Jany 18 – 70

St Louis 18 Jan 1870

Dear Parry

This morning your letter, this evening your seeds, and at once my answer.

Mind that that name "Cer. Palmeri" is provisional – It is distinct from any thing I know in Arizona – but there is a frequently cultivated edible Cereus plant with fruit, which possibly may be this – let us hear from Palmer!

The seeds are "elegant" That big seed of Opuntia belongs to the dry plant and must be O. basilaris, but seeds very large – plant not in cultivation yet.

The spiny fruits belong to that Opuntia acanthocarpa, which I mentioned in my last letter to you or Palmer; but unfortunately they dont seem to be ripe "more suo" The large fruit of Opuntia with small seed I can not make out – probably one you had Palmer has sent before but did not germinate because not ripe – whether this is better?

Echinocactus is Le Conteii which may not be distinct from E. Wislizeni

Now to the Yucca! Elegant again! and probably ripe!!

Y Arizonica – Who named it? where described? Narrow leaves like Y. angustifolia

and I would name it Y. augustissima, if not already named Arizonica — your sketch is admirable! You see I am not of the faultfinding order to night — it is only with unripe fruit that I have no patience! Well, this Arizonica is then one of the Dry fruited ones, xerocarpeae, as I named them long before Torrey found out that character. Good, that you sent Capsule & fruit — Capsule is remarkably pale — others are darker or brownish, so Y filamentosa. —

But here comes the great oversight that big unopened Yucca fruit, without leaf without Cabel, standing solitary and alone on its merits. And they are great!

If I am not mistaken, this is an intermediate form and connecting link between the xerocarpeae and sarcocarpeae. It dont open, but is scarcely fleshy — and the seeds are also intermediate in thickness between the two sections. — You have I suppose other fruits — have they the same character? This one contained few seeds which seem to be good — and several live worms which were certainly less so.

I would name it <u>intermedia</u> but that is such a trivial name, usually designating a species or a form, which is so near two others that it seems to unite them; subcarnosa might be a good name — but I will find a better one. Give me all details you know about it. Are your other fruits also pointed, like

my specimen?

Agave good! What relation does it bear to ~~at~~ Parryi? can you tell? — I have now no specimen of the seed before me — Glad to get the leaf — Have you any more? Is this leaf you sent a small one or usual size? and how are the teeth or spines. The end of the leaf is wrecked off and all the lateral spiny teeth are broken off, how are they? about size, direction shape and colour?

The pappus of inflorescence — and shows it to belong to the section allied to Agave Americana — —

I have seen numerous Agaves in bloom in Europe and have got an idea of the different forms of this vast genus — Brought seeds of one Agave Virgi to Europe, which gave great pleasure. Do you want any?

Pimmenedia which is now in DC Prod classed with Buxaceae, is valuable — but unfortunately seed quite unripe. —

I have not now a draftsman, but may get Rotter again.

Thurber got 3 years ago some drawings of Nolina Engelmanni and others made by Rotter for me — excellent ones — has not returned them yet; must write to him about them.

If Thurber will do absolutely nothing, I may undertake your grasses — I have a rather full Collection named by Thurber about 10 years ago — I will see. Thurber seemed to me 3 months ago better looking than 2 years ago, I thought he might become more useful. I am mistaken?

Gray's beard! That is a good one! The old fellows must have had a good laugh.

But now good night! I intended to write 2 lines only and am on the 4th page!

My plants and books are still at Shaw's, but hope to get right in 4–6 weeks!

Yours truly

J. Engelmann

no more a Member of N.A. Acad — respond — therefore and for 1000 other reasons will not be in Albany in April.

3003 Locust Street

(Cor. Corner of Jamison Av. & Locust St.)

(30 squares from the river!!)

Take care of your grey Cor. Blumii — sown to early, apt to perish — sow more in April!

Engelmann —

St Louis Feb 2? 1870

Dear Parry

You could not have made me a nicer Birthday present than those Yucca leaves! — "Pauris contenta Natura" many would say — for me they are not pauca. That Y. Draconis var you label at once Y. brevifolia. It would perhaps be more proper to leave Torrey's aforesaid as specific name, but it is too insignificant a name while the shortness of leaves is really very peculiar.

There is not the least similarity to Y. Draconis which I have often seen in Italy. — The sharp serratures approach it to Y. aloefolia more than to any others.

Send me another leaf — — no, I will try to get that trunk, you speak of. How is the fruit and seed — I have not Torrey's work to compare. Send me those Photographs, if you can.

The Yucca of Arizona I would take for nothing but a small leaved form of Y. filamentosa — very different from our new Y. (elephantipes)

So you will get me a photograph of the Arizona Agave (or Yucca). What is that? I suppose the one of which seeds have germinated in many places in Europe and which I had named A. Parryi. — But you do not inform me, whether the Agave of Palmer seems to be the same, or distinct; — is the leaf you sent me of Palmer's as wide, sized one, or smaller.

Yes, by all means get those St George people to get all those things but not to mix them up — and make notes of them — the different Yucca Agave, and Cacti and good ripe fruit of all of them.

It seems you have another fruit of my new Yucca (elephantipes); is it also closed, and semi-pulpy?

Bully for Thurber! I thought I found him brighter when I saw him 3 months ago. I will write to him.

What do you have of living Cacti in your Garden? If I can not come to see them

they, or those of them that are important may come and see me, or send their children to me.

Whitney's letter is interesting. He dont say how high he made Denver, you know, that in your second Expedition it came out higher yet — but I recollect that there was difficulty and discrepancy among your different observers. — Well, we will not acknowledge our selves beaten yet — And the difference of 100 feet in Gray's Peak dont amount to anything. — After all, if we are wrong in Denver, the difference is only 223 feet in more than 5000, or not much more than 4½ p. C. and at a distance of 1000 (?) miles!

Is the Yucca brevifolia a fleshy-fruited one, with thick seeds?

In that region (at least in New Mexico) there is that other tree Yucca which I had named Y. crassifolia, but Torry Y. edulis. — The St George man may get that also — He must be careful not to mix and confound; get leaf and fruit (and if possible, flower — pressed, or only wrapped up) of the same specimen; that will make it sure.

and now good bye — This day begins my 62° year — and I feel the importance of not getting older — must remain so young at least 10 years more!

Jimmy will look at at daylight to morrow — don't seem to be happy.

Yours truly

G Engelmann

What is the Secr. Acad. San Francisco's name he sends me a notice of my election as Hon. Member, but I can not answer because I can not read his name: Eloesser ???

St Louis March 4 1870

Dear Parry

I will try to write as quick fast and illegibly as you do and hope in the best quality at least to beat you! But go on, write on — I suppose you have no time to practise Calligraphy just now. But please do write names of plants at least so that I can make out — but above all please put every thing which you think may interest me (and my interests are manyfold and comprehensive) aside for me in a big pigeonhole, — as you say you did those Sonora things of Schott's — thanks in advance!

Arenthobium, Lemna Caleichth Chara, Sporles I will study by & by. You know that Canby discovered — new Sporles "granulata" on Stone Mountain Georgia — Don't forget Utis.

I day or two ago I got a big box from you with Pinea Mexicana Cones — rattlesnake, but unknown,

leaves of course fallen. — I'll cut them down, as Gray says, for future use — The specimen is that of quite a tree with scraggy branches — more like the Mountain form of Englemann's. Is that the ordinary appearance ??

With it was the Yucca which I call Y. crassifolia and which Torry publishes as Y. baccata I believe. I have had plants from Wilkinson's seed 24 years ago — but they have died at Shaw's. Will sow again — as well as other Yuccas.

Get all information you can from Palmer — also about Cacti — I suppose I must correspond with him as soon as I hear from you or him and pump him out.

I could not help chuckling when the other day I got a big package by mail (what may the carrier think of my tastes and my correspondents?) from that formerly benighted but now glorious and enlightened State of South Carolina — and what was in it? P. serotina and especially specimens of P. glabra,

could dried, not pressed, like
yours — clumsy, bulky, unwieldy,
hateful but still lovely!
So, you see Rabinal helps also
to furnish material for the
future great work!
Lady and dried (and pressed!)
specimens if flowering Paintbrushes.
I should heap up stones
like a gopher — but will they
be worked up? —
We will see about next
August and the Rocky Mtns —
It would not do for me to
run off thus lightly but human
weakness must excuse a good
many faults

Good bye

Yours

Thanks to Schott not only for the instructive notes on Yucca but also for the package of valuable Yucca plants sent during my absence in Europe. I shall write to him by a long overdue.

St Louis March 29th 1870

Dear Parry

I have not written for 19 days! Have been quite sick since — confined to house — had to give up patients, but unfortunately too sick to work in botany. When I got better I studied Wm Gabb's Catalogue of Lower California collected in 1867 and given me in Phila. April 1868.. Gabb is a Geologist who knows nothing of Botany but took an interest in those things, made notes some drawings and brought (on mule back and with geolog. specs.) specimens small and often poor, a few bunches of spiny Bot on the whole the Coll. is quite interesting and spurs us or somebody to study more closely the Cactus flora of that peculiar country and get full specimens, notes and seeds!! —

O, that Palmer with his specimens had made such notes — how much more valuable they would be.

But I loose myself among the spiny darlings!

Since I wrote you I got from you that splendid hair brush — peculiar in many respects.

I am distributing the different seeds and will send to Europe

this week

I have also got A. Torreyana Cone and today a set of Cactus flowers of Palmer. Pity that he does not make notes (vide supra!) Fortunately I know most of them, and one especially pleases me much as it is the flower, heretofore unknown, of one of Bigelow's discoveries — Cereus (sect Echinocereus) gonacanthus.

But Yucca flowers, without leaves, without notes! oh! oh! Fruit and leaf is important, but flower almost less than any other organ! Still it is good and important (even if only negative character) to have them — but leaf is always more important than flower. And there are Palmer's notes! notes? notes ?!?!! High — low — simple — branched — leaves stiff — flexid — smooth edged — rough edged — filamentose —

By the way, does he recollect any thing about that Y. intermedia?

And what is it you send me as Yucca Arizonica? Here the specimen and remarks are full enough: stem high, branched, leaves very narrow, stiff, filamentose — capsule dry, seed papery. But the question arises, whether those stems

mean real leaf bearing trunks, or only the flower bearing scape ?!

The matter becomes more important because the whole plant resembles, so much Y. angustifolia, that one would take it for that and even if it has a tree like growth. The question arises whether Y. angustifolia in that climate may not grow up to be a tree ?? Who named it Arizonica ? I substitute the name of stenophylla to show its close alliance with angustifolia — if Arizonica is not a published name. —

I have got for Shaw that fragment of trunk of Y. brevifolia in Pac. R.R. Office but was disappointed in it — hoped to get the top with good leaves and have only old withered leaves partly dissolved in fibres, all without edge or point. What you sent me has also no point. — Get full full opening & notes from Utah — also shape of panicle ? or spike ? of flowers.

Hope none of Palmer's coll. are wrecked !

Where exactly is "Fort Defiance" ?

"the Cereus sent was from Sonora (Altar)" letter of March 4th

I read it Alton, you correct: Altar but while I write, I think I find

the true word, which is: Alta —
Sonora Alta is the high, or upper Sonora
and I expect that is what is meant —
But what Cereus is it? Palmeri
or Thurberi?

I tried to identify some of Gabb's
Cerei with those from Sonora, but —
only C. Thurberi and C. Schottii reappear —
also our old C. Emoryi.

