St Louis May 16 1875.

G W Letterman Esq 6/15/53.

Dear Sir

your plants have been rec^d all right; but sent them to my office in town, 201 South 5th St. in future, to avoid trouble & Expense, as the Express Co^y do not bring them here

1 Veronica peregrina
2 Geum vernum
3 Arenaria Pitcheri Nutt. (not in Gray)
4 Osmorhiza brevistylis
5 Antennaria plantaginifolia
6 Alsine Ludoviciana
7 A. laevigata
8 Cerastium nutans
9 ~~Alsine~~ Ellisia nyctelea var ambigua
10 Chaerophyllum procumbens
11 Euphorbia commutata
12 Draba aureifolia
13 Viola bicolor var pedata 234 Wood
14 Erigeron bellidifolium
428 Woo

15 Vossinium Vexillaus

A study of this latter species, which is, I believe very variable — sometimes with very large leaves, would be interesting; species — flowers and — full grown fruit & leaves would be interesting to me.

There are 2 or 3 other similar Arenaria up in the rocky regions of Kentucky, which you ought to look for. a few better dried specimens would be desirable

A few good dried specimens — fl & good fruit of Euphorbia are desirable — Also good fruiting specimens of Nissolia Ellis.

Umbelliferous plants need be collected in fruit

Did you find Ulmus alata the wing-barked Elm on the Meramec? I thought I saw it there.

Yours truly

J. Engelmann

You ought to try to find out the names of plants yourself. one learns a good deal more in such an attempt.

St Louis June 30 '75

J W Letterman

Dear Sir

Sorry not to have met you yesterday. Your note warns me not to come on account of high water of the Mississippi, while I send you a P C that I would be there today. Of course I better defer, and hope I did not inconvenience you by my (and my son's) promise to be there to day.

Your plants are of the usual interest and gave me a good deal of pleasure.

1 Dipsacus sylvestris
19 Sonchus asper
24 Linaria elatine
25 Trifolium procumbens

are introduced plants, of which 24 I had not seen since I left Europe the others also, with the exception of 19 are uncommon out west, but

I have no objection to examine fresh plants for you — on the contrary, they are better for study — and these last ones were very fresh and in best condition.

all these plants make their way west. Many have come here within twenty years. The others are:

2. Ochothera sinuata
3 Psoralea Onobrychis the short one seeded pod ought to have warned you that it is no Desmodium
4 Bryanla Carolin. not seen by me before here
5 Coreopsis palmata
6 Stylosanthes elatior
7 & 8 Osmorh. correct
9 Lechea minor a common, but interesting little plant, evidently perennial, with decumbent old stems, which may be con-suffruticescent — get more of it
10 Hedeoma hispidum
11 Galium virgatum 12. G. concinnum
13 correct 14 Hedeoma hispida ~~over~~ largest, not Rugelii, which is a delicate plant
15 A. palag. mistake
16 correct 17 Hypericum sphaerocarpum
18 Hydrangea arborescens
19. 20. corr. 21. Potamogeton natans? (perhaps Cusn?)
22 Crotalaria sagittalis
23 Oxybaphus nyctagineus var. lanceolatus
Cassia reflexa Euphorb. dentata

Yours truly
G. Engelmann

St Louis Nov 9 1875

Gov Letterman

6/15/53

Dear Sir

I have carefully examined your two maples and find abundant difference — I have placed the characters side by side on the other page for you to study and to examine on different trees and in different localities, whether constant — also add the chart of bark and size and growth of tree — & wood

Any more Hickory specimens?

It is singular how our eyes are opened by study and investigation. I think I would now distinguish any single print of both maples — while when we were looking here at them, the difference appeared slight and difficult to catch.

