Rec Jan 9 Ans Jan 9

Athens Ill. Jan. 6 1873

Dear Engelman — Happy new year
Since my return in July I have
been very busy getting things
straightened up after my 2 seasons
absence & since the winter weather
has driven me partly indoors — have
been at work on the Texan Plants
I have them distributed now up to
430 numbers (there will be over
500 of them). Dr Gray has undertaken
to name them & print a list at
my expense. I expect to have
them ready in about a fortnight
and I write to ask you if you will
want a set of them: if not I
will send you the Euphorbias
Grapes Juncus. Cuscuta &c as I
suppose you will be called on to
name these by Dr Gray & the lot of
Juncus diffusissimus. The Isoetes
is not exactly melanopoda
the maturest specimens showing no

black bases.

I have studied your article on grapes and think I understand them now as goods. Our Lemmon grape having turned out to be the winter one the difficulty is with me mostly cleared up, yet in studying the Texan specimens I have I am of impression there are hybrids in the family and that the hybrid bloods is best traced in the character of the pubescence taking the cobwebs as one extreme and the simple erect hair as the other. Probably no 2 individuals exhibit exactly the same characters in these respects yet there is a limit in these characters over which no species can pass. There is no doubt but that the Texan post oak grape possesses some constitutional chara

ters quite peculiar and that
would seem should exclude
it from all forms of aestivalis
but the herbarium of Cornwell
shows nothing of this. I have
from a South west Missouri
root a form of aestivalis, with
perfectly smooth & glaucous
branches (or vines) as smooth
as the vine of riparia. but
covered with a glaucous bloom
I will send you specimens of it
also

Respectfully Yours

E Hall

Rec'd Jan 31
Ans Feb 5

Athens Ill. Jan 27 1873

Dear Engelm — your duly
recd. The plants are now ready
& I send you a little package
by Express to day — You will please
name them & send if you will
the names to Dr Gray as I suppose
he will want you to name
them. Genera or usually does
I will tell him the genera I
have sent you — I mean the
names of those that have numbered
tickets that are in the sets
You ask what one plans for
next year — to stay at home
& raise taters) I can make more
with less labor & no deprivation.
Plant Collecting don't pay — not in
greenbacks — and I have to drop it
awhile and probably altogether
Those are some numbered specimen of
paper you will please determine

then I send name to me
& if anything new turns
up in any of the Genera I should
be glad to hear
In the matter of the Oregon Collection
that it seems Dr Gray sent you
& you returned to him that he
has now sent me were two
forms of Quercus that you
did not name or at least
I can find none Can you
tell me now about them?
I did not know till I saw them
that you were the authority for
Oaks or I should have sent you
my whole Texas Collection — though
all were in leaf only or in leaf
and young fruit yet were
very interesting, showing several
hybrids. Several of the species
were new to me 2 Durandii 2
Cinerea. I receive vor ~~as~~
this Swale Collection to you
grates. Ever yours & Gall

Rec' Feb 27
an — 28

Celtis reticulata

Athens Ill. Feb 20th 1873

Dear Engelman

Your two letters are Rec'd — I done my level best, on Pines

I was told by an old german long living there that there were 2 species but when he went to point them out to me he failed to satisfy himself that he had done it I judged that he formed his opinion from the nature of the wood. being an old lawyer — but he said the bark was different — very few cones appeared last year — it seemed to be the wrong year for them — bearing as probably most conifers do in alternate years — the cones I got were not grown — but the old cones were abundant & were round oblong or long linear varying even on the same tree & the leaves were also of variable lengths. if there is a real specific difference in the Houston Pines I have

totally overlooked it. — no
I might here want for my Specimen
& behold I am mistaken
The fruiting Specimen are a form
of Dacda Sure enough & the
other Probably mitis — if not inops
well So much for over sight — P
Dacda is well marked by a ridge or
keel on the inner face of the leaves
which the other has not. I think
both Species must run together
with their Cones as I saw no marked
difference here. — the Soil of the Pine
forests of Houston is a Close waxy
peculiarly Constituted Clay or Clay
loam almost entirely unfitted for
agricultural purposes on account
of its tendency to run together & to bake
hard when dry very little effort
is made at Houston to Cultivate
the Soil. a few gardens only by the
aid of manure —
I have a Copy that I could spare

of the Oregon plts but I wish
you would ask Eng for one
if he has them yet if not I
will send you mine – Some
time I must send you oaks
but too busy now
Now for Grapes –
On V. cordifolia I think you are mistaken
it is allied by the vine & some other characters
to V. vulpina for which I at first took it
as to others you are or may be correct
Buckley to the contrary notwithstanding
I cant send you cuttings this
year – vine killed to the ground
& so of all grapes here that I cultivate
except possibly the Concord may
in part have escaped – Did
you find anything new? – what
did you make of the Grapes?
Truly Your
E. Hall