Palmeri C. Thurberi fruit is scarcely
ripe — very small — while Thurberi original
was like an orange, and very pulpy.
In Lower Calif it is called also Pitahaya dulce
Well we won't send the living
Cacti.

Braun is slow. have no answer from
him on letter written about Christmas,
overburdened with work.

If you have "plenty more seeds" of Thurberi —
why have you not sent on?

Give me a list of the Sonora & Arizona Cacti you have living
and short notes: C. Thurberi, from Guaymas —
2 joints — ribs? spines? — length of joints? etc

Has the other fruit of C. Pecten also a bald
side without spines? May that be a regular
character? It is a most remarkable
not to say abnormal, fruit; hope to hear
more about the plant which bears it —
where native? — Do your seedlings grow?

Now, is this a letter to go
free? — I send as usual with
stamp — Send one to Capron — answer
to his. Write again.

Yours ever
G. Engelmann

Locust Str 3003 or Corner of Locust &
(not Garrison Av.) Garrison Avenue

St Louis April 12 1870

Dear Perry

Saturday your last letter, today the package of Yucca leaves arrived. What a charming little porcupine that brevifolia head is! And I shall not possess it! Well, I will soak it and cut it up for specimens for you and me and others; it is such a dear pet!

Well all the others are no doubt Y. baccata, of which I had the flowers already of Wilkinson, but was too timid to publish; and the "Date" and "Banana" of the (what!) deserts of Arizona (beg to Colonel pardon) is the same. And then brevifolia bears also a delicious fruit — But the common southeastern aloefolia and the Texan longifolia (Engelm mss 1844, Buckley in Proc. Acad. Phil. 1867) I have seen with baccata; southeastern Y. filamentosa has same fruit not seen by me. Y. aloefolia is the only known one in Europe with fruit

so that most botanists supposed pall Yucca had become!

Y. filamentosa, Y. angustifolia, Y. stenophylla and the Texan Y. rupicola (Schott's No. 2 & but in Texas stemless) have dry dehiscent capsules.

What Schott's Californian Yucca are, I do not know.

Dot Bound 222
Dot Does 29

Nor do I know Torrey's Y. Whipplei nor Y. pubescens — but — might the latter not be = Y. brevifolia? Light that out with Schott! His figure does not fully agree. Has Schott specimens of this Yucca?

Dot Bound 221

Now about angustifolia, the latin and stenophylla, the Greek. Yucca baccata is an example of Yuccas stemless north and caulescent south in North Mexico a tree! — Leaf and fruit are the important things in this genus — trunk some, flowers scarcely anything so far as at present advised. Leaves and fruit are here indistinguishable —

femina trunk and tall, branching scape. Can our explorers find intermediate forms?

At Shaw's "it" angustifolia makes a stem 6 inches high. — Schott describes it from Eaglepass as: stem 1–1½ feet high.

Glad you do away with the leafless intermediate ~~brevifolia~~ and gain fruit & seed for brevifolia! And so you raise seedlings! then we will soon see.

I had for 15 years Wislizeni seed plants of Yucca, but Shaw's gardener lost them!

How is the woodcut in Whipple 99 Report III. p. 121 of Y. brevifolia?

To Schott my best thanks for nice plants and best regards — must write to him, when my head is less whirling around with anything and everything.

Did you send two or more living Mammillaria? without name date label etc? — I make them M. vivipara var Dædalea — I will return as soon as I know from you. You don't mention them.

Palmer did a good thing in just drying up, without pressing the Cacti — Some of the flowers thus ripened fruit — ripe enough to examine — and all flowers could be soaked and well examined, better than the pressed and mashed ones. The Geologist Gabb did the same and I thus got some good things from him from Nevada and from Lower California.

Get you the photogr. No. 12 of Y. brevifolia for me. Of course get all the seeds you can for distribution. Do you distribute these Yucca & Cactus seeds also and to whom?

Yes I was quite sick, but am right again — That pestilent Microscope !! I will write to Brown again this week.

Yours truly

J. Engelmann

St Louis April 15th 1870

Dear Parry

I wrote you a day or two ago – the head of Y. Borealis has been split – will make only two good specimens, the largest of which I return to you.

I have an hour ago got a letter from Braun who says, that as instructed by Prof Gray from Rev York last, he sent the Microscope to Dr Flügel, the Smithsonian Agent at Leipzig. Flügel wrote that strict instructions from Prof Henry prevented him to send anything to or through the Instit. that was bought not presented or exchanged – so he declined to send, awaiting further orders. Mrs Mettenius, Braun's daughter then wrote to Gray for orders – and the letter most probably miscarried as it seems it was never answered. The Microscope is still in the hands of Dr Felix Flügel Leipzig and a letter to him (endorsed by Prof Henry as F. dont know you or the Agric. Department) will fetch it.

Of course you will have to direct how it shall be sent, — Red Tape, I suppose has spoiled the matter.

Very truly yours

G. Engelmann

Would it be well to write to Gray too, informing him of the state of things and difficulties?

I send again congratulations from this region & return for your outlandish things!

Locust St. 3003 / St Louis Apr 19 '70
(or: NW Corner Locust St & Garrison St.)

Dear Parry

There is again a valuable letter without a line except Cobly. Well, as it contains Yucca fruit I wont grumble. Y. aloefolia is the most common plant in Europe and in the Bot Garden of Naples makes stately trees 25' high — fruit I have often seen — even here, at Shaw's but have not had fruit of wild plant.

But Y. glorosa is still to me a doubtful plant and I am glad to get seed — but is it authentic? Send me a leaf! Who is the Compositae-nut who sends these things? Get me leaves and fruit also of the native aloefolia — of superba and whatever may grow South.

It may be well to give some a synopsis of all our Yarrow — but to do that I ought to have Torrey's material, which he would gladly give me, if he would not neglect to pack and express it !!

(and of the old eastern species I must have seed and fruit and specimens in general.

The other page I had written some days ago and send now to acknowledge that Yucca seed etc.

You have got my note about the microscope ?

yours ever

J. Engelmann

We have had here a nice imitation of your eastern cities — with the accomplishments — city treasurer defaulter $160,000 —

Yucca stenophylla

" tall species, grows 15 – 20 feet high"

Parry in Febr.

" short trunk, occasionally branching, flowering branch 10 feet long "

Parry in April

Which is correct? Trunk about 2 feet?

Palmer's Cactaceae

Cereus Pecten Aboriginorum Engel. n. sp.

C. Palmeri Engel. n. sp.

136 C. Mojavensis Eng. & Big.

134 C. gonacanthus Eng. & Big.

both somewhat differing from the original form, and both probably belonging together – for which the latter name is best; but both approach too near

C. triglochidiatus Eng.

135. 137. Cereus Fendleri Eng. form parvi spina

132 & 133 You say "Cereus" and I following your blindly was sure it was an Echinocereus!! Until looking at the pretty thing more closely, what should it be; but the flower of an old friend

in fruit only
introduced by Bigelow, and no Cereus at all but Opuntia erinacea, a fine purple fl. Opuntia! Thanks! Had not known the flower before!

Echinocactus Le Conteï, which will merge into E. Wislizeni

Ech. Emoryi, straightspined form, closely allied to the former, but I think distinct enough — dead, very similar, was found sufficiently ripe in Ovary. — It is the plant that Palmer says, is eaten

The yellow O. Opuntia[131] I have no means of judging — does the fruit sent separately belong to it? Does the Dr recollect whether it is an erect plant? — Any of Bigelow's figures to be referred to it?

And last Opuntia arborescens which has never yet come with ripe seeds, though apparently common in Arizona

(131) Erect

I have from you:

Yucca with thin seeds (therefore dry fruit)
Central Arizona, Dr Parry Nov. 1867

Do you recollect it? Is it the stenophylla?
I begin to find characters in the flowers
and shall in future pay more attention
to them — help me out with specimens
withered flowers are as good and
often better than hard pressed ones

The Yuccas of the S Eastern states must
be revised!

"Y. baccata S Colorado, Hayden" But the label says
"Thomas" — This I suppose you sent twice, each
time with not quite ripe seeds.

The "St George man" must get flowers
and fruit & ripe seed of Y. brevifolia, to
propagate and the fine species, and also to
satisfy us about the pulpiness of the fruit —
is it "date-like"? like that gloriosa?
or really "intermediate"

How did the microscope get to you?
what way? I expected the directions
to be in the case — I have none!

you know about the immersion lenses, the most powerful of the mic. are for immersion, and can not be used otherwise. A drop of clear water is placed between the lens and the object, no air and refraction by it intervenes, which makes the image much clearer. If you want more instruction, we must write to Oberlin.

I shall write to Torrey, also to Schott.

Is your Y. Cornif. dead, you say? the leaves sent are fine. I believe I will stick to "Cornifolia."

Glad that you begin to give in about Y. stenophylla. I have again seen a specimen of Shaw's raised from Kansas seeds — or Colorado nearly 1½ or 1¾ feet high — branching!

I find the seeds of stenophylla of equal size with those of acquatica and much larger than those of Y. filamentosa.

I shall send the Dedalean Mammillaria. — don't know what ails me, Hayden, you say but he is rather cold towards me!

Yours truly and hastily
J E

St Louis May 22d 1870

Dear Parry

Thanks for the Yucca package which came safe to hand. Before I really begin to work them up, I must unearth my older specimens and notes. The Cases have left Shaws basement and grace my Museum but are not yet unpacked — The great drawback with me is my very sore fingers.

When I first opened your last letter I could not understand what you said of going west — not being able to see me, etc; and — I stumbled at your orthography and calligraphy until I found it was Palmer, who wrote me. Please give him the enclosed.

'Cercus Thurberi' is surely not an Eckinocereus Engelmanni nor any

other Chiococcas but if not Thurber's, something exactly like it is seed. It comes up well with me. So does C. Palmeri which was the only one really fully ripe. Pity we do not know any thing more about it — It will be many years before the seedlings will be able to tell us any thing.

Cereus Beckii does not come — too bad. Do you grow it!

A Yucca from Arizona comes well. Yucca brevifolia poorly and perishes again.

Y. Stenophylla not at all. What of your things does germinate?

I am working at Cactaceae preparatory of the Flora Brasiliensis.

Ever yours

S. Engelmann

Miami Jun 10 1880

Dear Parry

Our lovely correspondence has suddenly been interrupted, perhaps by my fault. The last I heard from you was your letter of May 24 when you were "upset with excitement". I hope you have righted again. Thanks for the plants, the Carpella & C. M. Yucca. I hope you keep a pigeonhole for me — and in better order than those I left in Geneva and Vienna, where my things are buried and can not be lifted, it would seem.

Among the things that have come up with me are Cor Thurber's (abundant) C. Wislizeni opening — (but C. Wislizeni has failed) Mammillaria from Arizona with very further indication, no spines or any other hold — Yucca atrophylla & brevifolia & Agave Ariz.

How go Cor. Potter? I believe I have received the same plant 20 years ago from Dr Gregg from Magellan, judging by fruit very similar only spec. Osoro and also fragment of trunk!

You are in North Carolina! good — & go in July to England! better — but she will attend to Agr. Univ. Botany?

where will you go on the Continent!

Look at the Yucca in the Kew

wonderful it, my time being taken up with Cinchona and Cactaceae. See what they have, make notes etc.

The most western Yucca I know of is Schott's from Yucatan; Jamaica is also given as producing a Yucca and so is Canada for Y. gloriosa!! Oh, lucky Cooky! who can trust in you?

Something else! It is said in some Smithsonian publication, that Cinchona is now successfully cultivated in U.S. I have been questioned from Europe whether it is so, where, and to what extent. You as the official botanist must be able to tell me please do! Don't forget!

