Ans Feb 14
Mar 26

Boott?

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

July 20th 1881

Dear Dr Engelmann

I am very thankful that you have sent the Pinus Ellottii to my friend Boott.

I could not see any difference at the time (1873) in the Abies I found ~~on~~ near the timber line at Gray's Peak, – a rather lower for they commenced to get scarce as we rose up from Baker's Mile, – and those I saw in ~~the~~ 1871 on Engelmann's Canon, – but if you say they are they must be, for you have had better chances to com-

Re two plants I have —
Of course when I said
"never produce seed", I meant
so far as I had ever seen
or heard of. I should not
suppose it impossible that
some ~~the~~ cones be found
"just above the timber line",—
I suppose that there were
many much higher than
those you saw which had
no seed, and if so, this
would still leave the
inference just where I
placed it. I am very
much interested in knowing
just how this was, for
if the scrubby trees do
bear cones freely at
the highest elevations

that they reach, it would
surely cause me to
change my views.
No doubt climatal con-
ditions have some influence
in defining the timber line,
but there can be I think
no dispute that through
the climatal conditions
remain exactly the
same, the timber line
must get lower as
the earth wears down
and leaves the rocks
rock bare.

Sincerely as ever yours
Thomas Meehan

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec Febr 26
ans March 3

July 25 1881

Dear Dr. Engelmann

While arranging drawings for 2 vol series III of my flowers and ferns, I thought I should like to include an Echinocactus I received last year from Southern Utah; but have not yet got it named. Can you tell it for me from the drawing enclosed in a parcel by to day's mail.

While sending I include ~~thought~~ three others to see if your determination agrees with mine. The Habenaria is from Washoe Valley Nevada, the Erigonum, the common one of the Rocky mountains, — and the Solidago one of the common ones of the Eastern States. Sincerely yours

Thos. Meehan

Rotterock has just
returned from Germany

3

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Cars connect [illegible] Germantown, [illegible] Street.
Horse [illegible] Eighth Street, direct [illegible] Street.
Chestnut Hill [illegible] Vergas Lane Station, is ten [illegible] walk from the nursery.

Germ[illegible]town Nurse[illegible],

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec June 2

May 31 1881

Dear Dr. Engelmann

I send with this a flower of what you thought when you saw it here might be Mammillaria Mutallii. In comparing it however with the description I am not satisfied that it is that and would be glad of your re-opinion. I send the mamma which was below the flower. I have five plants, and it was interesting to notice that each had three flowers to open yesterday — & these flowers at exactly the same moments! Is it not an interesting fact in plant life? but each plant has yet more buds to open. To day, my Mammillaria vivipara is in flower, —

more beautiful than I ever had before. The flower is nearly as large as these I send you of this species. I have lost all recollection of where I had this Mammillaria from but I am half inclined to think it must have been from yourself; perhaps five or six years ago. Is it a Texan? I have an Echinocactus with a yellow flower, which some unknown correspondent sent to me some time last spring. I have no idea where from. It is about four inches high, conical (almost columnar) with a fearfully pachydermatous character, very short but very thick spines, and the one flower (not quite open) looks as if it might be much like this Mammillaria in form and color. Along with it came a plant of what I take to be Echinocactus.

I hear that you are

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THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

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Rec June 2 —
Ans same day

188

Laid up, I hope you are better now. Try and take care of yourself for our sakes. What we want to do in Cactae after you are gone? Only that after all our care the youngest, even I at 55, may go before you. Even Threepence and Ten I should be tempted to go again into the critical study of Cactaceae which was among my early loves. At Rest in 1845, I was the little kisp among the Mor boys on Cactaceous matters.