Rec'd March 14
Ans — 15

Atheus Ill. March 11th 1879

Dear Engelman

Your 28 duly Recd

I enclose Specimen (divide mine with you) of Celtis reticulata I could get but little for. And only found one Shrub 5 or 6 feet high — There are 2 Celtis or forms in the Texas Collection. growing together often but quite unlike but where all the characters for Species are to be found I am unable to say. I have a Specimen of C Mississippiensis. Still unlike any that I have seen growing — but the distinguishing characteristics are not manifest — I am glad to be set right on Pine leaves — I cant verify for my self in Mitis mine having only 2 leaves — Jig has sent me your report — you did not report on all — why not I thought the Entire Euphorbiaceae was

your Specialty there are! three
Species of Phyllanthus that I fear
Gray will overlook & confound
the Euphorbias are most perplexing
you now make Junca 4-47 & 4-48
Zygopiocides & not acuminatus well
I must alter before I forget
I suppose none of the Oregon
Oaks were distributed among
I have not had returned all
the Specimens collected - Some
time will divide Specimen
with you - most of the
Orchidaceae were hard to get
in Oregon being too scarce
the Cypripedium 4-45 and Corallorhiza
Striata are the same about
I cannot help you out in
there.

Ever yours

E. Hall

Rec'd July 29 '14
Ans

Hall, E

Austin Tex. Aug 27 1873.

Dear Engelmann

Thanks for your paper on Juncaceae I have just found time to examine it carefully & find that my material and knowledge of the genus is so small that — I have nothing to say. The two species I brought from Texas distributed as J. nevicola & J. paucicaulis according to Gray which latter in fact at least must be J. acutifolia (from last letting specimens of Watts). The north form or plains form of J. acutifolia leaves J. aliaefolia & J. filamentosa are the total of my stock. But your paper will be exceedingly useful to me in the future if I have the good fortune to know more of the genus am I to keep it?

Dr Fog wrote me that he had sent you a list of the Texas collection you will notice there are several omissions in the genus Paspalum & Panicum. Do you study these? Have you the material at hand to determine them for me? — it seems to me they are easily enough made out from authentic specimens I believe I could send you all of them if you can do anything with them. These genera are large & interesting in Texas & I have become specially interested in them and should like to have other Southern sheets to compare as Paspalum vaginatum P. praecox P. floridanum P. racemulosum, P Bloodgetii &

Panicum gymnocarpum. P. fasciculatum P. angustifolium. P. divaricatum P. scabriusculum P. melicarium P. repens P. Walteri — P. molle

The merest bit of any of these genera to spare would be gladly appreciated & I will give in exchange anything I have

Why little wonder of Celtis reticulata?
flowered freely this Spring but set no fruit
shall have to wait another year —
I planted seeds of many genera plants
& most of them do well the perennials
Coming to fruit the first year, the 2
species of Nicotiana or one at least
a showy plant in flower — I have
now growing 6 species of Nicotiana
2 of which I have lost name & habitat
of — have you a collection of these —
Could you [illegible] & locate nativity
of their genus?

Respectfully yours

E. Hall

Rec'd Nov 19th 24 Athens Nov 17 1873

No 1. Quercus ~~Garryana~~ Douglasii var Dalles of the Columbia Oregon Dr hills

No 2 – Q. ~~Garryana var~~ Q. Douglasii Salem Oregon this is the only Oregon oak in the Willamette Valley – attains to 2 to 3 feet in diameter but is always scrubby rarely a 1000 x 12 foot log can be had for sawing it seems to be different from No 1 – but neither are the same as 515. of the Rocky Collection of Hall & Harbour. Q. Douglasii var. Nov Mexicana rechristened in Watson report as Q. alba var Jeffersonii Torr. throw much resembling in leaf. the bark & form of tree ally these Oregon specimens to Q obtusiloba Does Q alba really acquire pubescence on its leaves as it advances westward If so Q Jeffersonii will be absorbed also the bark of which alleys it that species the pubescence however is of a hoary glandular character in the latter Sp