Fingers better, not well yet — gradually getting gradually into the old groove, and in working order. Wish you would come and spend a few week with us!

Yours truly

G. Engelmann

NB. I have a small package for DeCandolle too late, I suppose for the Smithsonian envoy — have read it!

Have found a new Quercus hybrid: individuals planting!

Best regards to Schott.

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

St. Louis, Mo., ..... 187

no number) Cuscuta mitraeformis, Engelm. n. sp. Stems stout; flowers rather large (3 lines long and ~~about a little less~~ almost as wide) short pedicelled or subsessile in large glomerules; lobes of calyx orbicular, unequal, the two outer ones carinate or sometimes almost winged, rather longer than the short campanulate tube of the corolla and its broadly oval rounded at last patulous or reflexed lobes; subulate filaments as long as the oblong anthers, shorter than the corolla-lobes; staminal scales very broad, rounded, fringed, exceeding the corolla tube and incurved over the enclosed pistil; styles broadly-conical shorter than the ovary; capsule greatly enlarged, exsert, with the remnants of the corolla at its base, appearing bifid from the broadly enlarged conical divaricate styles, regularly circumscissile.

Between San Luis and Tampico, Dr Palmer. Fruit glomerules 10–12 lines thick; single fruits with the calyx 4 lines long. Well distinguished from the allied species by the broad scales which exceed the tube and principally by the very short conical styles and the large bivaspidate capsules. Its nearest ally, C. jalapensis has smaller flower and fruit and slender styles.

631.a C. Jalapeus is Schlecht. Engelm Cust. 478. an unusually large form, unfortunately without any flowers, only with mature fruit; on Schinus molle. It is distinguished from the last by the smaller flowers and fruit, narrower corolla with narrower lobes and scales which are scarcely or not exserted and especially by the slenderly subulate styles.

631½ C. applanata, Engelm. Cust. 479. Not different from the Arizona form, which I have described under that name. The lobes of the delicate, white corolla are oblate-oblong, obtuse; the regularly circumscissile capsule is enveloped by the ~~remnants of the~~ withered corolla.

631 C. Americana Lin, Engelm Cust. 482. On Schinus molle a large and loose-flowered form, found between San Luis and Tampico. A smaller form with smaller flowers in a more compact inflorescence was found near Venadero on Acacias and other shrubs.

C. corymbosa var. stylosa, Engelm. Cust. 484 (no number) the typical form, was collected near Vera Cruz.

I suspect that Phalenia must be made a distinct genus, Brachyrea halenoides I will look into it again.

St Louis June 21 1870

Dear Sany

here is a line to wish you God speed — but don't fail to write from Kew, and I shall answer, as in duty bound.

You remark that you did not say anything about that Echinocactus because you could see and examine it any time, is "naive" — I suppose Mr Johnson sees still more about it, but that doesn't do me any good — me, who is to describe the plant!! So, you see, before "estering" Johnson you shall not be spared!

We will not doubt the success, at, though Palmer's voyages are not very reliable. Those given leaves, are not similar to elsewhere

Give my love to our good old friend Torrey, and tell him that I shall report on Vitis and Yucca which I have from him, when I have studied them. For the present the Cactus take up all spare time and those old things, Gregg (1849) and Fendler Venezuela (1853) come up again and are quite interesting & valuable.

If you can get Cactus fruit in Kew Gardens, or dried flowers (pressed between cotton batting) think of me. The Phyllocacti in Kew are quite interesting, but when I was there were neither in flower nor fruit — One was in fruit and I was too modest to ask for it, and when I did the fruit had been cut off and thrown away!!

Your notice of that Elmira v. Johns reminds me of a note of Fenton's on his label to a "Vaccinula Cereus, ribs several". Isn't that instructive?

Remember me to our friends in Kew; don't forget Thiselton.

The Hemerocrypta is good and cheap and I am very, after all — I did not take it!

Farewell!

Yours ever

Geo. Lindley

You have tracked Coulter — I wish you had tracked his Cones in England!

Abies Pattoniana or Tsuga P. is the right name for the Gamm, publ. 1853 the right name for the tree

St Louis Sept 20 1870

My dear Dr Asa Gray

My letter from Mex came too late to be answered — I regret you cannot get my letter in England. Pity you should have had to ask a good many things from you.

Did Dieber get my letter of Aug. 10th Vaba L Yucca? He has not answered it! I am not at all pleased with his papers, which I see here at Shaw's. Thanks for the copies of the two first which you sent me.

I would have asked you about some Mex questions, which I have not solved in England, and also for some specimens which you must have in Washington.

I have not seen the original cones (there were only Cones collected) of Coulter of P. muricata, tuberculata and

I better mail this as you may find Nelumbium Mex. Exhibition. Can Pilsen answer it? Mex is antipathetic in Englands. Remember me to Mrs Gray, Hooker, Bentham & Darwin. Yours truly J. Torrey

P. Pattoniana. i. Mex.

radiata. They are figured by Lambert and London but are not now in Linn or London. No doubt about the first and last; the last is absolutely identical with C. insignis, and the earlier name C. of Jq. comes from Solander has even the peculiar radiate fissure, continued, whence the name! But the original tuberculata may be only a very slender cone of radiata — who described first what we now call ~~radiata~~ tuberculata? perhaps the "Oregon Committee" 1850 and also figured it in the flying sheet they published.

The Abies question is still unsolved. The Douglas' specimens in Hb Kew are not satisfactory, and perhaps in confusion. Only Douglas' cones would decide, and those I have been unable to see. Next to Douglas I would trust in Newberry the only one, perhaps, who has been through the same regions with an eye to this question. N. sent me many years

ago scales and seeds of cones of A. nobilis and of what he then called A. lasiocarpa, but in Pac. R. Rep. described as A. amabilis, but not any branch. Now, if that collection of Newberry's is in the Agr. Department, I should desire you to get me scales and seeds and a small branch of Abies grandis from the Cascade Mtns, and a branch of what he called A lasiocarpa or amabilis. also a small branch of his nobilis. You are, however, aware of the great variability of foliage of the same species on young and old specimens, on fertile or sterile ones, on erect robust shoots or horizontal lateral branchlets. — How is the bark of old trees of your Colorado - A grandis, ashy white or cinnamon brown?

What Orlander now takes for A. amabilis is something very different from any "amabilis" I have seen in English herbaria or gardens.

I have had a good letter from Johnson and a live specimen of an Opuntia but not the E. Johnsonii — perhaps Palmer will through seeds of something like it

bring things with him, also Yucca; O. wrote me from Yuma, and will probably be here this fall. Johnson says he has never seen or obtained fruit of Y. brevifolia, but thinks it is dry, not juicy. I believe I can now tell from the ovules whether the fruit is one or the other! —

You say, you are afraid Cereus Peckii aborigenorum would die in winter for want of care. Suppose you send me a couple of young ones (in a small box) by mail, and I will take care of them — have not raised any, but the young Thurberi with 8 ribs and 8–10 spines and a few Palmeri with 4 ribs and 4 spines are doing first rate; also a few specimens of a Mammillaria of Palmer's seeds. How my young ones in Paris may fare now? bombarded? abandoned. — One collection was outside of Paris, by a Frenchman, in the now Prussian lines — the other and best one in Paris, by a German Horticulturist, who is probably driven out —!!. And where my friend the Army surgeon Weber, of the Hospital des Invalides is? He wrote me in July he would probably be sent to the seat of war. — George is very busy in military hospital. Thank you for slips I got from you; thanks. Respects to Torrey! Write soon — Yours ever

G. Engelmann

Lit. Oken 3 [illegible] Thing

St Louis Oct 17 1870

Dear Perry

thanks for the nice specimen just received. It is certainly Pch. cylindracea as you suggest — and we will now see what my Cereus of St. NB 12 years ago got in Washington, Congress. Garden, seedlings of an Echinocactus which have now grown up under all neglect and prove to be E. viridescens! Any living get in W? Mine are only 2½ inches in diameter, poor.

So the 2 Yucca slips came from you! The other day I got 3 more from Kew without a line one is missing. I shall have to wait for Baker to write to me. I had written him a long and full letter, and in his forthcoming work he may use my notes!! Let him!

I have a nice lot of Pch. Simpsonii fresh from Colorado. Do you want any? I was afraid to trust our forgetful friend Torrey with a letter — glad to hear that you got it.

nothing from Johnson; he has not answered my last letter. Do you hear from him? How could I send him my Cactus book, too large for mail.

I have seen today, rediscovered specimens of our old Boundary Cact., considered lost long since — C. Schottii, C. longispinus, C. Greggii and a few others; shall try to get them and propagate them.

More when I get your promised letter

Your truly
G. Engelmann



How did you find the old country, how do Pinus — Thunb. —?

Did you see in Kew my disposition of the artificial Pinus Sinclairii?

P. insignis cone + P. Montezumae branch = P. radiata Bot. Mag.
P. insignis branch + P. Montezumae cone = P. Sinclairii Bot. Mag.
(Monterey) (Tepic)

In your absence the Abies question has grown warm again with me, and I have come to strange conclusions.

1. Abies grandis from all the Rocky Mountains, Colorado to Montana, and Cascade Mountains is individual and is = A Lasiocarpa Hook, the original sp. of which, collected by Douglas I have examined.

2, There are different other forms (of grandis) in Oregon and California of the same, and the one with the largest cones, Cascade Mountains is A amabilis, and this was collected and figured by Newberry.

3, What Bolander now sends from big tree grove as A amabilis is very distinct, but is not Douglas' amabilis of which I have seen a branch in Mr. Kew and living trees in different English gardens. It seems to differ from nobilis only in the short bracts, not at all in the foliage. The A. magnifica and robusta of English nurseries is

this plant, but none of Douglas' seedlings look like it.

What I want from you is now a fragment of a branch of Newberry's specimens of A. grandis, A. amabilis and A nobilis, and a few good scales and seeds of the first. At the time he sent me a few scales and seeds of what he called A. nobilis and A lasiocarpa. The latter I suppose is what he afterwards published and figured as amabilis. Now I would like to see the foliage of all three — a few scales and seeds of "amabilis" would also be desirable.

Pinus Balandri Pursh

is the old original P. contorta of Douglas, built from swampy land near the sea coast — small stunted trees with very narrow leaves, and perhaps at least to be distinguished from the Mountain Contorta. I wrote to Balander about all these things but can not get answer from him. He may not be in San Francisco

St Louis Nov. 4 1870

Dear Parry

your letter of Oct 24 and several packages have come to hand. Thanks for them. Thanks also to friend Schott for that piece of Yucca aloifolia the true plant! I had kind it before but ~~that~~ you know we always find some thing new when we examine a thing anew, it thus was very interesting to me. But I want now the fruit of Y. gloriosa (with entire leaves) also, by the way, did you send Palmer's Yucca seeds last winter to Kew? I am now sure that P. is right and that our Y. intermedia is = Y. brevifolia. I found a fragment of fruit coll. by Bigelow in Miss. and the seed is exactly the same. I begin to find character in the seeds and in the flowers. I think that our commonly cult. Y. filamentosa (here at least) is distinct from the true plant which has almost spatulate leaves, broadest upper 4th, and is ——— Rawnit has just sent me flowers of the former, very different from our flowers. How is the Y. filamentosa cult. at Washington?

I believe I have not told you that I had a good letter from Baker and also his Liliacae capsulares (where does Yucca belong?? !) Your friend Newberry & Kellogg is worth knowing! a bit of scientific sarcasm.