Sincerely Yours
Thos. Meehan

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec Jun 13
Ans ——

June 11th 1881

Dear Dr Engelmann

I thought you would like to see two yucca flowers which I send to day. One - the green & large flower, and the shorter leaved - is from my own collection in 1871 from Little Park Colorado. The white & rose flower with long leaves is from Rand Parry & gave me a few years ago. I believe he collected it in Utah. I think he gave it to me he remarked "it is like arenosa, but may be a new species!" They both have opened their flowers to day. The leaves of the "new one" are so much longer, that they scarcely much narrower, they seem much to resemble the young plant. The flowers are scattered on the stem, - unequally

very dense. You will
substitute the Glowose perianth
variation, & other differences
what shall be its name?
Lilium Grayi is just opening.
It has good points from
L. Canadensis. I had an
"Lily root", sent me from
Woburn Ontario. It looks
very much like Pitcher's
Kamschatcea. Did you know
that it was found so far
East. Kunth seems to
indicate that it might be
(Lycopsis) As it must be Gram
millesia Missouriensis,
the description must be
altered from "petals white"
to petals greenish brown.
There will be another crop of
flowers in a week or two.

Sincerely Yours
M. S. Wheelan

Rec June 24

Ans

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

June 24 1881

Dear Dr Engelmann

I have a horror of species making. No one knows better than I how plants vary from seed. Without I am sure if you saw these two Yuccas as they are growing here you would surely believe them distinct, notwithstanding the green apex to the ovarium.

The Y. angustifolia has slender pedicels, ~~[illegible]~~ perianth (tapering from the pedicel) much longer than wide, segments papery mucosa, tapering, and nocturnal. — The other has very thick pedicels the perianth rotating from

Opuntiae Re Y. filamentosa, – but they do nutting towards fertilizing them, – but Y. angustifolia has always fruited very well by my merely touching the green apex with the flowers own pollen, – and this is why it seems to me that apex must be stigmatose. This new? form seems inclined to fruitfully the same process.

I had Mamillaria arizonica

the petal, the segments almost orbicular, smooth, thick, shining, — and diurnal. May expand so during the day, that if the segments were not incurved, the flower would be literally flat.

Mr. Porter was here yesterday, and said that with your great knowledge of species, he should feel compelled to bow to your decision and to feel that you must be right about it, — but that he should not hesitate under other circumstances to refer them as distinct.

The Producers infest the flowers just as do

in flower a few days ago. The flower is much like M. vivipara but the appearance of the long cottony white spines and larger growth of plant, is very different. I suppose you regard it as a good species?

Very sincerely yours
Wm R. Sweetser

Rec July 7

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

July 4th 1881

Dear Dr Engelmann

Rothrock has been made full Professor of Botany in the University, at $1200. a year. He is nearly broken down by hard work.

There is no doubt about the new form of yucca being a day opener. The flowers at midday are as nearly flat as an Opuntia in the sun, only they turn up and incurve at the edges, saucer like. I know no yucca that does like it. The texture of the segments is a striking peculiarity. These are thicker than Y. filamentosa, and very polished and shining. While I should not hesitate to regard it as a good species, there need be no hurry about it. Another year I can get you to review the matter. It is of far more importance to convince you

than to risk more specimens, I hate them. I am anxious to sow the seed of both this and the normal angustifolia, but I will send you a seed vessel of each, (which you can return as soon as you have done with them. They will be ripe in about two weeks.

Do you know there are some puzzling things about the time opening of flowers. Some closely allied Oenotheras may be either mid day or vespertine. But what bothers me is that the same species is not uniform in different years or in different places. A few years ago I watched, daily, through the whole season, and found Talinum teretifolium open at one and closed at 2. P.M. — This season they do not open till 2. and close till 4. P.M. So of other things.

In regard to the timber line question, I see your observations were, as I suspected, — the spruce dwarfs were not much above the timber line, now I know of nothing in my observations to lead me to think that the scrubby pines may not sometimes seed, — my point is that they do not generally do so. My assertion was that in observations extending over ten years I had seen numerous cases of scrubby conifers, often a thousand feet or more above present timber line, which bore no cones, and yet were in situations which showed that they could not have germinated there in the first place, without the proximity of some bearing trees. Your observation of some cones just above timber line on Pawnee Peak does not in the least affect these facts.