No 3 Q. Durandii Buckly ~~Starr?~~ Q. undulata var branch of a sheaves ~~[illegible]~~ Throughout the Kindness of Prof Buckly I am able to send you the mature fruit this Sp. I found it at Austin & Dallas Texas. Mr Buckly I think has found it in Louisiana where I saw it in a shrubby long tree or

bush & bears fruit at all sizes the leaves are often entire

No 4. Q. from Dallas Texas – a form of Q ? Castanea with a rather straggling long pubescence unusual in the Spe so far as I know

No 5 Q. Castanea – Prinus var acuminata var montana forms found here

No 6 Q. G. Phillyreoides in Kansas varying in size from a foot to 30 feet & fruiting at all sizes. large & small acorns variable leaves with a dense tomentum beneath Q. Prinus var humilis? Marsh

See the autumnal flowering specimen

Do not find this in Gll

No 7 Q. bicolor (Bicolor) a small tree. rare here

No 8 Q. obtusiloba! to stellata compare with the Oregon Salem specimen, not the same – See buds

No 9 is that hybrid Q alba – macrocarpa – p.a. I sent you before. q. olivaeformis

No 10 Quercus Cinerea (yes) a distinct Sp but variable in foliage in Texas. leaves often entire. I have no mature fr

No 11 hybrid of Q. Phellos & Cinerea? Why not Phellos? but pubescent!

No 12 hybrid Q. aquatica & Cinerea? annual!!! large?, probably = D.

? No 13 hybrid aquatica & probably palustris
where? or some large white. It may be rubra

where No 14 Q. heterophylla = Q. falcata · Phellos

No 15 Q. hybrid Q. aquatica Phellos

where When you have studied these oaks you
2 forms Phellos, 1 either bank
& aquatica, 1 either bank
& Ariel Please give me your best deter-
-minations - I have indicated my ideas
of them in part. There are a few other
interesting crosses in the collection - but
I have no duplicates of them. Some
of the hybrids here indicated may be
extreme forms of species. My attention
when in Texas was not sufficiently
called to the oaks. being too early for
fruit but the family is an interesting
one there even in leaf - but it is
difficult if not impossible to determine
species from leaf or even fr. of their genus
The tree itself shows the strongest
characters
With these oaks I send you a
numbered set of Texas plants not
in the sets being imperfect or insuf-
-ficient for that purpose - If you
can help me out with the names

Phellos?
rt!
!!!
Mrs = Durandii

of them or all of them you can I shall be much obliged: no doubt you have them all in Lindheimers collections & others from Texas & well know them at sight even if only in bot or most of them are

Your determinations of the grasses are satisfactory & no doubt correct except as to P. laeve & P. setaceum which I still think must be somewhat different, having both the sp from Texas & elsewhere to compare

P. asperulum (?) digitata is plenty at Houston & Lindheimer must have got it. So is no 4 in fields — I have a single plant living of Yucca (tortifolia) rupicola only took one in last winter lost all the balance it has made fair growth this year when it produces an offset you shall have it. my Texas Y. angustifolia are all dead. I only have 4 sp now living: rupicola, angustifolia (Colorado form) aloefolia & filamentosa. When ever you can conveniently get seeds or roots of any other sp. shall be glad to get. I have also lost by freezing last winter that largest fouloso Opuntia. Is yours yet living? the little one is I believe over O. Rafinesquii. Yours E. Hall

Rec Dec 3
Ans — 4

Athens Ill. Dec 1st 1873

Dear Engelm — your Acid May-
— ks for names. I was surprised
to get so many from such incomplete
material. I believe nearly all are correctly
expressed except perhaps the following
34 Baccharis angustifolia (subdivifolia) described in
Chapman flora with leaves entire
36 Condalia obovata Hook is rather
I think C. spathulata — at any rate it
is not the same as Gray called that in the
Sets obovata the leaves hirsute & toothed
if Gray is right. The Jerardia tenuifolia?
or filifolia? is certainly not the former
— cannot be the latter if Chapman's description
is right

As to the oaks 15 is all from Houston I
may have put in through intake bit of
Q. aquatica but I intended to show you
a form of Phellos with the leaves of imbricaria
which doesn't grow in Texas I believe
no 14 one tree only at Houston in and
[illegible] about 30 ft high in company with

N. L. Sonchus with the Orange

Phellos + falcata aquatica. nigra rubra
&c. —

No 13 is I think from Austin I don't
remember further of it

No 12 is from Austin or Hempstead
I have no further recollection of it
it is doubtless related to Q. Durandii. may be from sit