Many thanks for Ech. Johnsoni! Did you get E. Simpsoni? Both Cereus and are forms of C. Engelmanni allied to our chrysocrinus (Engelm). Another form was sent by Johnson, who has also sent a big Mammillaria, which perhaps is nothing but a big form of M. vivipara — at least allied to it.

Seeds of M. phellosperma are good — it has never been in cultivation.

Do you hear from Bolander. He don't answer my letters, miffed? why? on acct of microscope?

I was through Kew Pinetum with Oliver, but don't think I saw P. sinclairii. I labeled all I knew.

O yes tuberculata is good, but question whether Don's (Coulter's) tuberculata is our present plant. There is a cone somewhere but I did not see it. It is figured by Lambert and copied by Loudon, and if Coulter's remarks (100' high, on the seacoast at Monterey) are not a confusion, must be a slender cone of insignis. I have asked Bolander whether insignis ever makes such slender cones. Radiata is the same as insignis and was published a year earlier (1837)

No, I never got Beechey!! forgot all about it. Must write Lorey or you better do it. You have many things for me, I might send it there, or send it by mail. Don't forget to write to J.

I told you that P. Sinclairii is a cross between P. Montezumae & P. radiata

P. Montezumae Cone P. radiata leaves = P. Sinclairii
P. Mont. leaves P. radiata cone = P. radiata

Hoskins

Keep sending things, Cactus, Yucca — need plenty of seeds of them. I suppose you send to Kew also?

I intend to cultivate all Asters, Solidago, Helianthus I can get. Can you help me with species we do not have here?

Thanks to Sargent — shall write to him soon

Yours truly

S. Eggleston

Abies grandis
seeds & capsules
Colonial Refinery
Hyde

Nixon, Nev 15 1870

Dear Sir,

[illegible] your [illegible] [illegible] on the Palmer, [illegible] [illegible] yesterday together with an excellent [illegible] very good for packing [illegible] [illegible] Cactus & Simpsonia as you persistently write. And this brings me to another question.

This species was first discovered in Utah in Capt Simpson's Expedition 1859 by my brother, and was at the Captain's request together with one or two other Cacti figured by Wrettler, for publication in his report. That report does never come out and the drawings are supposed to be now at the War Office, probably with the botanical notes in or with Capt Simpson's report on a route from Utah to Norfolk.

It seems to be unwritten a pity made use of, and then is now a good opportunity, as they publish a flora of Utah in doing the Cacti and I have been requested to furnish plates, of course for credit would be given the War Department and Capt Simpson. Look with the Commissioner and see if anything can be done.

If we are getting some [illegible]
[illegible] I think, [illegible]
like to have you [illegible]
[illegible] would be [illegible]
[illegible]
up in the [illegible]

If you have to spare [illegible]
one more [illegible] Peter in [illegible]
[illegible] the [illegible]
repeat the dose in [illegible]
please [illegible] that [illegible] [illegible]
the Cotyledons are as large as [illegible]
[illegible]

[illegible]
How is Henry [illegible] the [illegible]

[illegible]

Nothing like [illegible] always [illegible]

[illegible]

[illegible] 9 1 [illegible]

Oct. 20

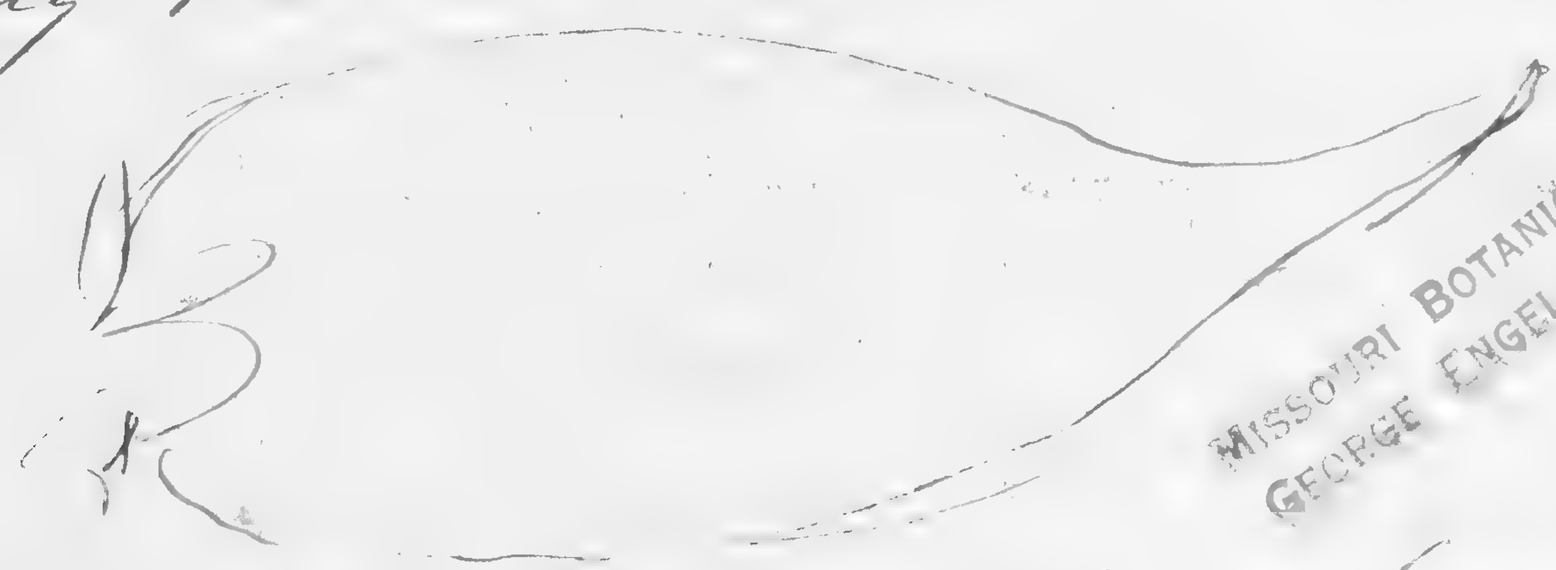
Wickens Cabin is the real Cardamine as Torrey says — but it is nothing but the small form of A. grandis which you also find in the Mountains of Colorado.

Bridges 330 is Alsine Grahami. The most interesting is Bigelow's from the Sierra mountains. This is identical with a specimen gathered from Clayton. Such I in MS have named A. compactor, which name was taken up by Lindley and now by Watson. I had afterwards supposed some A. grandis but begin to mistrust, and find those of the same from the mountains of Humboldt [illegible] but we know not enough of it, it must be better investigated in Mexico.

You will find that it has usually leaves below on both sides, just like A. nobilis and A. ambigua of Wollander though I suspect that is not a permanent character, the shape of the leaves in this genus need be better studied. [illegible] on young and old stems and [illegible] erect [illegible] horizontal branches [illegible] these things when you

[illegible] "Discontinuing seed [illegible]
[illegible] since you. [illegible] did you see
the G. grandis with leaves as [illegible]
[illegible] & Mengsiesii? I enclose a few
leaves for you to wonder at, [illegible]
[illegible] Revolutionaire Vrieser, [illegible]
[illegible] "[illegible] the [illegible]
[illegible] [illegible] [illegible]
[illegible] had another letter [illegible]
[illegible] he writes [illegible]
[illegible] & [illegible] but [illegible]
have been received! Yes, Cactus seed [illegible] if you
[illegible] at least [illegible] [illegible]
from Oaxaca in which he acknowledged
that his way of doing [illegible]
[illegible] a "pis-aller." [illegible] the best
[illegible] [illegible] [illegible] circumstance.

— Johnson sends leaf and unripe fruit of Y. baccata — fruit with a long rostrum



Is that the usual shape?

This sheet was written a week ago and is inclosed, as it contains some notes of interest.

[illegible] 1[illegible]

[illegible] Dear [illegible],

Your box came off [illegible] yesterday [illegible] unfortunate [illegible] too much prompt[illegible]. Thanks, for the fine things. Unfortunately many were without notes, some with mere numbers.

The fine columnar Cereus is C. Schottii! Schott will be pleased to see his old namesake; and so [illegible] was. Did they not send me a section of the upper stem like a [illegible] cleaning part? This is the [illegible] that I got a segment of [illegible] Schott from Sinaloa [illegible] California and [illegible] [illegible] this day [illegible] [illegible] flowers [illegible] [illegible] plant. So there a living specimen! [illegible] for the fragment sent [illegible] [illegible] still, yet. Tell me how many [illegible] it has, and give a diagram of the cross section. [illegible] flower [illegible]

[illegible] a great [illegible] [illegible]
effect William says, we got
[illegible]
No 10 is probably [illegible]
[illegible]

I [illegible]

I forgot to [illegible] this
[illegible] nothing of [illegible]
[illegible] polycephalus [illegible] [illegible]
[illegible] figured [illegible] Whipple
[illegible] by Dr Gibbons.

The Orchids are interesting
— a most [illegible]
[illegible] remarkable, that
there is not a single epiphyte
one among the [illegible].

[illegible] hearty [illegible]

[illegible]

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

Exadenus   Valeria

St. Louis, Mo., 187

Dear P.

more mature consideration induces me to change my opinion, and the two forms of Exadenus, which you send as No 600 probably belong together as forma robusta and forma gracilis (or longiramea) of E. brevicornis. It is better and safer, with so little material at hand to refrain from inaugurating a new name (not a new species!)

yours E.

POSTAL CARD.

ST. LOUIS MO. FEB 14 1884

U.S. POSTAGE ONE CENT

WRITE THE ADDRESS ON THIS SIDE—THE MESSAGE ON THE OTHER

MISSOURI BOTANICAL GA
GEORGE ENGELMANN PA

Dr C Parry

Davenport

Iowa

[illegible] to you and
[illegible] flower for the different things
[illegible], showed fruits of gigantic
[illegible] good seed
[illegible] clearly
is desirable.

I am now deep in the Agave
question, and have with
[illegible] out on the accompanying sheet
a [illegible] of data and questions
which I wish you and Fabiana
to consider and to give me as
much information as you can.
I omit also to scratch about it.
You will find that you need
no rod — no leaf of 1862 (No. 2) is
larger than one of No. 3 [illegible]
[illegible] though both cases, leaves must
be different.
[illegible] these difficulties
[illegible] to unravel.
You see that I have 10 numbers
to account for from the South West,
[illegible] specimens and [illegible] notes;
but you not imagine that there are
10 distinct species.

Please return that sheet with my notes.

[illegible] Kew Gardens. The Jamaica [illegible] are in very poor condition. [illegible] most of them will die on Gov. Jones's examination. I hope you have better specimens growing, for that can supply is with young one. Next year.

Dr R. [illegible] promises in his letter to send soon a communication about his collection. Please tell him that I shall be happy to send any thing I can to Johnson.

Did you raise that big Sonora bean? It grew with me well & immense pods but unfortunately did not ripen. Have you any more seeds left? Like to prove it another trial. All is

Gnaualea pledata D.C.

from Dr Castillon [illegible] dies it gets into Sonora.

In most haste a letter from me written a week ago.

[illegible]


0 1 2 3 4 5 6 7 8 9 10
cm
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MISSOURI
BOTANICAL
GARDEN

St Louis Oct. 20 1871

Asa Gray

I have just finished your letter to Palmer which please read before you give to him

Thanks for the flowers which came here lively and fresh as a young poet — so that from last year's seeds of Palmer's [illegible] growing.

[illegible] I have ~~[illegible]~~ to dry and not expose [illegible] last summer.