again your observation that there are often grassy slopes far above timber line, is essentially correct, - but the inference that they ~~have~~ had been there "perhaps thousands of years" I much doubt. I examined this matter very carefully on Roan Mountain. To the southward is a grassy hill which I determined to give a day to, with the express purpose of studying up this question then on my mind. I found a thick sod of Danthonia compressa, with the earth probably 2 feet deep at least over the rock. There was however a spot on which you might jump down from a two or three feet rock, without feeling the ground tremble under foot, showing that there were hollow places underneath, and which gave the elasticity to the

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THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Surface Soil. However ~~in~~ 788
there would be here and there
a tree standing perhaps 100 or 150
years old, in the midst of this
huge slope of grass. Careful
examination among the grass in
various places ~~where the~~
showed still the black earth
of a dead stump, showing that
at some remote date the grassy
slope was tree-covered. In short
I found that the grass had grown
since the trees died away and
that the soil had accumulated
since then, by the power
which the grass has of holding
the particles of rock together,
in spite of the washings of
rain or melting snow. No
doubt some favorable
season will come time
scatter seeds again on the

grassy slopes; trees will cover them, the grass be destroyed, and again the soil will wash away and the trees die — and so the round of perpetual change go on. The barometrical objection you make seems to have some force. Still as you put it it is only a question. Perhaps the answer might not be what you think. Whatever the answer might be, it cannot invalidate the facts I have scattered. ~~such the and~~ The other question you put, why does not the same phenomenon occur on a lower mountain? It does, as I have myself seen in the alleghanies of Penn.

Sincerely Yours

Thomas Meehan

Ans Oct 3 2

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

Aug 30 – 1881

Dear Dr Engelmann!

I must risk dispute with you that the yucca is or is not a new species, but I must maintain that, outside of the green apex, there is more difference between its and angustifolia, than between angustifolia and filamentosa.

I repeat points made in my note Book June 16th at mid-day:– outer divisions of the perianth, roundish ovate (1½ inch across) waxy like, smooth and glossy, very pink tinge among the white; inner three pure white and waxy, orbicular, 2 inches across, three lobed above the middle, perianth broadly expanded, the tips of the opposite segments being three inches from each other. a bitterish liquid oozing from the whole outer surface of the

of the perianth.

The same day green angustifolia — outer three divisions of the perianth (two inches long by one wide) ovate, over 2½ × 2. terminating in a dark green point; all the segments light green, thin, and rugosely veined; closed; also exuding a bitterish moisture.

The seed vessels? send you. While green they have a more marked difference than now. In the "new" one there seems to be three holes, a half inch from the apex of the three carpels. If you will look closely at the tip of the disseptiments you will see what I mean

In order for a fair comparison, I have sent the lower most capsule on each panicle. — For will notice the longer and slenderer pedicel in Sp. longistylis

They were artificially fertilized by pollen placed on the papillose apex.

No insects appeared when these were in flower — not till the blossoming was half over. No seed vessels came after the insects appeared, though hand pollinization was kept up to the end. When the insects appeared I sent all I caught in one flower to Hagen. He reported they were all males — 4 Bromelia 13 Amodoxus.

Mr Riley came here the next day after I sent there to Hagen, and took many hundreds away. He respects all this insects Prodromus.

I send the capsules — the large round one is the new one, — the next largest is Z. amphiphila, — and the smallest is Z. filamentosa for comparison.

We were all very sorry not to have you at Cincinnati. There was not however much Botany, or papers treating indirectly botanical science,

Very Sincerely yours
Thomas Meehan

Rec Feb 23
An — 28

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

July 21 — 188—

Dear Mr. Engelmann

I have just read the "Grass Cloth" in Bot. Exp. My plant is nothing like it. It does not branch, the inflorescence in fact, in this respect, is just like a Amaranthus. From what you tell me, I am nearly sure my plant is from Darby's original seed, but I am not sure enough of it to warrant me in giving this as the fact. All I know certainly is that Darby gave me a packet of seed with the remark, that it was

like Angustifolia, but might prove a new species. I have had this plant about this many years, but the label being lost since last, I can not say positively it is from Nancy's seed.

