Rec Jan 9 Ans January

Athens Ill. Jan. 6th 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 in doors — 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 boxes.
I have studied your article on grapes and think I understand them now as goods. Our Lemanon grape having turned out to be the winter one the dificulty 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 Commwill
show 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 duf
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 are 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
Grapes You will have 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 or in leaf
and young fruit yet were
very interesting, showing several
hybrids. Several of the species
very new to me 2 Durandii 2
Cinerea. I receive for
this Swale Collection to you
grateful. Ever yours I Hall

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 right here went for my Specimen
& so behold I am mistaken
the fruiting Specimen are a form
of Yaeda Sure enough & the
other Probably mitis — if not inops
well so much for over sight — P
Yaeda 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 Sig for one
if he has them yet if not I
will send you mine – Some
time I must send you others
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

Athens Ill. March 11th 1879

Dear Engelmann

Your 28 duly Recd

I enclose Specimen (divide mine with you) of Celtis reticulata I could get but little fr. 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 when 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 P 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 genera 4 47 & 48
Zygophyllum & not accumulatus 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 Specimens
with you — most of the
Orchidaceae were hard to get
in Oregon being too scarce
the Cypripedium kor & Corallorhiza
Striata are the same about
I cannot help you out in
there.

Ever yours

E. Hall

Rec^d July 29 '14
Ans 30

Hall E

Mr. Sargent

Dear Bogelmann

Thanks for your paper on Juncus I have just found time to examine it carefully I 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. texicola & J. paccata according to gray which latter in part at least must be J. acutifolia (I had seen specimens of both). The north Jersey or plains form of J. acutifolia leaves J. oligocephalus & 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 [illegible] all of them. If you can do anything with them [illegible] large & interesting in Texas I have become specially interested in them and should like to have other Northern 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. mollis The merest bit of any of these you have to spare would be gladly received & I will give in exchange anything I have

My little seedling of Celtis reticulata
flowered freely this Spring but set no fruit
shall have to wait another year —
I planted seeds of many species
& 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, the 2
Cactus plants & locate nativity
of this 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 hilli

No 2 – Q. ~~garryana var~~ Douglasii Salem Oregon this is the only Oregon oak in the Willamette Valley – attains to 2 to 3 feet in diameter but is always small. varies a 100 x 12 foot log can be had for [illegible] it seems to be different from No 1 – but neither are the same as 515. of the Rocky Mts Collection of Hall & Harbour. Q. Douglasii var. New Mexicana recharacterized in Watson report as Q. alba var Gunnisonii Torr. throw much resembling in leaf. the bark & form of tree alloy these Oregon specimens to Q obtusiloba Does Q alba really acquire pubescence on its leaves as it advances westward If so I fear Q Durandii will be absorbed also the bark of which alleys it that species the pubescence however is of a hoary glandular character in the latter Sh

No 3 Q. Durandii Buckly ~~Sent~~ q. undulatifolia branch forwarded ~~Through the~~ Kindness of Prof Buckly I am able to send you the mature fruit thus Sp. I found it at Austin & Dallas. Texas. Mr Buckly I think has found it in Louisiana where I saw it in the shrub. but only large tree or

bush & bears fruit all sizes The [illegible]
often entire

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

Prior or arnicrt
No 5 Q, Castanea. var mutiola forms found here
No 6 Q. G. Q. prinoides
In Kansas varying in size
from a foot to 30 feet & fruiting
Carpinbous = Castanea
at all sizes. large & small acorns
variable leaves with a dense tomentum
beneath Q. Prinoides var humilis? Marsh
See the autumnal flowering Specimens
Do not find this in Gill

No 7 Q. Bicolor (bicolor) a small tree. rare here
No 8 Q. obtusiloba! to stellata compare with
the Oregon Solem Specimens, not
the same – See sheets
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. [illegible]
often entire. I have no mature for
No 11 hybrid Q. [illegible] & Cinerea? Why not Phellos? but pubescent!
No 12 hybrid aquatica & Cinerea, annual!!! large?, marks = Q.

? No 13 hybrid aquatica & probably palustris
where? or some lower, wetter. Sh may be rubra

where No 14 Q. heterophylla = Q. falcato-Phellos

No 15 Q. hybrid Q. aquatica Phellos

where When you have studied these oaks you
2 forms Phellos, 1 either both
or Coccinea 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 this 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?
!!
!!!
Phellos = Durandii

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

Your determinations of the grasses are satisfactory & no doubt correct except as to P. laevis & 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. It is so 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. I shall be glad to get. I have also lost by freezing last winter that largest fruitose 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 [illegible]
[illegible]ks for names. I was surprised
to get so many from such incomplete
material. I believe nearly all are correctly
except perhaps the following
34 Baccharis angustifolia? described in
Chapman's flora with leaves entire
30 Condalia obovata Hook is rather
I think C. spathulata — at any rate it
is not the same as Gray called that in the
Sets Obovatae. the leaves hirsute & toothed
if Gray is right. The Forestiera tenuifolia?
or filifolia? is certainly not the forestiera
— 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 does not grow in Texas I believe
No 14 one tree only at Houston in
[redacted] about 30 ft high in company with