Why do you give a new name to Palmer's? If it is the same which you gathered (Mad Dorita 1876) that you know [illegible] in Sonora or Yaqui Range. [illegible] I told you [illegible] Palmer's thing in [illegible] you call [illegible] but that is the [illegible] are for the old [illegible] in Mexico — I suppose to the people [illegible] are all the same.

thing for the Museum, I have questions, but some were hasty and incorrect — for example the roll at Fort Chipple 1870 is very different from the Mexical specimen. Palmer's but failed to get leaves or any memorandum and evidently she is recollect now.

The Gt George one is a very distinct one — I hope the seed will germinate with me or you.

Big more Cactus or yucca specimen turned up.

The rose or climbers this plant which I get from several sources is evidently opuntia mitis. Neither I have good specimen growing from Johnson. Palmer's were in dirty packing — too long packed up — can't find Fentler (this year) perhaps Schott will collect some. They look old.

How do you get along?

I had a letter from Schott, speaking

[illegible] Department [illegible]
[illegible] 2 [illegible] the perfect [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] letter from [illegible]
Please hand him his [illegible]
[illegible] hand to me [illegible]
[illegible] hereby enclosed.

[illegible] make the most of the
[illegible] sketch [illegible] from the
[illegible] [illegible] [illegible]
[illegible] the [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible]

[illegible] on Los Angeles.

If I don't hear from you at all, I'm going [illegible]

Lean [illegible]

[illegible]

[illegible] moreover will [illegible] [illegible] in Spain, then you do — think perhaps you are right.

Black envelope [illegible]

[illegible] [illegible] [illegible]

label — too bad — [illegible]

[illegible]

Kew, 1847

My dear Parry,

I have learnt with pleasure and satisfaction that you have been permitted to join the Wellington Expt. Expedition, and I pray just referring one that one of the pieces of ... in ... on Ten years experience has induced you. Nature is a certain living and a certain ... a advantage of the Department and of Science in general.

Let me hope that my friends Department will have a little attention and to ... left of ... the Canadian and the ... you have ... left of ...


0 1 2 3 4 5 6 7 8 9 10
cm
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BOTANICAL
GARDEN

are [illegible] with [illegible]
[illegible] a [illegible] of [illegible]
[illegible] [illegible] [illegible] a [illegible]
[illegible] [illegible] [illegible].

A fine Melocactus would be
the very valuable [illegible] to
[illegible] up. [illegible] [illegible] [illegible]
of these plants is not [illegible]
known [illegible] a very [illegible].

"Yucca aloifolia" of Linnæus
is said to be a Westindian
while the S. Carolina and Georgia
plant is called by Linnæus
the Pacoria, and remarked by
Pursh, that [illegible] not whether
both are identical or not. [illegible]
believed or distinct. Yucca
is evidently a good deal
of Confusion which might
be cleared up by you. Seed
and flowers and leaf are
wanted.

I hardly make out the leaf of
the Pine of Tripoli. [illegible]
[illegible] [illegible] of [illegible] [illegible]
[illegible] [illegible] [illegible]

Yucca ? Melocactus !!

[illegible]

[illegible]

[illegible] to all [illegible]

anxiety was for nothing ! Hang it !

Well, you must have had a glorious time, you and Wright, among the Caribs (did your zoologists besides the tarantulas of which we read bring any skeletons [illegible] not Dacj's (how do you pronounce ?) or at least Cabrals ?

Have you got my short note reminding you of "Melocactus" ? Did the letter I included to Sorry for you, but you did not go to N.Y. want with the big bugs, made your reverence to the biggest — are a big bug yourself, noticed by the telegraph etc etc. This is of course not an official communication to the Department [illegible]

[illegible] spirit of accepting

[illegible].

[illegible] I know [illegible] have

[illegible] by Oliteau Schwabing,

Lathis and Wenton even mentioned

and so did Flueggé & have seen it

small cones with a vistal scales. Hope you

will furnish me good specimens.

And a many other things.

But while you run after all

[illegible] Domingo – I discover new

species in the S.E States, one at

least and a splendid one, which I

call "Illustrissima", vice it plays [illegible]

blaeggeing around, at a letter to

day, a whole box full of good

specimens is shipping for their port,

so that I can retain it to

all the botanists and it rest

of Mankind. Not in a Darwinian

shape) you of course included,

also good Palatina, [illegible]

Agave & Yucca are at most laid on a shelf — All is Pine now and Pine pollen is wafted by the breezes (Pinus australis from near River March 14th abundant in Adams)

Agave utilis — not in Kunth, Enum. but figured and described in the very unsatisfactory work of Descourtilz on the utilities. p. 284. I did not know where to look for it.

There hangs a tale to Fourcroya Cubensis (not se). I had to study it with Yucca! HBK call it Yucca acaulis the inferior ovary having been broken off and the enlarged style looking like an ovary. Kunth in Enum. touches up the matter — I have European cult. specimens under the name of Agave tuberculosa (incorrect, if the bulbs you mention)

Then have forgotten your latin among the tubercules (some such Griffiths) and will have it again (Pinus cubensis). Get out of

your own way "Aloe" (is so said it) into bulbs also to mine.

Chapman to Palmer, found a letter a few days ago. Have it now. Mass doubt this Yucca. The coarse-[illegible] & large flower, from Sacramento Valley are Y. bicrata — all right — but the flowers from [illegible] are from this species & are not bicrata "in position". Now, how is this to come out right? You know bacata will with their large, coarsely fibrous, and fleshy fruit — & I guess there are forms with large flowers, long petals, & others with small ones. What say you and Palmer?

There is another leaf from Sacramento Valley which is only 10–12 inches long, 6–9 lines wide, very rough, and which I took at first for Yucca Whipplei without flowers — but may it not be a Dasylirion? You have seen it yourself. Do you know what I mean? Being not involute, as in Yucca usually, but flat triangular. "I saw one yesterday."

Then Palmer thinks the Y. from Mt Pinos (to tie up grapevines with) is not aequatorialis but I suppose it is a small form.

Hope Palmer will see his situation & will do well there! Hope to hear from you again soon.

Yours truly G. Engelmann

Newark April 27th 1871

Dear Sir

Thanks for the cask received. Not knowing I will pay express it yourself. How is New York? Have been there? Did you pay for it?

Did you get any note from in Washington? Did you get Cire Melocactus? Do write!

Do you see Jabb there, the Philadelphia Geologist? Does he get Cacti? as he did in Lower California. How can I write to him?

How was Sierra in Washington?

But the object of my letter was to enquire about Correspondents which your department may have in Norfolk, North Carolina, Wilmington and Southward, or near Albemarle

found to South eastern Virginia. Throughout that region there is a valuable timber pine called there Swamp Pine, Slash pine, or near Wilmington Rosemary Pine (though that name is usually given to another & better matter) It is a highly prized tree for naval architecture and trunks have been paid 500 or 600 dollars in New York.

This tree is unbotanically described but unknown to Botanists. Curtis speaks of it in his "Trees of N. Car." but did not know it. Often I have seen it & I think it is taken for a Pitch pine, mean in shape 150 - 170 feet high.

All what I want, is that any of the Correspondents of the Agr. Department in that region should be required into whether he knows the valuable and tall Timber tree, the swamp pine, and should be asked to send by mail

a fine specimen with very pretty
near about 1 inch long — either to
your Department, which will be
better, or to me direct, — they
they will attend better if respected
to send to you — & you forward
at once to me.

I must make out whether if
is very near N. Elliotti of S.C.
or something else, and such a
specimen will be quite surprising
as I have the correspondence
specimens of all allied plants.

Will you attend to this?

I suppose you are quite up
work and no spare time to chat
so I won't rob you of it — and
hush up! — Yours truly

Sereno Watson

over.

Respects to Volney — is he
still in Washington?
You must have lots of letters from me, full
of unanswered questions!

To show you that I don't apply to you, poor overburdened soul, ~~after~~ before having exhausted all other means, I tell you, that both Canby and Curtis have written to me that they don't know a soul in those regions, who could be of use to me in filling positions.

So get the Department to buy Curtis' Collections and books! I have had a pleasant chat with Dr Gillings last week, and he will try his best also.

[illegible]

"Russels Magazine" was published in Charleston before the war, and must be in Libraries in Washington. There are two articles in it, printed probably about 1857 and 1859, by Edmund Ruffin on Virginia & North Carolina peats, which articles I have but want to know when (date), in what number and pages published. Can you help me "without trouble" — so that I can quote!

Now — that will do — [illegible]

St Louis May 4 1871

Dear Parry,

Yesterday I got your first and today your 2d letter. Thanks for the things and, for those to be sent. Prof Asa Gray shall make my acknowledgements when they have come! Those living and flowering Melastomas I see savage against and shall cut and slash at them. There is a good deal of inquiry about this vegetation to be unravelled yet.

I have got almost mired down with swamp and mountain pines. My misfortune is that I get deeper and deeper into these investigations, & have now got into the microscopic structure of the pine leaves.

Well, you have been active about that swamp pine & unearth or bring down some specimens at least. All will be welcome.

But you misunderstood my wishes, or I must have poorly expressed them. What I want is branches with young cones on not old branches and cones, as you write. If some of the many collectors send anything, the

I hope stumble on or the other, on a good specimen. — I guess Elliott & "Curtis" and others have seen the tree, or "branches and cones" but could not accurate much of them — only by studying the inflorescence and things connected with it, the true nature of the tree will come out plainly.

Thanks again then for Elliott's Botany. — As to the "large favors" or "very large favors" you may know more about it than I do.

I wrote out the Cacti for Watson, but before the proof-sheet came back from me they had struck off the thing very much to my annoyance and disgust, for I will have nothing more to do with government printing, which represents art only a renewed one ~~which~~ was delivered, forsooth, when Engelm. and my lectures of Triples Exp. were belched.

If I was not they inviting, I would offer Whitson those two flat Cacti you send. But I suppose it would be too late any how.

I want of McDonnigo all you have about Cacti, Agaves, Yucca (nom?) Nos, Peyotes &c.

returned to you. [illegible] I am [illegible]
you [illegible] Algaroba, in all [illegible]
the fruit & pl. of pressings will be
valuable. Aloe!

That woolly giant's (cactus) is behind
photographs. Exactly, flower & in triple.
Quite an acquisition if the seed be good!
Such is not always the case with Chilian
seeds. I never gave Lobos doubtful
mentioned it as a stock plant.
Hayden is a skilful manager.
Hope to get his report.
Also the Rep. of agric. Dep. with
the investigations & [illegible]
about Cattle diseases etc.

Thanks for shares in the Mines
I shall place a few in good hands.
Enclosed the Bible specimens as soon
as they come to hand, they will all
be valuable in some shape or
other.

You offend me by considering
the Eptacle trifling a good species
after all. Why, man, it is a
good, the best, the most remarkable
species and though they deserve
the credit of having it sought out to be denied by your botanical
Dyspepsia — but get my proofs
and I will not scold! The others

Coffee is [illegible] a little [illegible]
[illegible]

The Agaves I will overhaul when
I come with them in store now.
"Wait to d.v.d. over a month"
What-when?? you write today my
letter may be received & replied
25 or 30 days! —
Enough now.

Yours ever

J. Engelmann

You need have had a high time, you & Wright
even without the spice of old Lewis!

E. Ruppius published two articles on
S. Eastern Pines in "Russel's
Magazine" publ. in Charleston S.C.
somewhere about 1858. I suppose
I should like to get the data to
quote (the article itself assumes
without reference to more of it)
extracted from it, if I have

Dr Palmer when with me, all unable to distinguish 3 Agaves in Arizona

1 spikes flowered one which I call A. spicata from its all flowers and fruit.

