lupinus albus

Euphorbia corollata

Euphorbia corollata

Euphorbia corollata

Helianthus annuus?

Acer rubrum?

Quercus prinus?

Panicum capillare

Lactuca scariola

Quercus prinus

Rubus odoratus

Physalis peruviana

Agrostis sp.

Orchard grass

Cirsium discolor

Orchard grass

Hemiflora hispida

Iowa City

July 7, 1911

French Bottoms + Park
alluvial.

Ulmus americana

Betula nigra

Vitis riparia

Fraxinus americana

Acer saccharinum

Rosa blanda

Alex. rugosa

Corylus americana

" *mollis*

Asimina triloba

Rhus toxicodendron

Eurostyrium atrorubrum

Celtis occidentalis

Sparganium angustifolium

Helidivium tripartitum

Cornus ~~stolonifera~~

Quercus alba

Panicum amarum

(broad leaf)
 Cornus sericea
 Anemone fruticosa
 Salix longifolia
 Carya amara
 Sassafras covata
 Quercus macrocarpa
 Smilax hispida
 Populus deltoides
 Tilia americana
 " paniculata
 Sambucus canadensis
 Ulmus fulva
 Juglans nigra
 Salix amygdaloides
 Rubus occidentalis
 " villosa
 Menispermum canadense
 Salix nigra
 Quercus rubra

Plantain occidentale

Upland, Free Park

Crataegus tormentosa
 Prunus serotina
 Corylus americana
 Quercus reticulata
 (Betula nigra
 Quercus rubra
 " velutina
 " alba
 Crataegus mollis
 Vitis vulpina
 Q. macrocarpa
 Ulmus americana
 Populus tremuloides
 Carya amara
 Pyrus ioensis
 Carya alba
 Acer saccharinum

Bayfield, Ia

July 8, 1911,

Prairie - (concluded) sandy - at Lake

Potentilla monspeliensis

Oxybaphus occidentalis

Arnica montana

Leptochloa spicata

Ambrosia artemisiifolia

Cirsium allanii

Desmodium illinoense

Oxybaphus occidentalis

Euphorbia corollata

Poa horrida fls

Physalis peruviana

Asclepias tuberosa ^{amplexifolia} fls

Equisetum laevigatum

Asclepias verticillata

Aster multiflorus var.

Eryngium yuccifolium

Senecio jacobinae

Senecio jacobinae

Helianthus annuus fr.

Petalostemum candidum fls

Cyperus sclavatorum fr.

Poa horrida fr.

Andropogon furcatus fr.

Carotum annuum fls

Rubus cuneifolius fr.

Pentstemon digitalis fls

Convolvulus sepium fls

Rudbeckia hirta fls

Verbena stricta fls

Verbena hastata fls

Euphorbia corollata fls

Leptochloa spicata fr.

Elymus americanus fr.

Rumex crispus fls

Lactuca canadensis fr.

Brassica palustris fr.

Oenothera biennis fr.

Chenopodium leptophyllum fr.

Chenopodium leptophyllum fr.

Chenopodium leptophyllum fr.

Park notes,

- What was income? -
Hay? wood? Animals?
- Six cages along bank north
- Culvert not S.E. part
- Change Spruces.
- Cut out brush & dead trees.
- Cut branches & repair trees -
- Work surface of soil around blue spruces.
- Posts, - keep these & wood to ground.
- Pruning hook & other implements.

June 29 + 2 wks.

Bay field (com)

Prairie (com)

<i>Eriogonum canadense</i>	herb	Walden in center
<i>Helianthus tuberosus</i>	herb	
<i>Achillea millefolium</i>	herb	
<i>Rhus glabra</i>	shrub	
<i>Pyrenanthem flexuosum</i>	herb	
<i>Thymus canadensis</i>	herb	
<i>Liatris pycnostachya</i>	herb	
<i>Solidago rigida</i>	herb	
<i>Cassia chamaecrista</i>	herb	
<i>Artemisia ludoviciana</i>	herb	
<i>Stachys punctata</i>	herb	Walden in center
<i>Helianthus grosseserratus</i>	herb	
<i>Muhlenbergia glomerata</i>	grass	
<i>Asclepias tuberosa</i>	herb	
<i>Lilium canadense</i>	herb	
<i>Vitis vulpina</i>	herb	
<i>Achillea millefolium</i>	herb	Walden in center
<i>Thymus canadensis</i>	herb	
<i>Portulaca integerrima</i>	herb	
<i>Peltandra purpurascens</i>	herb	

Oxalis stricta n

Agrostis canadensis fr

Pycnanthemum virginicum

Salix humilis br

Helianthus scaberrimus br

Polypogon monspeliensis

Eryngium yuccifolium fl

Moroneja mollis fl

Transectaria reflexa br

Desmodium canadense fl

Lygia aurea fr

Asplenium effusum fr

Mnium ~~sp~~ fr

" ~~sp~~ fr

Rhus glabra br

Scrophularia lepida fr

Triphium laciniatum fl

^{rr}
Pulsatilla grandis fr

^{rr}
Verbascum ~~sp~~ fl

Salix sp. fl

Lactuca pulchella fr

" ~~sp~~ br

Prunus ~~sp~~ fr

Plyssalis pulchra

Statice arvensis

Andropogon canadensis

Rhus typhina br

(^{rr} Strophostyles angustatus)

Stipa spartea fr

^{rr}
Euphorbia maculata fl

Hyssopus officinalis fl

(Euphorbia ~~sp~~)

(Eryngium pectinatum var

Scrophularia peruviana br

Thalictrum ^{fr} ~~sp~~ br

(Cenchrus ~~sp~~ br)

Amorpha canescens fl

Ruellia setosa fl

Speulcain ~~sp~~ fr

Hedysarum pulegioides fl

Verbena ~~sp~~ fl

Carex ^(road) fl

Antennaria nasutum br

Cirsium ~~sp~~ fr

Helianthus ~~sp~~ fr

Asplenium Bullii fr

Prun

Dem

Dem

Dem

10
G. A. Merrill
Eden Rapids
In