[illegible] Q. [illegible] Oregon

Phellos falcata aquatica nigra rubra
&c. —

No 13 is [illegible] k from Austin I don't
remember further [illegible]

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

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

No 3 [illegible] indii you take to be Q. undulata
Can you send me a leaf that [illegible] the
pubescence is so peculiar that it will
almost tell [illegible]

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
[illegible] are that are two each different
it must be a hybrid

Shall be very glad to get
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
now

Respectfully yours

E Hall

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

Cupressus Nutkaensis

Rec'd Feb 23
Ans May 20

Athens Mo. 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 Jn. communis L. 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 Gnoetes melanopoda vs 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

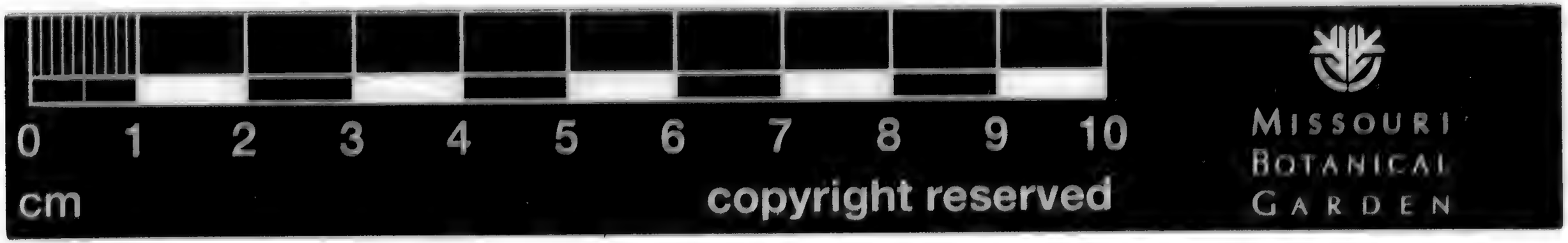
Dr Gray finally refused to correct the list after I had pointed out all the errors I could discover & furnished the names of those Paspalums & Panicums you made out for me. with some others omitted — said he had no time And this I much regretted because I had promised several of the patrons a corrected 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 Insecter 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

Mimosa multiflora Willdenow
Calliandra comosa Benth
Cassia helmsiana
Styrax



Rec Nov 17
Ans — /19

Athensville Nov 12th 1874

Dear Engelman — Your Card
Yes, it has been a long time since
I wrote you — but I had nothing
the Duncan observation ??? fld & set
young fr — but all blasted & not a
specimen was left for Autumn
collecting. I got dead stamens & 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 Abies 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 species for $370
all but 2 or 3 new to me — he collects

S. Carolily 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 enough
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 cannot make
out. but the calyx with its lobes are
a tremendously 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. 1901 the only fl I have found
but 2 in wet prairie at Salem Oregon
& must be very rare without spots marked
I September; which is quite different

from 426 — 426 grows in boggy ground
(Sphagnum swamp) on the Coast at
Cape Trowl weather — affinis in
Colorado I only found on dry rocky grounds
I also had in 2 forms of the Colorado
Species called them by Eng or Jones a cuta
will you give me the name of
them now — type & variety
H. J. Lefturn? I should like to have
returned sometime
That Oregon Abies Grandis? is separated
by a wide stretch from valley to high
Mountain. in the valley it is one of the 2
giants of the Country A Douglasii being
the other and most common The Cone
Specimens were all collected on Mt Hood
I only saw for one a single valley Specimen
and found that by inquiring of woodsmen
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
weeks & the cones were falling to pieces

I find [illegible] none of them. I obtained by falling a tree 6 inches in diameter at the base of Mt Hood. All from the top of the tree & great in color & form as I saw them in the valley – but all the [illegible] much smaller on the Mt. and of a rigid dense growth. but I could see no specific difference. And by the way is it not the same species of balsamea of the east? look much the same to me. The wide gap between the valley & Mt Hood is probably to be explained as to the situation in regard to moisture. a dry elevated region is associated to it but the vicinity of the alpine prairies with constant moisture is favorable to its existence which the short season causes it to keep small & grow dense.