Mich Snowy Mamillaria I can give no more information about now. It is in a cespitose mass, as Bonney the warm weather comes, I will split off one of the offsets, and send you. If I do it now they will not. It is a pretty species, and I am very anxious to get it accurate.

I send you to day some specimens I wish you would glance at for me. I had sent me some Tweedy specimens some time ago,

and among them two — we
named Opuntia tortispina
the other Cereus polyacanthus
since then Greenly has
sent me the better specimens
I now send, and I doubt
my own determinations.
also I send you a Mammillaria
from a lot in Rusby's
collection. He makes
miserable Cactus specimens.
Write M. Grahamii with
fewer spines than commonly.
The Academy of Natural
Sciences, though with an
excellent herbarium of
North American and other
plants, has no Cacti.
I shall give it all mine

and pay special attention
to buildings in the
future. Have you any
duplicates you can
reasonably spare for it?
Write be an act of
Botanical charity we
shall all be grateful
for.

Very sincerely yours
Thomas Meehan

Should you desire to retain
some of these do so where
they will divide - or if
you want them all do so,
as you will no doubt have
some pistas food you can
give to the academy.

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec March 13

March 9 1882

Dear Dr. Engelmann

Much obliged by the suggestions about the Cactus. I will label the Mamillaria M. Wrightii, as you have no doubt of it. I have written on the label that the spines and aculei are downy, though not stated in Engelmann's description. I have since had another specimen from Rusby, in fruit. The form of the fruit, and the aspect, are as you have figured, but the crown formed by the dead flower is fully as long as the fruit itself, and but this may be of no importance.

Looking over Martindale's herb. I saw a specimen of your M. deserti, from Parish, and the appearance is precisely the same as the Arizona one. I sent you fruits of in the fall. This is not in fruit. I send a fascicle

from his specimen, and one from my plant, except that one has rather shorter stamens than the other. I think they must be the same thing. But it does not fit your description in Bot. of California in the following particulars.

The fruit is vermillion purple when mature, — not green.

The plant is caespitose, not in single upright stems; and it is larger than you indicate. My plant is in three branches each about ~~three~~ four inches high by three wide and they taper rapidly into a conoidal outline

May I for all this label it M. deserti? It was one of the first sent you by Vasey; and I supposed it then to be M. arizonica.