No 11 Phellos? how can that be &
with so dense tomentum. always
glabrous has certainly got the
tomentum from Cinerea & form from
Phellos

No 3 Q. rudis you take to be Q. undulata
Can you send me a leaf that I can see. the
inflorescence is so peculiar that it will
almost tell

No 9 Q. olivaeformis is as exactly inter-
-mediate between Q alba & macrocarpa
as need be it has the bark of alba &
much of the form of leaf & acorns growing
right with young twigs of macrocarpa
& the acorns are that are two each different
it must be a hybrid

Shall be very glad to get a
Joint of that big Opuntia
at any time & the plant of
Opuntia angus-var mollis - you
promised. I am trying to get a
Collection of American Cacti
now & am hungry for living
Species I have a home for
them now

Respectfully yours

E Hall

Do you know the enclosed
Juniper from the alpine
regions of Mt Hood & Mt Rainier
no fr could be bed a low
bush. not trailing

Cupressus Nootkaensis

Rec'd Feb 23
Ans May 20

Athens Ga. Feb 20 1874

Dear Engelm — you ask if I had I have but one well used Catalogue of the Oregon plts. If you need it for marking specimens or other purpose I will loan it but I cannot spare it altogether. Probably you can get one of some one in St Louis who takes Silliman's Journal of arts & Sciences for Feb. 1872 - May be Dr Gray could find one for you. The juniper from Mt Hood in the Cat. is called J. communis var alpina Parl in DC. Prod 16 P480 I saw nothing in Oregon like J. virginiana unless it was what I sent you before that you said was no juniper at all

I send you by mail to day the Texas Isoetes melanopoda var pallida and also the Ill melanopoda to compare anew with it - but notwithstanding the apparent differences I suppose they are the same one & the Texans begin to show black foot

I also put in the package for name the leaves of a low shrub at Houston Texas. An acacia? from Austin a Mentzelia - (may be Wrightii from Austin & a curious form of Euphorbia Cyathophora?, raised from Austin seed. no blade was developed on the dry hills there as I supposed from sterility but none appearing here in cultivation leads me to think the form may be a permanent one

Dr Gray finally refused to correct the list after I had pointed out all the errors I could discover & furnished the names of those Paspalums & Panicums you made out for me. with some others omitted — said he had no time And this I much regretted because I had promised several of the patrons a corrected list. the acacia & Mentzelia I now send you are 2 that he left unnamed I want the names so that I can send them to a few of the patrons I have

promised – I have heard nothing
before of Dr Parry for a long time
whose exploration is he reporting for
Is the species he discovered a new one
Is there to be government exploration to
Utah again next year? How does
Parry make ends meet on private
exploration? of such I believe he has
made several lately
as for my self I have nothing
ahead for this season in the
collecting way. Shall probably be
at home all summer
Know of no place now where expenses
can could be made & moderate wages

Yours Respectfully

E. Hall

Mahalia multiflora Willdk
Calliandra comosa Benth
Cassia helmophylla
Styrax

STODDARD PHARMACY,

N. W. Corner Easton and Garrison Ave's.

POOLE & CO.

Rec'd Nov 17
Ans — /19

Athensville Nov 12th 1874

Dear Dr Palmer Your Reed
Yes, it has been a long time since
I wrote you — but I had nothing
The Dimmon observation ??? fld & wet
young fr. but all blasted & not a
specimen was left for Autumn
collecting. I got dead Starved at fl &
very young fr. some where — but can't
lay hands on it now I can send you
next Spring a Couple yearling plts
if they can be made live — I had before
heard from Brandegee that you was
in Colorado & from Mechan that you
had found Aster Concolor. & Brandegee
sends me what I take to be a Specimen of
it Cos & Scales of the Cone but the name
has not yet come — Specimen only
numbered to me. 37 specen for $3.70
all but 2 or 3 new to me — he [illegible]