Please ascertain again the value of both species for sugar making —

yours truly

G Engelmann

	Acer saccharinum	Acer nigrum
Tree	?	?
Bark	?	?
Petiole	slender, usually ~~rather~~ longer than leaf	stouter, usually ~~rather~~ shorter than leaf
Leaf	larger thinner paler	smaller, thicker & firmer darker coloured
	sinus between the larger lobes very narrow and acute	wide and obtuse
	3 upper lobes 5 dentate	3 dentate
	2 outer lobes 1 dentate	entire
Nut	obliquely oblong	subglobose
	wing not much more than twice as long as seed	about 3 times the length of seed
	narrower and almost parallel	wider and some what divaricate

Your poor specimen can be well distinguished as above — but whether the characters will hold good among thousands of trees, remains to be seen

Engelmann, G. to

6/15/53

St Louis May 8 1876.

My dear Mr Letterman

I have spent the whole afternoon in examining the fine lot of Hickories, I got this morning from you, & a few others which I gathered yesterday. And the result is rather unsatisfactory. The chambers of the male flowers does not seem to be constant or striking.

Your sulcata has a curious character in the anthers; the two cells are connected only in the lower half and divergent upwards

But I find something approaching to it in alba, and it may an individual peculiarity of that tree. Look again!

I have been promised flowering

specimens from up the River, if bottoms not overflowed!

I hope you know which is which, of your specimens and you can find the same trees again in summer and in fall; and are not as unfortunate as I have been with a peculiar Oak which I discovered several years ago and took for a hybrid. Yesterday I went out 8 miles, to get flowers of it and found in its place a new rail road!

Carya porcina seems to be the latest and tomentosa perhaps the earliest flowering of our species.

If you know get the tree that furnished those red velvety leaves & which you called C. nutra I wish you would look at it again; I think it is cordiformis, in that case the leaves would be still downy

while rubra becomes very early glabrous, like palustris. I do not recollect to have examined rubra before flowering, but think it is never so very downy or woolly.

Examining my stock. I find my flowers of rubra, as I stated, with very light whitish down, which disappears with the last catkins; so your plat of 2 weeks ago was, as I then suggested, J. Cooperea.

Very truly yours.

J. Engelmann

A friend in Europe wishes for a few perfectly ripe seeds, above falling asunder, of Engelmann's bulbosa. I suppose cold March has killed them off — but if you should happen to meet with them, you will oblige me by getting them

Yours

J. Engelmann

GEO. ENGELMANN, M. D.
3003 Locust Street.

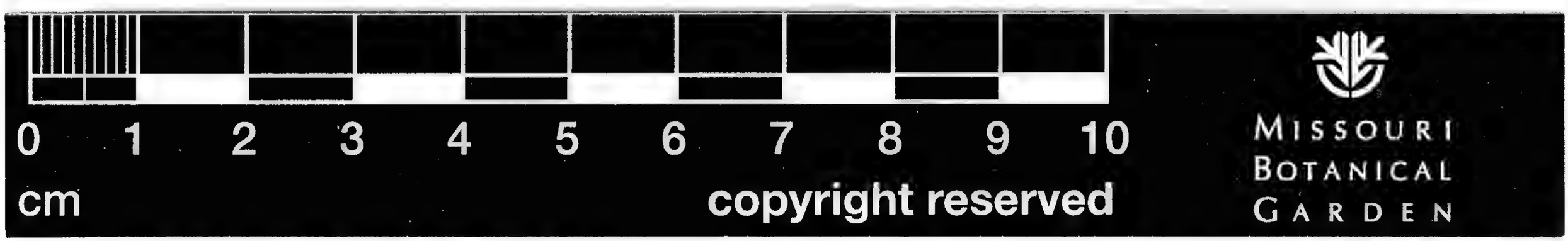
St. Louis, Mo., Saturday 187

If that is really T. quadrangulata, the books are wrong. Among ours only T. scambuscifolia is classed as having "short-oblong" anthers, all others have linear-oblong moreover anthers. Now is described as hermaphrodite. Your quadrangulata is hermaphrodite and has short reniform versiliate anthers

Both cells running together, horseshoe like! Watch it! See whether there are ash trees with distinct sexes and on them the anthers different.

GE

Does the "inner back cell" contain blue ash? Clear blue ash?