Sincerely yours
M. E. Meacham

(me) last

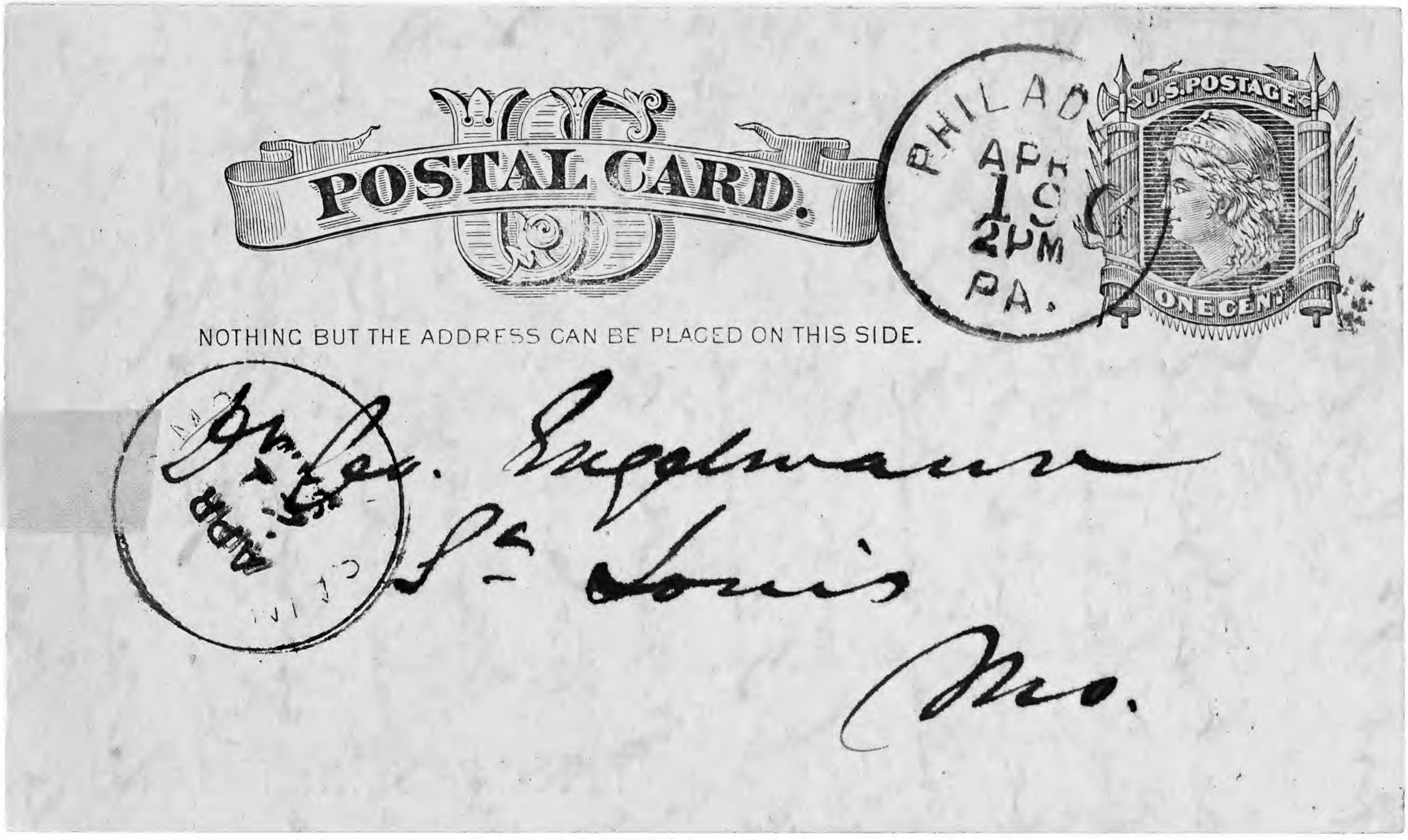
GERMANTOWN NURSERIES, near Philadelphia, Pa.

Rec'd Apr. 22

Apr. 19 188[illegible]

I am very much obliged by the seeds, and by the Jewelers paper. It is strange how much of interest there is yet to learn. In a few weeks when the weather gets warmer, I will send you to look at my plant of Opuntia "Versicolor" with Red fruit. I have now a seedling O. deserti and I see it is not that, though the spines are so much alike. My O. Rutteli, which flowered last summer, and I sent you a flower, is only now maturing the fruit. It is not half as long as the Maxima!

THOMAS MEEHAN.



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THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

May 27 1882

Dear Dr. Engelmann,

In order to get your opinion which advantage, I send you my Manillavia for you to look at.— The one which I thought might be Arizonica, until it perfected the purple ovate print, I sent to you last fall. I believe the flowers come out from the centre, but it was out of flower before I had it (from Vasey) last year. I enclose postage for its return when you have done with it. The spines are much like deserti, — but the numerous small flowers, and coming from Repandus Rio. Deserti is just out of flower with me. It is an insignificant thing, — not as pretty as Cereus Rio Grande which is also just out of flower.

They are barely half as long as the Mammoth and round. I suppose this is the M. Mutt. cuspidata of Porter's H. Col. — but what is it to be if the species goes back to M. missouriensis? Is it usual for these peanuts to keep their fruits so long before maturing? I have a Mexican species which does the same. It flowered last summer, and I supposed did not seed. But recently it has pushed out the seeds in a half inch above the mammillae and they are pushed out all in one night! Is there any more recent or better work for Mexican cactí than Walpers? His seems very unsatisfactory.