S Cantily and does not seem to know
all of what is most wanted in a
specimen — I have looked at the gentians
for the first time in 10 years & find sure
enough that the Oregon 426 is quite
distinct from affinis as I expected
it was when collecting — the 2 bracteal
leaves however are not peculiar to it
affinis having them also & other sp
the spathaceous calyx & I can not make
out. but the calyx with its lobes are
a tolerably distinguishing character
I send you to day by mail more of it
for dissecting & critical study — I have
but one plant taller than I send you
a foot high & it has an axillary
fl besides the terminal one — the
lobes a little larger & broader — I also find
in Jan. No 1 the only fl I have found
but 2 in wet prairie at Salem Oregon
& must be very rare with at least marked
& septemnis; which does not differ

from 426 — 426 grows in boggy ground
(Sphagnum swamp) on the Coast at
Cape Flowl weather — Affinis in
Colorado I only found on dry rocky grass
ty I also had in 2 forms of the Colorado
d Species called them by Eng or Jones, a cuta
l will you give me the name of
them now — type & variety
Mr. J. Sefton? I should like to have
e returned some time
That Oregon Abies Grandis? is separated
by a wide stretch from valley to high
t Mountain in the valley it is one of the 2
e giants of the Country A Douglasii being
the other and most common The Cone
Specimen were all collected on Mt Hood
I only saw for one a single valley Specimen
d and found that by inquiring of woodsmen
d who are felling the trees a small quantity
on the top top of a tree 200 feet high
but the tree had been fallen several
t weeks & the Cones were falling to pieces

I I [illegible] more of them. I obtained by falling a tree 6 inches in diameter at the base of the Hood. All from the top of the tree & great in color & form as I saw them in the valley – but all the trees were much smaller on the Mt. and of a rigid dwarf growth. but I could see no specific difference. And by the way is it not the same also as A. balsamea of the east? Look much the same to me. The wide gap between the valley & the trees is probably to be explained as to the situation in regard to moisture. A. the elevated region is exposed to it but at the vicinity of the alpine prairies with constant moisture is favorable to its existence while the slate rocks cause it to keep small & grow dwarf.

My observations were not however sufficiently critical to tell much. There may be 2 sp. I have [illegible] Brandegee of specimens of the Pinus contorta – Still different from P. Murrayana of Texas – I have faith in the latter being a good species. Yours &c Hall

Rec' Oct 12

Athens Ill. Oct 10th 1875

Dear Engelman – Jno Reid – I refer to my Abies & find the Specimens as you do exactly. And on comparing the fruiting Mt Hood Specimen with the Colorado Abies grandis find both the same – the Steril or leaf branches with short stiff leaves are also from Mt. Hood & I had no thought of there being difference. it came in this way I only found one small tree at the edge of a little alpine opening or prairie with fruit on the top. this I cut down & obtained all the fruiting specimens from it, – we had cut other small trees that I took to be the same to get branches for our tent and of these I made the steril or leaf specimens when it was raining so hard out side that I had to stay in but the longer & larger thinner flatter laser leaved branches are from young trees or the lower branches of the big trees of Salem 200 feet & over high. Have you got cones of this Willamette big tree? I regret now that

I omitted to get those that were falling to pieces from one of the trees cut near Salem the only cones of those large trees I saw & they were pointed out to me by the men who cut them I thinks the fruiting of this species must be quite rare. at least for the year I was there. on inquiry of the men (who were cutting down the timber lately) for cones they took me some distance to this tree that they had fallen several weeks before the cones appeared to me just the same as A. grandis of Colorado & Mt Hood colored just the same. but they are no doubt different. Now since this big tree is A grandis – what do you call the Mt Hood & Colorado tree?

If you have not got the cones of the Salem tree I thinks I can get them for you throug a man there who takes some interest in such things if they are to be had conveniently – but he is very slow.

Nothing new has transpired in botany with me this year been at home all the season hard at work have grown a few things from western seed If you succeed in raising specimens from the Georgia species should be glad to see one & the other when you have them to spare Yucca tortifolia grows well but has made no offset yet. I sent you last week acorns of Quercus alba-macrocarpa for planting.

Yours truly

E. Hall

Rec July 13
Ans Sunday

Athens Ill. July 7th 1872

Dear Engelmann your letter Recd
I did not know that Mr Crépin of Belgium
had made a new Species of Grays Kautsch-
atica.. I have corrected in herb accordingly
I find my Specimen of a single fruit & leaves
and some bits of the densely Spiny prickly young
Shoots. the material was poor the Species only
found when far advanced in fruit & the foliage
disfigured by insects I am unable to say
if there was sufficient to reach through
all the 15 sets made it is quite possible
it fell short & your set may have been one
of the omitted and my own is too
poor & insufficient to divide with any
profit to you. Mr herb shows
various forms of what are variously referred
to R. blanda & lucida & I am unable to say
how correctly. they seem difficult to manage
If there be 2 or more Species of them the

in the books need to be altered to limit them. Roses are but studied in the field