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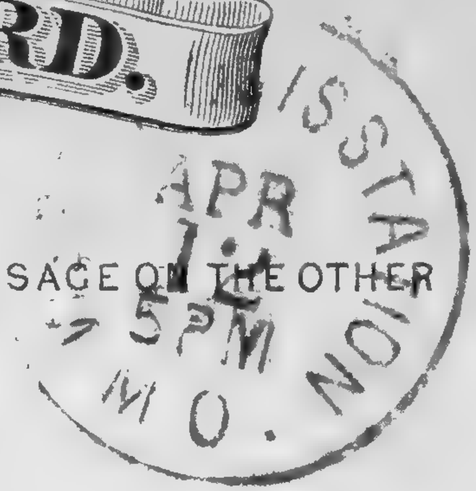
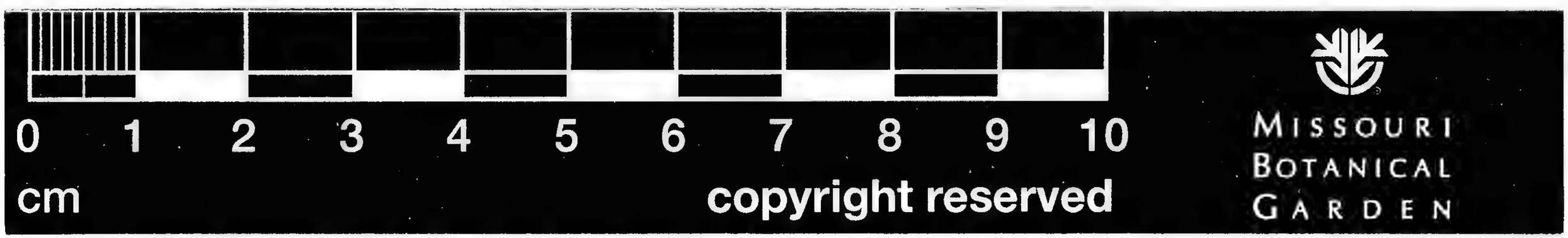


G. W. Letterman Esq

Allenton

St Louis Co



GEO. ENGELMANN, M. D.
3003 Locust Street.

St. Louis, Mo., Apr 17 187

Yes, by all means let us have good seed of U. Amer & Julo and if possible also U. alata.

If my patients & the weather permit, I should like to be with you Saturday — if you have no other plans; answer! I will also write again.