2 the northern paniculate one; 10–12 ft. scape used for spoons by the Indians in Europe as the Cactus

3. The "southern" paniculate one. 6 ft. high and with scarce "two feet" used for Mezcal" This we found near Ft. Fillmore & is the plant down 1870 — Have you any of Fan?

I believe is at least one other one, the plant from first Whipple, which is certainly distinct from any of the others, but I have only a few detached flowers for Colon. 1865

Do you want Vinkinega seed? more fresh seed — must in envelope & long tail

vs Cerpot. (Voting) B.2

pas: Agave n. sp. leaves narrow entire scape 8 feet high

What is it? Where is a specimen? Have you sent Yucca & Agave to Europe and do some

think that Mr Saunders of Wigtonshire has got them!

Don't forget to write it down in your speeches! [illegible] speeches or lectures?

May 4th 1871

This was written in January & with your letter laid aside, and — forgotten! Shame!

But — If I have not written as often as I might it was partly owing to your not answering my queries which were often of much interest at the time — and I and confer often afterwards!

So pray if I don't answer your questions, ask again! don't always wait!

I have thanked you for the C. Potter. I was astonished at the size. My Hazelnut is as large as a pea, the Walnut scarcely larger!

I am anxious to learn whether for Schott's head will grow — physiologically interesting. Let me know.

Hooker is ill & we now dine.

I do not feel well satisfied that the Agaves mentioned above

Palmer & Parry'. Seeds seem different
flowers have not been. No, neither
"& there is the world of difference. But
those Agaves are about as bad as
Opuntias; run into one another, or
each sp. makes innumerable varieties."

Those Agaves sent by you
some months ago were examined &
while you was absent and together
with Schott's afforded a deal of
information. Do they belong to
the Department or to Torrey? ? X
The Pourouya is, I suppose,
the ever present Cabensis. Dd.
I tell you that Kunth's Yucca aloifolia
is the same thing, <u>away broken off</u>!
and his Y. aphylla which I had from
Austin is Desplision acostichum with
flower of Y. aloefolia! Done
with them anomalous things. X
with Torrey Y. gloriosa which is by
no means an Aloe or Gray has it
had a generic.

I th[illegible] had [illegible] +
but no time [illegible]

[illegible]

Dear Pa,

You will have got a long letter and be satisfied with me. Well, so I am with your large and liberal transmission of specimens. When the Nuns Cannings came out of the boxes I thought it might be the pistillate plant of the black Pine — I hope that will come also in due time. — I suppose it is a native, wild specimen? Those I have from Italy, only have much shorter leaves.

Still better is Possidhilis, with the cones I have seen in museums in Europe but leaves in 3 & 4, more rarely in 5; cones persistent after maturity — but whether at the apex of each annual shoot, or lateral on it, I can not satisfactorily make out.

But the Cedar! That large long spread yellow is I suppose an Atlantica good and true, with transversely ribbed spores — no E. is described from West Indies — the mulcomates seems quite different from the one, sent by Wright from Cuba but with the poor descriptions of the botany it is difficult to make out. Unfortunately I could not make out the nature of the spadix, nor its transition from the

So far from [illegible]

vegetation part of the plant? For that it would be absolutely necessary to have a live plant to cut up, or perhaps sections preserved in Alcohol. It is strange how little is known about these Melocacti, though we have Monographs about them! Their single vegetation is not understood at all. I am making some old specimens, of Nees, in Digitis to try to make out what a living plant with the Cephalium would be like just now. The American Consul in St. Thomas (where Melocacti seem to be most common) might send to the Department a pig and I get one of them.

The lemon you sent is L. parvicostata, the same we have here in Florida. Cuba etc.

Thanks also for the flowers of Vitex rotundifolia Schott. The plant sent last fall is living, but I fear rotten in the core. I am not successful with my Cacti.

I have now supplies of Pleiomeris and Notelaea from S. Carolina. In exchange we very anxious, and especially that of L. australis, which does shoot up for 4-6 years, though it may make abundant & long leaves like a branch of Juncus. I shall send specimens ago by

This letter has been a week! also after mailing. Now, they come past midnight & rain. This is as you

Rocky Point & said yesterday, the specimen is probably P. serotina — another Rosemary pine! the third!! Hope they will, or some one of them will send the real slash or swamp pine, or "Naval timber-pine" — best pine, decorative only to long leaf Pine!

"But in heaven's name who is "Rocky Point" pine is your man"

I return the hieroglyphical writing for you to explain.

Capt Lapham was in town — all meteorology!

Charles has got something in flor ida which interests my Illustrious. He sent an same leaves and one cone.

Yours truly,

J. Engelmann

St Louis, May 20 '71

Letter of Valuable yet

Dear Sir

a specimen from Fox
or 2 yrs. of L. Tweda good
and true from a rocky point
and you will be glad to hear,
I now understand your meaning,
returned to you a day or two ago.
I think I will write to Mr Black
and learn what he has to say.

This is the real old field Pine,
Seedling, but it may grow in swamps,
also, and have better wood here.

Twenty miles in Greenland, Mr Elliott
has been gathering for the Society
(Washington) on the St Johns River
in Florida. He has sent me a
small branch.

It may be that Mr Ruffin
and the others are right and their
swamp Pine
is a real Tuck in its nature
growth in disposal results. Visit

perhaps there will come an
the Lord provide "a lamb
"from the Centre off a large jungle"

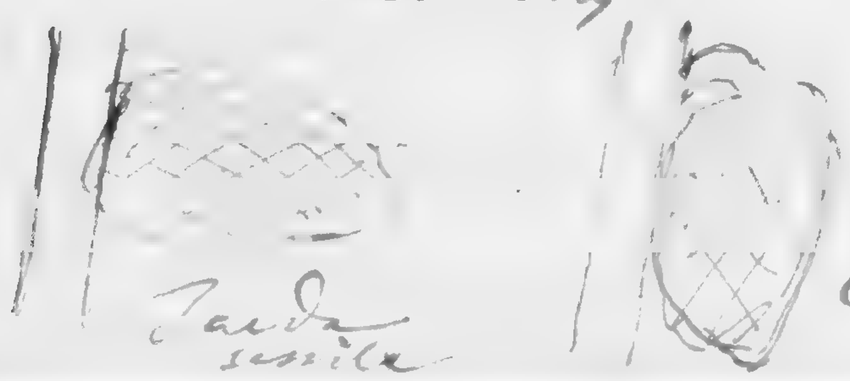
I have just written the
Lies and thought best to direct to
yourself - to do with them what
you think best.

The seed of the Pine-Apple
(same as the one you send me now a
(cad) have germinated — nothing
else of any account as yet — a few
Cer. gigantea.



The old cones of P. Taeda, rigida, serotina, mitis, pungens and others remain firmly attached to the tree for years

those of P. australis Elliottii, resinosa, Sabiana and others fall soon after maturity



Toronto May 18th 1871

Dear Sir,

Yesterday after the letter was off you 2 packages came with the Jamaica evidently Cereus. I take it to be Cr. Curtisii figured in Bot Mag. 3125 (which I will compare at Kew) & Anglitillae in Cactus Rogersii which Lowe says is said to be diff. from this work for himself.

The young Kea is, now – rather, quite blue – is that its living colour? Wright no recollection of having called it pin Cactus.

I have ~~[illegible]~~ that the "swamp pine" of N Car is certainly Fuch i.e. the specimen sent; and I gave you some of the distinctive characters. I include here some leaves in 2nd and 3rd of C. Elliottii which

you will find are larger than Lecoe.
Whether it will grow in N Carolina
and the Swamp Pine be this
tree, I do not know, and even
if the result of our investigation
is that Lecoe under certain
circumstances is a tall tree
150 feet or more, and excellent
timber it is well to know
that.

I return the Sierra sketch
after copying. I have a stereograph from Salt Lake,
which gives an excellent view,
but your ~~sketch~~ photograph shows
the bark better than any I have
seen. Have not yet seen the
Agave photogr. They call it
A. Americana var. because they
dont know better. Agaves are
like Yucca Quentin very much
alike and difficult to distinguish

— rise, some of them; I take it to be quite distinct from that species. Have you any Cacti for sale, Mr. Spencer?

I've spoken — or probably Volume of a book entitled "Macmillan's (from Farmer Island, Gulf of Calif.?) & I think I have seeds germinating, & said a live plant was in Wednesday. Do you know anything about it? If so, I should like to hear more about it so as to identify and get a bunch or two of spines.

Rather gone?

What is the "common hedge species of Cactus of San Domingo? Yes send me a specimen when it has roots."

How long you keep getting specimens of McCow's Vines, though so Comes. If you get anything approaching those Cactus, don't fail to let me know.

or if you get detailed description as regards of its being good shipping timber — in short if from the description it seems to be Muffin's plant — send it!

Yours truly

George Engelmann

George accepted on the 18th day in sending his diploma (and Kaiser Wilhelm) his thesis and another dissertation which received a premium in Göttingen.

St Louis Mo May 23d 1871

Dr C C Parry

Dear Sir

There is in North Carolina and the adjoining parts of Virginia especially about Albemarle Sound & Roanoke Swamps a pine which grows in rich swampy soil, is taller than any other, and furnishes excellent shipplanks, from 50 to 80 feet in length used to be sent to New York market, as Mr Edward Ruffin was informed by "Mr Herbert" in 1856.

The question is what is this tree, and what its natural history?

It was supposed that it was a Loblolly or Oldfield Pine, which old native swampy forests, and therefore different from the ordinary form, which grows in dry light soil and is almost universally of secondary growth i.e. on lands formerly cultivated,

also often abandoned.

The specimens of "Swamp Pine" sent to you by Mr. A. R. Black certainly belong to their same species. Does it show differently from the Old field Pine? Had it considerably the inhabitant distinct from it? Does it have more heartwood and of a better quality?

Mr. Chuffin's trees come in part from "Hanover" grown in "oozy slash" 3–5 feet in diameter and with 150 to 200 annual rings. Others, mentioned by him, come from Bertie (the mast of the Roanoke steamships of war and others) others from Washington County.

Do any of these trees occur individualy with 2 and with 3 leaves in each bunch?

There is another Pine growing in swamps all over the South, the "Pond Pine", which however, is worthless, and not tall; it comes near short weak prickles, while the yellowly has strong pungent knobs.

Yours truly
Dr. G. Engelmann

answered July 30

Illinois June 8 1871

Dear Parry

got your different things at last, one by one. But there is confusion with me or with you.

You send: "Cereus No 1 smooth top" "wording" also marked No 1. Section fig. 3 in same paper marked No 2

But the flowers sent are marked: No 2 3 flowers, "Azua" and "Port au Prince" all in same envelope and mixed: so, which is Azua and which Port au Prince I cannot make out. — Now which of No 1 and 2 are the same? Azua and St Domingo seem to be beautifully mixed up. Then there is a living joint of a Cereus, I willed "flowers and notes to come" —

These disjointed bits are all puzzles and rob me of a good deal of time needlessly, make confusion. I am too old to unmiddle them

I will return your notes in a few days.

So far, the Mamillaria is M parvilla which comes often from West Indies.

The thing said as "parasitic on Pine and Juniper" I suppose for Palmer, though nothing is said, is Cephalanthus, (I suppose) albo marginatus a new fact that it grows parasitic on Pines — I suppose you meant to say Chroococcus! —

Now about the Pines. Your Nuttall specimens are all P. Taeda: no Elliottii among them. Though disappointed in this, the important question indicated by E Chuffii is settled, as he already surmised that Taeda in the old original swampy forests is an excellent timber tree. I shall write to Mr Clark.