I found R foliolosa at Dallas in the rich black Prairies there not rare

I also saw it plentifully at McAlister Indian Territory Some slips brought home & planted have spread rather coldly & bloom freely every year with pale flesh colored flowers

Shall be glad to see that giant form of Isoetes melanopoda from the Indian Ter

And if possible also the new species I Arkansas

I will see as soon as time allows how it is with our melanopoda as to diecious nen

At present my impression are that is polygamous but have not made special investigations in that direction

As to Quercus albamacrocarpa in the bay I think I have satisfied my self that the pubescence of macrocarpa is unevenly distributed which agrees with the law of by birds as I understand it (i.e) that

the character of the parents may be and often are disproportionately developed in different parts of the offspring. the bark for example may be not what would be considered intermediate but largely resembling one of the parents whilst the fruit or leaf may quite as much resemble the other and the pubescence may be on the leaf in patches thick or thin or nearly absent on the same leaf - whilst in true species we would find it uniformly distributed,

The Kansas Q. prinoides? are evidently the above ground growths from old roots as I stated in my former letter. So are my impression, but an actual examination was not made

I can not send you Q alba ~~for~~ here this year not a fruiting specimen to be had as the crop is total failure. Our white oak woods have suffered severe damage this year from looseing

these leaves by a green worm 4 weeks ago a small yellow moth developed from the depredator that swarmed the woods in millions for a few days though latent buds subsequently developed leaves the forests are yet presenting a shabby appearance and if a second brood appears from the eggs that must have been laid by the moths the noblest of our forests will be utterly destroyed

Your Ob

S Hall

I send you by to days mail notes on arboretum & supplement flora of Oregon in which Rosa Durandii figures from botanical magazine if you do not take it
Cm Sen

Rec'd July 31st
Ans Aug 2

Athens Ill July 28th 1872

Dear Engelmann — your card was duly received I have delayed reply to have opportunity examine those Isoetes but so far all the localities of the plant I have so far visited are <u>none ent</u> — not a plant to be found this begins to show that the plants are developed only in peculiarly favorable seasons. this one being very wet would have seemed favorable but not a plant is to be found — when they were often seen by me before in plenty — I have not yet examined the soil for the bulbs but shall. I shall have opportunity to do so before winter I sacrificed a bout a dozen dried specimens and found them all, completely diœcious no admixture of male & femal organs in the same plants but if I am not at fault in recollection

I have in times past seen the plants monoecious with the male organs interior. but my recollections may be from the examination of some other species

Rosa foliosa behaves very much here as does the R. blanda. it blooms all summer and the later blooms are from the suckers. but it is hard here to survive the winter to the tips of its branches it not growing above 8 to 12' high

I will send you roots in fall or Spring

My first impression of Quercus Gyrata seen at Dallas in Texas was that it was a geographical variety of Q. macrocarpa & did not suspect it being more till Gray called it in his determinations of the Collection

Q. Gyrata the matured fruit is unknown to me

I have just been interested in watching the blooming of the last specimen of Aquilegia virginica brought from the Indian Territory in 1872 other specimens

having flowered in previous years
and died as is the habit of the genus
its method of preventing self
fertilization is interesting developing
the stamens in advance of the stigmas
& shedding the pollen on the stigmas
of flowers that have cast the stamens
below. the interesting point comes in
however strongest from the fact
that the lower flowers produce
abortive stamens only. having no
matured stigmas to fertilize it would
seem to save a waste of material
this plan was laid I am now
anxiously waiting to see in what
shape the last stigmas will appear
as there will be no pollen but their
own to fertilize them
all of which however I impose
has been long known to you

Yours respectfully
Yours
Elias Neall

Rec Aug 28
Ans " 31

Athens Ill Aug 26th 1867

Dear Engelman — Your of Aug 2nd was duly rec'd & have watched my agave Virginica though & found there were other (high up in the Spike) infertile anthers. These anthers seem so perfect in every way except in the production of pollen that I am disposed to regard them of some special use in the economy of the plant — as yet unknown.

My plant has however failed to afford a completely fertile ovule & no capsule have formed.