Yours G E

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G W Letterman Esq

Allenton

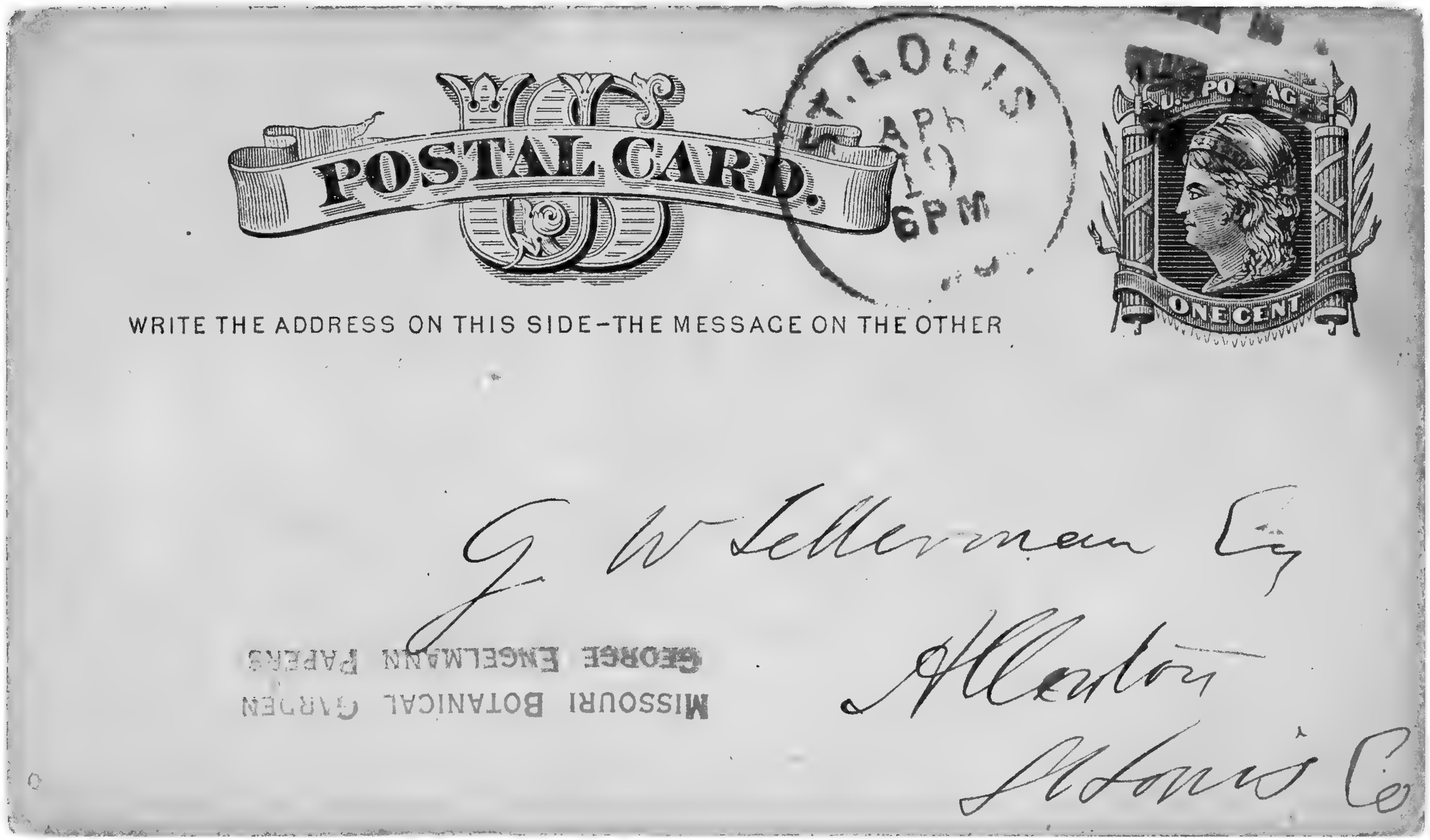
St Louis Co

GEO. ENGELMANN, M. D.
3003 Locust Street.

St. Louis, Mo., 187

Friends and, I fear, the weather will prevent me from looking with you at Carya and Quercus! Another time! But don't forget Ulmus if you please

Yours E.



I will send fragments of leaves, when dry. May 10

I expected to have a talk with you about your finds, can not keep the specimens a week longer to discuss them.

The interesting part are 2 sp, which raise the expectation that we are on the trace of hybrids.

1 one of your possibles "from the hills" has slightly ciliate leaflets — and with less sharply incurved teeth.

2 one of your alba also "from the hills" has very narrow leaflets, not dull and smoothish below but shining and glandular, like possibles. I wonder will, if you can to rediscover those trees and watch their flowering, maturity of leaves and of fruit.

Yours G

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J. W. Letterman Esq

Allenton

Mo

GEO. ENGELMANN, M. D.
3003 Locust Street.

St. Louis, Mo., May 23 1877

I had reexamined the specimens and also taken them for a pubescent albo! The yoy fid of that tree are interesting because quite irregular. It will be well to get a lot of them, and to watch the mature fruit in the fall; I will explain, when you call again.

A pint of slippery Elm is quite enough and a quart I can ~~use~~. No, thanks for Eriganie — My Goodberg is just coming up!

G E

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J. W. Lettermain Esq

Allenton

St Louis Co

GEO. ENGELMANN, M. D.
3008 Locust Street.

St. Louis, Mo., Jan 17 1875

Our poplars are not at all well known and a series of specimens cultivated in the low grounds of the Arboretum would be a benefit to botany. Of course, if possible, male and female plants ought both to be planted.

P. tremuloides and grandidentata form together with the European tremula and alba a distinct section. Grandidentata I have from Wisconsin and New England. tremuloides in the same localities and is said to occur also through Iowa to North Wisconsin. It is very abundant in the Rocky Mountains as a low bush in great elevations where it is apt to spring up after

the burning of the Pine woods and as a large tree in creek bottoms where it is the principal food of the beaver.