Don't let me suppose so many things in reading specimens.

The woolly head, which I took for Cr. Centrinii may be Cr Floridanus, Hort Berolin. but these

plants are all poorly described, and from Gardn specimens, so that the divisions, simplicity, etc are not to be relied on at all; it would be almost best to ignore all of them.

It is also probable that many so called species fall together.

When you come to Cambridge you will see our friends there; I wish I was with you!

Brewer has sent me a nice lot of Calif. Yucceae and among others the long covered Yucca whipplei in flower — different from any other Yucca and splendidly large 5 inches when stretched open!

I will impart to you another secret, some Yuccas have open spreading, or open campanulate flowers, others almost closed or globose ones! And both

are thus figured: good character, is it not?

Well, all Yuccas open at night and close in the morning — Campanulas — night, glories — daytime!!! Watch for Grey's subdivision Yucca! A Aristo to me — send me for your Yucca a few Yucca flowers and branch of inflorescence and a leaf or top of leaf of same plant to compare with my Californian ones here, with those I got from Carolina, just w[illegible] they need not be [illegible]

Yours truly

G. Engelmann

Stockholm July 7 1877

Dear Sir,

I have written to you a few days ago; but here follows another line, in answer to your last received yesterday.

You may make your mind easy about confusing me with particulars respecting what I call "Carex globosa" & "Carex globosa" Kunze. I give you credit for having at first found out the "Carex globosa" which was sent by Jurasky & characterized by Kunze as Echinosporus — if I letters by Egg — but that character is not peculiar to these globose plants, you find it in many Carex — & Phyllomacis! So Echinosporus is only an abnormal form of globose Carexes analogous in shape to the northern Echinosporus widely different in flower, and inhabitant, of

Chlorides etc. never found by Wilkes
in Sonora, unless cultivated. They
have seen in Prague an Echinocactus
in fact [illegible] of Cactus evidently was Chilian.
[illegible] seeks for the species [illegible] poor.
Have you any other cultivated [illegible]
[illegible] causes are very [illegible].

I suppose Watson has got my [illegible]
Yucca and Agave and is doing it justice.
To shorten the Agave confusion [illegible]
in some German horticultural periodical
where the genus Agave is attempted two
Names which interest us:

A. Kewensis California Hort Kew. with
broadly green foliate entire, very ligneous
leaves. This I do not recognize

A. Crenata Jacobi. Mezcal & Maguey
of Emory's report — Evidently my A. Lemaireana
which cannot be different from A. Palmeri (raised
from the seeds of Palmer 1869). — I had distributed
green seeds of 1867 — Lemaireana but had none
planted here — Have you any in cultivation
anywhere? Did you distribute seeds?
I had not the fruit from you — only seed
Did you collect any thing else! I have only
two seeds left which I want to keep as specimens
and try to get either more seed or young
plants which I may possibly get from Europe.
Emory's plant seems to be in cultivation
in Europe.

Yours truly

S. Watson

Wm R

St Louis July 21 1871

Dear Parry

I have your card of

July 5th, and you must have an fr — in

my July 7th — Well, these law Cases are

settled, and you are convinced that

Euphorbia, Cl. Olea has come on your

side — with the parasitic Euphorbia

it is the same !! and through

life forget I & L, pitty and worry

a naked !!

I don't whether I may go to

Indianapolis, if you go — they are

come here — perhaps perhaps he can't

this year.

Write I should be able to go with

you to Rocky Mts — also known

— perhaps I through the

Rockies with this Med. procedure

lets me here! — Yes if it would

for the origin other — Yr. your Cart

would be studied, as I speaking Texas!

I have recommended Jaeger who was here to write to you about your names of Mexican Gray Cactus & Engelm. Gray seems to be popularly adopted. Jaeger doubts the Rail A. Denver alt. I have given him all an. Data & I hope with them & his own observations, he will prove that we were near correct. He has not yet answered my communication.

Nothing another from the N C. I fear I suppose they are Kuntzeanet but don't care much about them — satisfied that all is Jacob.

Can you & Coy Lilang about Agave — Can you help me a little?

Yours &c

George Engelmann

Stockbridge Oct 28 1871

Dear Dr Asa

Yours of 2 Oct

Agave letter from Mex not long ago.

I have more questions of same sort, & shall

you will have to wait for Volumes & answers

some of them. Unfortunately he is somewhat

a little confused.

Of course he knows nothing of

A. Newberryi & A. Consesii (which I think

may have collected) but he told me he

recollected nothing about it.

In 1870 he collected flowers

you sent me last winter. They are in

excellent condition and very characteristic. Where were they collected?

He says that you & Palmeri

note distinguish two distinct species.

In Northern Mexico, the larger plant,

usual, as which I have only seeds

but in portion of Palmeri from

Pringle, 1869, of which I have fruit

& seed & yr plants. It is too small

and too poor for "Mezcal" Palmer mean.

To which of these do the agave flowers of 1870 belong? — I label them "Mezcal Agave"

You sent me July 1868 to Europe a dry specimen of A. Parryi, full of Molasses Candy, but without mentioning leaves. You say: flowers* 1 inch long [without ovary?] capsules dry [as in the agave] 1½ inches long, scapes 6–8 feet high [1–12 feet fide Palmer & Orcutt] "leaves lanceolate 2–2½ inch wide." Hitherto quite palmers

You thought so too, & so I, from other specimens, but — which I doubt.

A. Utahensis is well distinct from all others, I believe you enough, and will quit thanks for that Mamillaria for Pokaso. It is only another form of the polymorphous M. vivipara.

The last sentence is what interests you, and on which accord I write.

I have seen not help me much about agave.

Yours truly

J. Engelmann



28th I open again to thank you for the Opuntia information which will be, and for the "complete list" as soon as it is! It will help some. — Shall have inflorescence & flowers in Central Illinois & Kansas!!!

* How is you get the flowers

of Sejalacua is its vigour in Florida according to your measurement as in Yucatan besides Perrine figures and describes it as naturalized so Scott, Thompson & the Grove.

Now it is a most interesting cultivated species less form.

The mother plant is of Spain the Chelem of Vilmin & Schott and they vary in cultivation become larger also on form offsets &c of course preferable on that account. — The change in size is wonderful — but not more than we see in other cult. plants.

Thanks for the labels. They seem in too small type. But send on more, at least 2 sets.

Is the Florida Agave made use of for fibre? And what is the fibre good for, and that, imported from

Yucca vitata — what is
done with it? Pieces
[illegible] or [illegible]

I shall soon begin to
catechize you about Fouquieria
so you better make a clean
breast of it, before I begin
with the crucial proceedings —
size of trunk, length of leaves, spines,
panicle, scape — inflorescence — bulbs
bonality, and any thing else, you
may think of. — No flowers? capsules

Alton, Ill. August 2 - 1871

Dear Perry

I am very sick. I have chased drearfully on it Spain and then you have shock the right side in sending that Photograph. It is charming and as I learn that they have the negatives in Wash. I hope I may be permitted to retain the Photograph. It is better than I could imagine - only pity, as you say, that we have no measure for size. And here I have to compare Perry of 1868 against Perry of 1871. Then you wrote: scapes 6-8 feet high - now you suggest 12-15 feet - which is true? - Palmer said 10-12 feet (while his own, A Palmer, was 6-8 feet)

I cut the gordian knot and say 10 feet. If so, the canes are 18-XX inches long - 2½ wide, scapes 1½ - 2 inches thick "used for light canes by the party"

you say.

The shape and direction of the leaves and even their phyllotactic arrangement is pretty exhibited, and your friendly companion to a Mesosalane Algae American controversy — the only in the most latitudinarian sense.

Can you give me the exact locality? You say at base of San Francisco Mtns?

I have written to you only a few days ago —

In your letter of July 25 you speak of A. Antillarum and A. Lisalana. The former as I said shows larger and smaller flowers, but I never supposed them to indicate different species — am on the contrary, glad to find variations from different localities. Usually we get only single specimens (not to say fragments) and can not judge of the variability.

you say then that A. atrill. is a common native and cultivated plant in San Domingo? It must necessarily be already described, perhaps under some other name; for A. Atrillanus as such is unknown except by name among botanists.

Mad Lisalana! So Schott says he has seen nothing like it in Yucatan! This plant have sharp spines. — Can, could cultivation work this change? Why not? His flowers seem identical with yours,

You say that you find in Florida leaves with and without teeth or serratures, so the specimens, you sent me, seem to prove. But ~~if the~~ reviewer I find teeth, they are small, cartilaginous, whitish, not pungent. Do you ever find brown sharp teeth, such as most Agaves have? It would be important physiologically and systematically to know (what Agaveophiles don't know) that these conditions may be changed by cultivation.

Of Fouquieria we have first X form species, some with, others without teeth. Your Dr. Cubensis specimens have all smooth margins — had the old plants also no spines, — the Fouquieria Schott gathered in Yucatan is quite young.

Schott collected flowers of wild cultivated sisal hemp — so he must have seen them, and as I said above, they the flowers resemble your Florida flowers!

Your Florida plant has a character which I have not seen in any other of Agave. The terminal spine of leaf is terete, not grooved, while in Americanas & others it is always grooved. Pity we have no leaves of Schott's — to see how that is with him. It seems to be a good character.

The leaf of Palmer's you send is much like the photogr. leaf of Váry's.

I should like to get Hay's report on 40 lands of which I learn the 1 vol is out.

Also Agricultural Report with Dr Williams investigations of Cattle disease & fungi in Hallier.

Also is Thomas Taylor now 20 Agr. Bldg, who wrote me on Grape fungi? —

Yours truly

G. Engelmann

Oldenburg Sept 24 1871

Dear Jerry —

a few days ago got your first Washington Correspondence — had expected more from Davenport — but suppose you was so hugely enjoying yourself in your liberty, away from your Journals, carpet (rather shabby now!) that you find no time to or notice answer my long letter of Aug 25. The other day your welcome and undoubted Engelm. from Hall delighted me — tardy the flowers of Cirotis and the nice Penjells Thanks!

Agave & Yucca are in a state of quiescence — dormant for want of more material — Schott, however, has at last unearthed his Boundary Agave which is a little different from Palmer's flowered. Poor Schott is roasted again! I have given

him a letter for my cousin, J. Allgard of the Coast Survey — whether it does any good? I have not heard. Is Palmer & Daniel back? What are the mining prospects?

You have of course Watson's new Utah flora. He sent me the appendix the other day — a good idea! The appendix of the appendix gives many Sierra species, which will interest you.

You gathered a Sierra in Greenpoint July 3d and sent it to me. Shall like to get some ripe capsules, and seed and also a leaf or two.

Seen Meehan, Hooper, Conley & others here just from Colorado — but I believe I have told you them already.

Mr. Engelm. was the only Rocky Mt. species of Conifer not found west west — and now that distinction is vanished — All Rocky Mt. Conifers occur in the western Mts. but not all Californian — in fact all Mts.

I think I must close as sterile Picea with pendulous branches which Brewer sends from Calif or Oregon. with Esq. I shall hereafter referred it to Menziesii as a very narrow leaved form.

I suspect that you are the man at whom my shafts ought to have been directed in place of "poor Palmer". Well I will not get excited again and will let you settle the matter with Palmer, when he is back, not trusting to your mediation! Would you be glad of it?

McClean says N. Rigida and Sonderiana look very like.

I know that I had other things to say but can not remember now — so shall have to write soon again.

Do thou likewise

Your Tr. G.