All the plants I have had in flower here have invariably perished root & all — whether this is the habit of the plant at home or not — will be seen. Thus remaining one exhausts in that way — it will probably be found that most plants — many lean in coming

to merit it at the date of
writing — Rosa Carolina — of
the 2 roots brought from Waterson
Co in 1869 one died & perished
in 1875 & the other is yet living
but made no effort to flower
this makes the species somewhat different
from the character given it by Pursh
as a biennial or triennial the plant
I now have cannot be less than 10 or 12
years from the seed & probably much
more
Rosa setigera produces flowers at the end
of shoots either from the old wood
or from the collar shoots I notice this
to day from shoots from the old wood
it fruits plentifully — I suppose only
the strongest buds produce flowers & the
weaker ones lower only as would be
expected the flowers are produced
chiefly at the ends of the present year
branches and at intervals all the season
being quite a perpetual in its moderate way

I find no Sweet Lupine in the Tables of Prof. Asa Gray. I do not know the plant as native of this State — Would be glad to try your annual flowering specimens to see how they behave here. Did you ever examine the Stamineal tubes of Asclepias Cultivanti — I believe it is common with you — too late now — but another year see if you can find out why it is necessary for so many Insects to sacrifice their feet and to even perish themselves in its Trap — I do not as yet recognize a useless waste in nature. I regard the great author as truly economical — that there is sacrifice for the good of the whole I admit & this is all — Seeds of the millions that may be in the earth often seem to germinate in the proportion that opportunity to live & food supplies are available — The numerous apparent exceptions to this general law does not invalidate it

as there will be found to depend chiefly not altogether upon abnormal conditions. And as to the problem of maize in Indian Corn. This may be due to these conditions as it is cultivated plant - but in nature where self fertilization is not provided against the matured stigmas appear first - and we know this to be true in the animal world. We should expect it in the lower orders of life.

Yours truly

D. Thoreau

Rec Sept 12th
Ans ~~Sept 8~~ 13 Sept

Athens Ill Sept 1 1881

Dear Engelm — Your last received last week — I will in a day or two send the Specimens of Q. alba-macrocarpa you send for — There is just a little misunderstanding about the Economy of nature — She does not create for waste but intends for every grain of corn to grow & reproduce its kind — but of course is not cognizant of conditions and is often defeated by them — as to seminal cells or germs — This may be a phenomena as yet unknown to us but if as we know it now — may not the thousands that fail to the one that fertilizes be understood as being necessary on account of the difficulty attending impregnation a process certainly very little understood. That organized beings are developed to the utmost that

existing conditions will admit of
is evident — This is nature —
keep full — if but for an hour
it be possible for life that
flower is not left to waste but
is filled with life as the conditions
permit — but this is not for
the future — but anything
but wasteful nature. The
must be economical & creates
for use only

I shall be always glad to get
your published papers &
roots of Agaves or other
rare American plants

I return herewith your drawing
of the Texas species — when
I make offers shall be
glad of a specimen

Yours truly
Geo. Engelmann

Rec'd Dec 22
Ans ~~Dec 9~~ 28 Dec

Athens Ala Dec 20th 1877

Dear Engelman Thanks for Papers just rec'd on Oaks

Quercus V Agave Shawii

I have hastily run through the papers in part and am glad to see that your views on hybrids are much nearer the facts as I understand them than heretofore - You have doubtless however mistaken one of the parents of heterophylla Phellos V falcata (609) Texas Collection) did not the leaves in form so plainly point to falcata. The pubescence would exclude it from rubra. and as neither tinctoria nor coccinea are found in the Texas (Houston) locality (where a single tree only seen 30 inches in diameter V abundantly fruitful) I believe I sent you specimen with young fruit if not I can do so yet - a little talk in connection with these facts there is no

Doubt as to valuta being one of the Parents of Phelos doubtless the other

I also got in Texas at Houston 2 other hybrids that you do not notice 604 of the Collection Quercus phello-palustris & Quercus falcato-rubra (607) I believe I have sent you all there but all collected too early to show the fruit When I have time to study you happen may have have further to say — I sent you Rosa foliolosa in my box you received it all right

Yours truly

B Ball

Rec'd Jan 22 92
Ans Feb 8

Athens Ill Dec 20 1891

Dear Professor Happy New Year

Your letter rec'd — I enclose

you all I know — written from notes

taken on the ground on the Pyramid Abies

(which I suppose you already have

however). I suppose the fir you seen

at the Centennial the big section was

Douglasii Lindl — you nothing to

say — (See printed notes) It is called

yellow fir just because we call

yellow & white Pine that way — the

People do that to distinguish it from A.