P. balsamifera is a northern tree, common e.g. on the Great Lakes — on Goat Island of the Niagara, and from New England to Wisconsin.

P. candicans of New England is said to be a form of it.

P. angustifolia of the Rocky Mountains is closely allied to it, perhaps only a narrow leaved variety; — cultivated in Denver streets as a shade tree.

P. heterophylla I have never seen; it is northern, and said to come down to the Ohio River.

The remaining Canadensis monilifera and angulata are all in a mass and must be

stated anew.

Our common Cottonwood is considered to be angulata and the northern form (along the Lakes, in New England etc) as Canadensis (or monilifera which seems the same) the characteristic Cottonwood of the upper plains, as far as Denver where it grows on the Platte within the city limits, and which is the only tree along the water courses of the plains, is probably also monilifera.

Specimens cultivated side by side would be of great interest, thus we could ascertain the true relations of these different forms, and whether they are distinct or belong to one single widely diffused and varying species

Respectfully

G. Engelmann

Geo. Engelmann, M. D.
3003 Locust Street.

St. Louis, Mo., March 4 1879

My dear Mr Letterman

Your letter of Febr 9 was duly received, but you know why I could not attend to it — and now George had a relapse — a severe attack of Erysipelas. I think he is gradually improving — at least out of this second danger. —

I understand that the best time to cut trees is late in fall; at this season the sap rises and the wood is more apt to crack. I think the best way would be to keep them sheltered from sun and rain, to avoid the alternate contraction and expansion, to prevent cracking — but I have seen them crack also under such careful treatment. It is probable that a larger piece will not crack as readily as a short section.

I have not seen such a big Acacia as you describe

Ahern, we have copallina and glabra here, but, I believe, not typhina. Ahern exudes a black gum, or one that turns black, and is very much like the black varnish of Japan which is also produced by — Ahern.

Had no mind to attend to anything — and then your eastern plants

are still neglected.

Yours truly

G. Engelmann

When you hear from Pantheier?
I have written to him lately.

GEO. ENGELMANN, M. D.
3003 *Locust Street.*

St. Louis, Mo., Jan 5 1879.

My dear mr Sullivant

Your package has arrived in good condition. You ought to have numbered the specimens, no trouble with the P.O. — You now don't know what I refer to!

Your names seem correct except:
Lindernia is Justicia decurrens
Ammania angustifolia
Salvia azurea
Chrysopsis I suppose you name the glabrous glutinous Grindelia — not enough developed — get better, mature specimen
Coreopsis is tinctoria or near it!
Pycnanthemum incanum
Mulgedium must be Pycnothoppus Carolinianus
Cuscuta not enough developed to tell.
Then I find there Houstonia gracilis
Paspalum
Fraxinus Caroliniana is fine (also here)
Eriogonum ~~broadiflorum~~ longifolium.
The ferns are good. Get enough of the woodwardia (not uncommon east but not here) and of Chaitettum Alabamense and Vestita; the former especially is rare — but get good rooted specimens, not scraps!

The Cuscuta I collected on a large tree in Sec missouri and W. Arkansas. Good specimens are desirable — also

Wood, if convenient.

You must get the Gonolobus in fruit also.

My Texan specimens of Cheirotherium to me others are as large as yours.

I have in a few days

I could not make any

thing of your new Rutlackia

sent it to Gray, name it provisionally

A. Michauxii. — Must get more of it

Yours truly

J. Engelmann

Was mistaken — thinking Rutlackia lists being annual.

GEO. ENGELMANN, M. D.
3003 *Locust Street.*

St. Louis, Mo., April 14 1871

Thanks for Dr Vasey's letter. Too early to work up Carya, but we must go on gathering material. Prof S. never came here; he returned from N Orleans directly home, and writes me from Brookline. Address him there.

I know that east, where they ought to know, they call the small round fruited persica micro-carpa and they may be right but then, it is nothing but persica. Yours truly

G E

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