Sincerely J. Meehan

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THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

2

188

You remember last summer I sent you a flower of a Marillania you had named Mittalliana for one some years ago, as I thought I saw some differences from the published description - you considered it to be same, but that the name must be M. Miscomensis. I was annoyed that the flowers seemed to die away without fruiting. In the Spring - in early May - I was working among them, and knocked off an old ~~flower~~ dried flower, which seemed as much dirt as flower, and found pale-rosy-white-green-fruit beneath. With a few warm days they began to color, and for the past two weeks the plant seems as if bestudded with bright red holly berries.

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec June 12
ans Aug 12

Dr Engelmann
Shrubs cite
Pseudo-acacia Jam.
Gymnocladus & Fraxinus
Pennsylvanica alone id?

Phila 8 1882

Dear Dr. Engelmann

I am very much obliged by the trouble you took with the Macmillania. Unfortunately we must wait for the fruit till it flowers again, for I have no seed of it now. The berry was broadly oval and red, this is all we are safe in saying. I am very anxious to get my collection accurately named as I go on. Even from the most careful persons I get all sorts of things. I bought an Opuntia rutila from Parish. It has just flowered, and I see that it is only a very strong form of O. Missouriensis, and not rutila. I bought a Manillaria of Henchman, which is certainly but a form of Cactus spectinatus, and

"As it goes".

Cactaceae seem to flower very well with me and I have great pleasure in their study. At the present time I have open, M. missouriensis, mammillaria, M. missouriensis, and M. deserti. When I said the last was insignificant I should have said unattractive. But as the days get warmer it brightens.

In May I have in flower Opuntia rafinesquii. I was glad to note it, as I fancy there is a closer relationship between Portulacaceae and Cactaceae, than generally supposed. All I could make of it to day is that it is not quite so near Opuntia as Portulaca is, unless it may be to other species of Cact. There are white and pink flowers among them. I enclose a fl. of mam. deserti. Sincerely T. Meehan

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec July 4th
ans July 12

July 1 1882

Dear Dr. Engelmann.

I got home yesterday. Yucca all over. I know the earliness is of no great consequence. I only mentioned it that you might have all the facts. I am not anxious you should make a species of it. One who sees as much individual variation in it do, rather commends the prudence which hesitates, than the courage which rushes into "new species". Indeed I wonder who could have made Opuntia vulgaris and O. Rafinesquii distinct? I watch them from day to day. "But the seeds"? But why should these not be variations here as well as in oaks, hickories or beans? I send with this a specimen of one I have written to you before about, and which I was under the impression I had from you

years ago, under the name of "O. Raf. Optocarpa". You will see whoever named it, was badly astray in "Optocarpa". I am out of conceits of living plants Cactus varietal names, but this deserves one. I think rather than does O. vulgaris from O. Rafinesquii. The frond is thinner the spines very slender, and the stamens rather shorter in proportion to the length of the petal than the other. ~~I showed not from~~ ~~the botanist giving~~ and a little glaucous - but I should hardly favor even a varietal name from Rafinesquii. I begin to see that those things vary like a lot of gooseberries. I bought an "Opuntia rutila" of Parish which is certainly only a stronger growing O. Missouriensis than I have seen. You will see by the enclosed what Parish says of it. You can keep the "O. Raf. Optocarpa", if of any use to you.

Sincerely yours

Wm. Meehan

This "Optocarpa" is a pretty "florists" variety, and I must give it some distinctive garden name.

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec'd Aug 19th

Aug. 18 1882

Dear Dr Engelmann,

I shall be back from Montreal by this day week I think, — say Sep. 2nd; but at any rate Martindale, Parker, and Redfield will be among the "Friends at home" to look after you. You must try and spend the Sunday with me if I am at home. Redfield will know if I am back. I hope I shall be for I have lots to show you. Especially cactuses. I think in Opuntia fragilis longispina, I have a Cleistogene; but am not sure. I have a few more buds coming on, then I shall know for certain.