grandis, which has whiter wood &

less valuable for fuel and indeed for

all mechanical purposes. — (See printed

notes for all I know of them). Did you

see A. a Stock, that [illegible] Butleri

from your description I thought I had

it here in a seedling state of melanopoda

but on looking I could not find it

you seem to be out of luck in stating again that I melanopodon was found by me in Hem Dallas Co Texas. It was in the Pine woods at Houston and Hempstead only seen by me, where it grows pale with superficial veins & the cross divisions more conspicuous & transparent — I do not think it is very puzzling to correctly refer to oak when on the grounds where the parents are absent — In heterophylla how could the persistent pubescence of the leaves come — from coccinea when it has none & there can be no mistake as to phellos being the other — smooth also

Yours tly

S. Havell

Rec March 16

Athens Ill March 12th 1878

Dear Engelman – Your letter of 7 Feb (Det unanswered) & the paper on Abies was duly rec'd & now for Card enquiring after Arcuthobiums. I fear you have made me exaggerate the height of A. grandis. If I said 300 ft I evidently meant the other for A Douglasii which is the tallest as well as the largest tree on the Willamette the fallen trunk of one I paced 80 steps upon leaving the decayed top uncounted for to make the 300 feet I never measured a trunk of A Grandis to my recollection what you state about my Oregon Arcuthobiums are as I recollect them certainly as to the fructing specimens in September about the middle as to the young

plant though I do not now recollect exactly as to time when I told you in July that must have been the time — I have no data to fix the time exactly as I have of the grafting specimens — 457 July — 458 Sept

In Clearing up wood land this winter a remarkable instance of accidental grafting of Quercus Prinus var acuminata was developed. It appears that about 35 or 40 years ago some axeman had boxed the tree probably for the purpose of testing its splitting qualities as is the habit of rail makers &c. a block was cut from the tree by cutting 2 notches each with a horizontal & sloping cut to the block then split out & set back in the place with the bark inside which brings the two horizontal cuts together and also the sloping cuts the block had united with the living tree had clothed its self with bark on the out side & was nearly entirely

restored to vitality throughout.
I suppose you are incredulous
so would any of us be — but
nevertheless the fact remains
I observed your weather predictions
made in January based on 43 year
observations that this phenomenal
winter has entirely ignored so far
the "Cold March & late Spring"
does not yet come on the con-
trary we have Spring here already
the "Hepatica & Claytonia in
bloom in the woods & Peach trees
are ready to open out in a day
or sunshine more — will they
escape 6 weeks of probable frosts yet
to come? Can you help out
in this extremity & suggest
any means whereby we
could save some of them

Your obt

Elihu Hall

Rec'd May 31

Athens Ill May 29th 1881

Dear Engelman

Your letter was duly rec'd
Sorry to hear you were temporarily
afflicted — My ailing is Chronic
and is of some lung nature either
Bronchiti. bronchial Catarrh or
Possibly tubercular Consumption
my left lung seems to be entirely
affected have daily Cough & expect-
ration of mucus & purulent
matter Since winter is over
& I take regular out Door
exercise I feel I am gaining
flesh & Strength but the disease
still holds

I send you for our German
Correspondent No 547 & 548 of the
Oregon Journal — Give him the best
I have — The Tickets with them

Plantae Oregonenses

are 547 Juncus acuminatus Mich. Rx

" dubius Engelm

And letter to me from Jong v J. Xyphoides var.

Mar

And

548 Juncus acuminatus Micha

" dubius Engelm

" A form of it" A. Gray

Juncus Xyphoides Engelm in

lit vars

Marion Co

I dont remember if I sent you my set but from the tickets I did thoug I dont see your writing on any of the labels. Probably you named them for Dr Gray & I sent you specimens of the doubtful species afterwards which were explain your names on the tickets seemingly put on afterwards by my self - but I have no remem- brance of the transaction & cannot recall it my memory fails me of late and I now make record notes of

every thing necessary to be remembered
in all business matters

2. My duplicates of Oregon Juncei are
to meager to satisfactorily divide with
our German friends except J.
triformis & falcatus I believe I could
not divide a specie with him

Yours truly

Elihu Hall

ds

el

3 Apl 11
Ans " "

Athens Ill April 10th 1882

Dear Engelman
Thanks for your Daretes publication. So much research & history must have been no little labor as to melanopoda. You remember what I had forgotten as to its discovery - dates & all. This is remarkable - and already I am besieged for specimens of it & so I fear you have given me unenviable notoriety with all. If I had time this would be a pleasure but now right in the midst of spring planting I am too busy to attend to such things. I have not studied it much yet

I see the printer sets melanospora and melanopoda mixed but this an error easily seen. This is a wet Spring with us & I suppose we are to have Ipoeter in great plenty

Yours with thanks

Elias Hall