G. Engelmann

St Louis Sept 30th 71

Dear Parry —

"give me your sympathy" Yes, of course, and more than that! the deepest indignation on account of this miserable affair —

Yes, more! I suspect that your and my letters have been opened and abstracted. You speak of "several official letters" which you have written; I have got a single one only since you wrote to me from Davenport, Aug 24. This letter was dated Sept 16th, including Halls Abiss Sagelen, and was answered Sept 24th — so, I see, you could not have had it at the date of your letter. After that, 2 or 3 days ago, I got an envelope in your handwriting with blank franked envelopes — mused a little inwardly about your sending no line

with the blanks. Wonder whether you got my letter. I contained a request to send me another cap and capsule and ripe seed of that same Yucca, of which you had sent unripe fruit in July — spoke about Schott (never thinking you would be in same predicament!) and asked about Palmer.

I was preparing to send a specimen collection to the department but of course do not now care to take the trouble.

By the way, I sent to you to Lawrence Aug. 25 in answer to your letter of Aug. 11 did you get it? I did I spoke about the germinating of Agave & Yucca after flowering; and I now repeat the question whether your Yucca (mentioned above) does only sprout from the subterranean stem, or from the ~~the~~ between the upper leaves, at the base of the scape.

Let me hear from you soon again. and I will promise to answer at once.

Yes Palmer Cook! I shall have to return a few flowers of his, I have — as none seem to remain in Washington; — seeing which he may be able to recollect something about them.

I have unfortunately does not want any one for 2000 — perhaps if you 'can' do his work for 200 — and then — only perhaps —

If you go south, I want to hear from you, and instruct you.

Has my old friend Peck anything to do with this? I hope not.

The California wool business has been through our papers already — but it was not said that it came from this official source.

The "plane of the tenses" of the Compass plant is not tens. 'north & south', but each side of the edge is thus north & south. see page 272 Sept. Rep.

Answer soon.

What shall I do with all the blank envelopes!!

My wife [illegible] best regards — & sympathizes if you don't know better, come and stay a while with us!

Yours Truly

G. Engelmann

Anything about Schott?

Moorsi Oct 17 1871

Dear Parry —

Yours of 12th rec'd this day. So you have got my letter — no harm, if others, officials, read them: Glad you are at Sandy Hill! Well do I remember the place and the folks! Give our respects to them.

Glad you are working to "hoist" these "dolts" — I never credited you with such spirited resistance. Hope you will succeed, but I always believed as you seem to also "politics mighty uncertain".

I did not know why no answer came to my letter, — but suppose they found you only lately.

Meanwhile I had a strange apparition from your State of N.Y., in the shape of an Arcanthobium! What do you say to that?

Prof Peck of Albany has sent me a branch of Abies nigra from

"in marsh in the town of Sandlake in Rensselaer County"

It is a singular form, diminutive. 3–5 lines high, simple, never branched, but perhaps not distinct from the smaller Rocky Mt. form. But the whole ground must be worked over again, which I am going to do now. The specimens are females, and they have given me some clue to the vegetation of these plants which heretofore was to me quite unknown. — Try to hunt them up — if its not a Sandlake, it is a sandhill where you live!

Yes, you sent in the Huron fern & seed last year; but I did not know they came from the same stock that furnishes flowers and mature fruit this season. Several species of Yucca have contrite fruit.

I am studying with considerable interest an Italian work on

"Dichogamia" the fertilization of stigmas by the pollen of other flowers, which had long been suspected, even asserted, but was brought conspicuously forward by Darwin and has been much studied since.

The subject has interested me particularly on account of Agave and Yucca. In the former the pollen is shed long before the stigma is developed; in Yucca the same fact obtains in the former it is by the long exserted anthers, if it is given to the air, in the latter it is shed in the closed bud. And how it finally finds its way to the marriageable stigma (as my Italian says) is to be found out. The details of the wonderful apparatus of Lobelia, Campanulaceae, Compositae and many other plants, but don't mention Yucca.

but all that don't interest you now — you are like the Frenchman just now only Growing vengeance!

You will know by this time that the Academy of Chicago is also burnt, completely destroyed. — Those fires in the North must have been even more horrid. —

Let me hear from you soon!

Yours Truly

G. Engelmann.



A friend who just comes from Lake George says that our hotel, 15 years ago, was nothing but a Cottage compared with the present structure. So we have to go again for a fish fry and hunt Arrowheads!

3003 Locust st St Louis Nov 21 1871

My dear Parry.

I had a good letter from our friend Torrey a few days ago, and yesterday yours of Nov 15. Thanks for the interest you take in Agave and for the unearthing of further material. I had thought that Torrey had sent me all his material, and I do not know what all you have sent me last spring — There was this same no. 1906 of Wright's (flowers only) among them — and I was under the impression that it was from Torrey's herb. — There was also a plant of Lawberry's with Torrey's own handwriting (Lewis Expd) which I felt sure came from Torrey's herb. So it not so — but then, if he did send me through you those things, why not the others with you now mentioned? Has a Dr Parry (more one?) created a little confusion in the hurry of overwhelming urgent business?* The best thing to clear up

* as is the case with Wright's Texas plants (how spell?) To Sullivant etc?

these doubles will be, to give you a catalogue of the specimens of Agave received from you last spring. And you will please tell me where they belong; and — another question — to whom shall I return what belongs to the Department? I would prefer to keep the things a little longer in my hands, partly on my account and partly on the Department's.

Now to your notes about Agave. To be sure I am almost sunk out of sight among the Arcanthobiums, but still retain a faint love for the stately Agaves, which might very easily be fanned into flame again if the coquettish beauties had a mind to.

Please give me a full description of Thurber's Chihuahua Ag. 714. I have one from Wislizenus from Chihuahua — fl. for & leaf (leaf broad, spiny, abruptly long pointed — fl. panicled). I suppose Wright 906 is a larger flowered form of same but how Thurber's "narrow leaved" plant can belong here I do not know.

* I call it A. callosa, on acct of the swelling at tip of ext lobes of perigon.

Schott's * 1855 "Siem dolos Jnos" from Schott himself, — very peculiar. I have ~~[illegible]~~, and it is not exactly, it may be a different thing, one of Schott's.

Emory's Report p. 89 speaks of an Agave on Oct 18 (not 19", as you write) but apparently without flower. — A sketch is given on the 2d Cactus plate (No 15) of which the explanation says: Oct 22 abundantly 3 feet high, "fruit 5 inches long" [lines ??] I add: probably an Agave.

The "flower of the Agave from Villcito" is a good thing.

The flower of A Americana p? latifolia which you sent, is valuable. But pray tell me, where does it belong to? To Bigelow's Rockcreek in Texas, or Emory's Copperminee plants? It would do to mix up specimens. Please find out & let me know the descr. of Capsule in it Bigelow's — I suppose that both the flowers ~~& Capsules~~ belong to Bigelow, as Emory does not mention fl. or fr. or scape on Oct. 18' but then, you send caps. & seed marked Oct 19. So I refer the flowers to Bigelow and the Caps to Emory.

Cut away with Agave! Arcanthobium is the thing.

I have plenty of Material and hope to make a good thing of it — I suppose there are more species hidden; and your New York plant, though close to A. campylopodum, is I believe distinct. I name it A. minutum. I find that the male flowers and their arrangement gives excellent characters. But I must do as I did with Prion, soak every specimen, and make a drawing of it. I can tell you now that A. Amnicola is a fine species — and always on P. contortus or (on the Saskatchewan) P. Banksianus. Yours of Middle Park also belongs here.

Has Torrey no male plants of Phoradendron juniperinum? It is a new genus or at least subgenus, but males are necessary before definite conclusion. —

But you take little interest in these things. I cannot write our friend Torrey about them — especially as you say, he is also studying them. So he will be able to appreciate the secret of the mysterious middle.

Write soon!

I forgot to say that Scott applied to me for a sort of recommendation. I thought proper to decline, as long as your case was yet pending. So Watson has peremptorily declined. Who will take up the mantle fallen from your shoulders? Silly if the plants & microscope should fall into bad hands! O the politicians, the bungling rascals!

Yours ever —

G Engelmann

Agave-Antillarum, Descourtil. I find not in my books. You have sent me a leaf, and flowering branches and flowers. But there are two sets; one with much smaller flowers than the other; do you recollect which is which?

What is size of panicle? You say largest branches 1 foot — therefore diameter of panicle 2 feet — length?

Scape 9 — 10 feet high —

The two sets of flowers are interesting, showing how they may vary in size and somewhat in proportion.

I have a capsule from you, but no ripe seed — may you have any?

Dr Lisalana is so named by Torrey & Gray and nothing in the books about it; probably [illegible] by some other name. Torrey's Report (1838) I have; the plant [illegible] in his entire Botany. No [illegible] the one he introduced in Hooker. But now is it that Elliott's plant is herb [illegible] in Botany. Report

also bulbiferum

is a very different thing, with spring leaves etc. I want you to settle that matter with him. He never mentions the Sisyrinchium, without spring leaves, only mentions the tubers for August, & the fourwings as a fibrous-plant. — I have written to him.

I have the N. Mex. Agaves in pretty good order, almost ready to marsh up; A. Wyoming just flowering in my yard has given me a good insight — ought to see the others alive also.

It is only your & Vilmorin Agaves with panicled flowers that are in confusion yet; the spiked ones are all right: the specimens of panicled ones in my hands are the following:

folii's coulcatis – dentatis:

1. A. Mexicana Sam. West N Mex. Wright 1906
only flowers; Wall specimens from
Dr Wislizenus from Chihuahua

2. A. Parryi E 35th Parallel seeds only
(186) seeds larger, plant larger,
then next; Very plants in Europe

3. A. Palmeri E. Tucson etc Thurber
further south, then Dast. capsule
seeds and leaf 1869 (but without point,
base, or margin!! Can't you send
a better one?) and now very plants.
The same? flowers, Palmer 1870
very different; but do they belong
really to this plant?? As Palmer
and you thought all the same,
it is difficult to decide.

folii integri storis

5. A. Newberryi E – Lower Cal.
an incomplete sp. – Hb Torrey
but probably very distinct

folii ignotis

6. A. Cowesii E. from Fort Whipple
flowers only –

So you see there is difficulty which probably only another collector will be able to solve.

The spiked ones are all right

A. parviflora Torr. very pretty and distinct.

A. Schottii E. (A gamiflora Torr)

A. heteracantha Jacob (A Lechuguilla Torr)

A. Utahensis Eng. (St George.

So you see we have abundance of Agaves.

Palmer says the northern plant (No. 2) is the Mezcal Agave (as you do also) and adds that his Thurber plant is too weak and small to be used thus.

Have you any capsules of your 1867 Mezcal Agave?

The Utah Agave has germinated.

List of Agave specimens sent by Dr Parry to Dr Engelmann from Washington in the spring of 1871

A. bundle supposed to belong to Capt Parry

A. Newberryi Engelm. p.t. Peacock spring glued up Arizona

A. Virginica Bigelow, Arkansas

A. macrodon Hook. Wright 1905 N Mex

The same Camargo, Schott

A. Virginica Aiken S.C Ravenel

Fourcroya Yucatan Schott

A. Lechuguilla Mex Bourd 1432

same Wright 682

same Wright 1907

"A. geminiflora" Mex Bourd 1433

"A. vivipara" Yucatan Schott 201

A. Sacqui " " 202

Agave floren Wright 1906

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B bundle from A Schott, plants not glued

"Agave geminiflora" Schott 1855 Arizona

A. parviflora Torr Schott 1855 (a lovely spring)

A. macrodon Schott 1852 Texas