Mammillaria phellosperma and M. Wrightii, both seem in

flower. The first blossoms on each opened within 24 hours of each other, – but the flowers are remarkably distinct. I have received 1 Pot ~~the of~~ of Ref. "Solo-Carpa" printing. now that it is getting to that stage it is ~~[illegible]~~ quite distinct, – though I do not know that the distinctions are of specific value. I did not know that "Solo-Carpa" was your name. I thought you had repudiated it, when I called your attention to it before.

I enclose some curious leaves in the direction of Durbus, from Agnes as Butterflies

Very truly yours

Thomas Meehan

I expect one of the Parish's from San Bernardino, here in a few days.

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Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

Rec Jan 29th

Jany 26 1883

Dear Dr Engelmann,

I am glad the note on C. Sprengi interested you. I am sorry I did not have drawings made of the flower. But a year ago the publisher of my L & L. died suddenly, and his estate got into law. There seemed so much uncertainty about the work going on within any reasonable time, that I stopped the work of my artist. It is only a few months ago that the publishers affairs were settled, and I felt warranted in looking up another publisher. I believe I shall have one soon, and if so, I hope again to go on with my drawings, and other work. I am not idle in Botanical work however, having engaged to prepare the Miscellaneous botanical chapters for the American Supplement

to Encyclopedia ~~Brittannica~~ Britannica. I have printed to G. I expect with my wife to be the three months on the Pacific coast from June next. So am working a little hard to get all my cards ahead.

The seed was expelled from the apex of the seed vessel.

I am much interested in what you say of the Ruellia. When we think of the structure of the seed vessel, I should not wonder if a similar experience might not be had with other Acanthaceae. I shall watch them when I get a chance with much interest. But so far as purpose is concerned, though I feel sure there is purpose in all things, I have lost faith in the idea that that purpose is always for individual benefit. Still to every suggestion helps in to get at the real purpose whatever that may be.

Cars leave Ninth and Green Streets, Philadelphia, every hour.

Horse Cars connect with the cars in Germantown, direct to Upper Church Street.

Horse Cars along Eighth Street, direct to Upper Church Street.

Chestnut Hill Cars to Gorgas Lane Station, is ten minutes' walk from the Nursery.

Germantown Nurseries,

THOMAS MEEHAN, Proprietor.

Office, Upper Church & Chew Sts., Germantown,

NEAR PHILADELPHIA.

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Speaking of Acanthaceae, I am looking over an unnamed collection of specimens from South western Texas, and I find a very pretty Calliphaves I cannot identify. The flowers are very much larger than any described while the ovate spatulate leaves are much larger than in C. decumbens.

The Ipomoea undulata - Gum delia you sent me have made a number of good plants.

I was sorry to hear of your semi - centennial in one sense, thought it really protest in that you have lived so long to do such good work. Though only 57 myself, I begin to feel more strongly every day that life is such worth

hopeless we can
add some little to human
knowledge with every day
that goes over us.

As ever sincerely yours

Thomas Meehan

Rec March 14
An 15

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

March 12, 1883

Dear Dr. Engelmann

I am much concerned that you have been ill-fash, but as a peculiar form of throat disease seems epidemic, but seems to be not fatal to anyone about here, I suppose you have been under this misfortune also and will soon be well again.

My Echinocactus which I had looked on as a form of polyancistrus has flowered and proves to be a very different thing. Unless it may be one described since Watson's Index, I think it is entirely new. I enclose you a memorandum I made before the plant to day. Can you

suggest any thing for me
to look up, and which it might
be?. It has but one flower
or I should be tempted to cut
one off and send you. Most
very different, I should look
for some relationship with E.
<u>speciosus</u>, which I should have
in bloom in about three weeks,
next week I shall have
one in bloom nearly related
to the one in question, but
as the buds are swelling, I see
it is more different than I
~~I~~ once thought. The one
I have now in flower has the
blossom so much like a
~~Mammillaria~~ Mamillaria, that
if I had seen it off the plant,
I should have taken it for
one. It has also the same disposi-
tion not to expand except
in bright sunlights. Though

we have had fair sunlight—
only a misty veil over the
sun for three days, it does not
expand more than like a
thimble.