My observations were not however sufficiently critical to warrant much if there may be 2 spe. I have [illegible] Brandegee's of specimen of the Quercus undulata – Still different from D. Douglasii of Texas – I have faith in the latter being a good species. Yours Truly E Hall

Rec' Oct 12

Athens Ill. Oct 10th 1872

Dear Engelman - I John Reed - 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 Come 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 there I made the Steril or leaf Specimens when it was raining & hard out side that I had to Stay in but the longer - larger thicker 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. Not least for the year I was there. On enquiry 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 Colorado 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 same day

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 Kamtsch-
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. My herb Shows
various forms of what are variously referred
to R. blanda & lucida & I am unable to say
how correctly. They Seem deficient 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 Iroetes 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 hop

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

Yours Truly

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

Rec'd July 31st
Ans'd Aug 2

Athens Ill July 28th 1872

Dear Engelmann — your card was duly received I have delayed reply to those opportunity examine those Isoetes but so far all the localities of the plant I have so far visited are none ent — 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

is 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 cast stigmas will appear as there will be no pollen but their own to fertilize them

All of which however I suppose has been long known to you

Respectfully
Yours
Elias Neall

Rec Aug 28
Ans " 31

Athens Ill Aug 26th 1887

Dear Engelman — your of Aug 2nd was duly rec'd & have watched my agave Virginica through & 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 say that they are 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 to flower here have invariably perished root & all — whether this is the habit of the plant at home or not — will see how this remaining one behaves in that way — it will probably be found that most plants many years in coming

to publish — as at the date of
publication — Fraser's Carolinensis of
the 2 roots brought from Alabama
in 1869 one blooms & 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 Gray
as a biennial or triennial the plant
now have cannot be less than 10 or 12
years from the seed & probably much
more
Rosa alba produces flowers at the end
of shoots either on the old wood
or from the collar shoots I notice flos
to day from shoots from the old wood
it fruits plentifully — I suppose only
the strongest buds produce flos & 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 mode of growth

I send no account of the seeds
of Jones. I do not know the
plant is native of this State. I would
be glad to try your annual flowering
perennials to see how they behave here.
Did you ever examine the tamarind
tubers of Asclepias tuberosa? 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 inner seeds to sacrifice
their self and to even perish themselves
in its pods — I do not as yet
recognize a useless waste in nature
I regard the great author as truly
economical — that there is sufficient for
the end of the whole I do not see of 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 strictly not ~~attention~~ upon abnormal conditions. And as to the problem raised in Indian Corn. This may be due to their 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

B. T. Galloway

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

Athens Ill Sept 1 1877

Dear Engelm — Your last rec'd last week — I will in a day or two send the Specimens of Q. alba-macrocarpa & send you — 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 considered 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, 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 in the subject — but anything but wasteful nature. She 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 offsets shall be glad of a specimen

Yours truly

C. Sprague

Rec Dec 22
Ans ~~Dec 9~~ 28 Dec

Athens Ill Dec 20 #. 577

Dear Engelman Thanks
for Papers just rec'd on Oaks
Vitis & Acer Shaw
I have hastily run through the Oaks
in part and am glad to see that my
views on hybrids are much nearer the
facts as I understand them than heretofore - You have doubtless however
mistook one of the parents of heterophylla
Phellos & 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) 3 inches in diameter &
abundantly fruitful I believe I sent you
specimen with young fruit if not I
can do so yet - a little f. taken in
connection with these facts there is no

I think it as to palustris being one of the parents & Phelos doubtless the other.

I also got in Texas at Houston 2 other hybrids that you do not notice 205 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 your papers may have more further to say. — I sent you Rosa foliolosa in case hope you received it all right

Yours truly

B M Ball

Rec'd Jan 2 92
Ans Feb 8

Athens Ill Dec 30 1891

Dear Dr Robbins Happy New Year

Your letter Recd — I enclose you all I know — written from notes taken on the ground of the Yellow Pines (which I suppose you already have however). I suppose the few you seen at the Centennial the big sections of wood was A. Douglasii Lindl — I know nothing is Ponderosa — (See Printed notes) It is called Yellow pine 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. Stockii of the Centennial. Butler from your description I thought I had it here in a seedling state of melanophoda but a closer 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.

It was in the pine woods at Houston and Hempstead only seen by me, where it grows large with stifer ones & the cross divisions more conspicuous & transparent — I do not think A is very puzzling to correll, refer to Dun Oaks (when on the ground where the parents are about — In heterophylla how could the persistent pubescence of the leaves come — given coccinea when it has none & there can be no mistake as to phellos being the other — smooth also

(from tip)

B Sharp

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 species A Douglasii which is the tallest as well as the largest tree on the Williamette the fallen trunk of one I paced 80 steps upon leaving the decayed top accounted 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 fruiting 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. a block was cut from the tree by cutting 2 notches each with a horizontal & sloping cut in 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
of 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 Ob't

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 & expec-
toration 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

547 Juncus acuminatus Michx

" dubius Engelm

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

Mar

And

548 Juncus acuminatus Michx

" 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 thing 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 remembrance 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 meagen to satisfactorily divide with
our German friend except J.
triformis & falcatus I believe I could
not divide a specie with him

Yours truly

Elias Hall

3 April 11
Ans " "

Athens Ill April 10th 1882

Dear Engelman

Thanks for your ~~Rhoeteo~~ Rhoeteo publication. So much research & history must have been no little labor as to melanopsoda. 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 withall. 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 & Sue Prove
we are to have Insects in
great plenty

Yours with thanks

Elias Hall