With my knowledge of
variations, I have been in-
clined to believe that many
species of cactus will be found
but variations of some one spe-
cies or another. but I begin to
feel that I may have carried
this pre-judgement too far.
Last year I flowered an
Opuntia, which Parish tells me
you identified as O. rutila.
I had it in flower with O.
missouriensis, and I could
see no difference whatever ex-
cept that every part of the plant
and flower was larger than in
the ordinary missouriensis.
Merely an overgrown chap.
But Parish tells me you find
distinction in the seeds.

Hooper is happy in having some half grown cones of Pinus Koraiensis from islands of the mouth of the Lena, gathered by Engineer Melville. At least he tells him it is that species — but he says "better be not too sure till we know," a reproof I like to get once in a while. It is a good thing for our leaders to hold a tight rein over us colts once in a while.

The trees are described as if they may have been 20 or 30 ft. high. Very good for Pines in that high region is it not?

Hoping you are quite recovered and at work

Sincerely yours as ever
Thos Meehan

Rec March 22
Ans Jan 19 1884

The Germantown Nurseries,

Chew Street, below Gorgas,

Germantown, Philadelphia.

March 19th 1883

Dear Dr Engelmann

I cannot tell you how pleased I am to know you are about again. It has been a rather unhealthy season I think, and if you get through this, you will get the better of many years.

To tell the honest truth, I do not believe that Illinois observation is accurate. It is not however just the thing to be expressing one's doubts about this or that, and I said what I did that Miss might look closer at the Calathea next year. There is so much looseness in statements of facts, that we have to doubt many things we read. I never, for instance, said anything anywhere to warrant Prof. Lemmon in saying I endorsed the importance of his Potato discoveries. They may be important, but I shall not say so.

Well, about Cactuses! – I have to day E. polyanchis trees in flower.

I am sure this is correct, since you decide the other to be E. Whipplei. But I do not think any one could decide them positively by the descriptions published. Both of California, and Watson in King's report, says "flowers yellow" in Polyganeistus. But in this we they have bright rosy purple. The sepals are said to be fringed — but nothing of the petals, which are much more beautifully fringed than the sepals. In my specimen the ~~[illegible]~~ spines and aculei (radial) are very little colored, — nearly all of an amber white, or brownish white. The two (Whipplei and polyganeistus) appear much more distinctly I have them, than the written descriptions led me to suppose.

Is it not strange how we often have eyes, and see not! I was wondering why this flower only half opened in the full sun, when I thought that it could not because of the long stiff spines around it. Looking at the remains of

Whipplei, I saw it had also been the case with that, and the mystery was settled! I shall have a print to study on Whipplei by and by.

I was delighted by and measure to discover in polyancistrus that the stamens are sensitive as in true Opuntiae. It is the first Cactaceae I have found with this power outside of Opuntia.

The next I shall have to flower will be E. uncinatus. The plate in Pfeiffer does not quite correspond with my plant so far, though enough so to show I have the plant he intends. The central horned spine is double the length of the lateral ones, and always (though erect) more nearly approaching the relative length on the figures in E. longihamatus, and the smaller calycine scales are red and white edged, as in his plate of longihamatus. But the plant is certainly his uncinatus.

Maybe I may run against your Pa ifi[illegible] E. Simpsonii; for

Mrs. Meehan and I have arranged for a three months holiday for rest & recuperation on the Pacific coast. We leave here the last week in May, and shall spend perhaps a week in Colorado, a week or so in Utah, — then go on to San Francisco, and work slowly northward, returning most likely by Northern Pacific and stopping on the meeting of the Assoc. at Minneapolis, and home by 1st week of September. I have been absolutely free from Rheumatism for six months, with not much for a year or more and I want to have a good, strong, vacation season, while I feel in good heart. I am almost tempted to go round by way of St. Louis especially to shake hands with you and Mr. Shaw; but my wife has never been over the Union Pacific; nor have I since 1871, — and so we have selected Canada as the V.G. Very sincerely Yours Thomas Meehan