

1) No 608 Fendler is in full flower with me. It is a *Salvia* apparently belonging to *Microspora* Benth. but Corolla rather too large for it. It is annual! Are there any other annual *Salviae*? — Connective linearis postice deflexa longitudinally connate very small, rudimentary teeth — inferior style truncate, rounded, glandular (is there any stigmatic surface on the upper lobe?) the lower lobe lays right between the anthers, and the Pollen adheres to it. — Upper lobe of corolla emarginate lower 3 lobed, middle lobe bilobed. — No 606 appears to belong here too but I have not examined the stigma — I believe I have seen this last also in Fremont's collection. — The calyx of 608 is immediately after flowering laterally compressed ^{& closed} but ^{when ripe} opens again wide to let the ripe seed drop out. I am collecting seeds.



July 26, 1898
Lindheimer's Blue Androsace is in flower. ~~The~~ flower bud irregular flower very elegant, 3 upper lobes smaller, two lower ones larger. Lowest stamens the largest, blue anthers, others with yellow anthers, anthers unconnected. Why does Engelm. reunite Androsace? The dry dehiscent capsule should be sufficient to separate it. — I have just compared Fendler's plant 673 and find it entirely distinct. — leaves less compound, flowers much smaller — Lindheimer's plant has very much compound leaves very small leaflets. — But I can not find a dry specimen of Lindheimer's, probably he has only sent the seeds. — I find a notice on the paper, which contained the seeds: Blue Androsace with from granitic soil on the Sierras. — So we have 3 Androsace with dry spinous ^{capsules} ^{over the dry} opening regularly with 5 lobes. —



I have examined Fendler's Pines, and find that my name *O. brachyptera* is wrong and must be altered; cones obtained from Fendler which were in a better state than those examined before showed the seeds to have large wings — but I believe I have told you that before. — Have I not requested you also to send me specimens of all the eastern Pines and their cones? I should like much to get them, — Fendler has got the other day one of his Boxes containing dead Cacti and a few cones of Pines and wood. The former were especially interesting on account of the specimens of "*Echinocereus fendleri*" which I had not seen

before - all the others I had already obtained from Dr. W.
- is - I do not want a copy of Fendler's notes on this plant.
- I have had a long letter from Miss Alm, he will not
acknowledge the genus, *Echinocereus*, but make it the first
subgenus of *Cylindropuntia*. - But to return to *Mimulus* - Fendler's
Mimulus ²¹⁸ must be a new species - the leaves as well as ones
differ from *M. lewisii* - 229 is also new. Comes with exserted
sterile bracts. 233 is perhaps *Mimulus* - no cones seen. -
236 *P. edulis*, I have a young tree growing from seed. 237 *Mimulus*
leucoglossus (family) 238 *Mimulus* *flexilis* - I could find any
difference between both *Juncus* - do you find one?

Helianthus scaberrimus is beautifully - flowers, leaves 2-3 inch
long - flowers 15 lines - diameter - but seeds finally also
described; - the name *major* would be better. among the
other minor differences from the common plant which I have also
a subvarieties - it should be mentioned that the style is
much exserted over the numerous stamens and somewhat
declined.

The seeds of *Helianthus* examined by me are more like those
of 10-12 - in your *Genes*, embryo 1/2 the length of the seed -
are these with small embryo - fertile? - but the shape
of one seed and position of embryo is a little different
from your drawing - the shape however is variable
the integuments are thin, membranaceous, and the
embryo always curved on one side, opposite the hilum.



In one of the pots, where I cultivated a *Cactaceae* from *Cochise*
a little plant with the appearance of an *Arenaria* came up -
I find it to be a very pretty species of *Drymonia*, not described
- See Prodr - with green leaves.

The *O. lutea* (262) from water Texas I have in cultivation.
it must be different from the larger much more to mention *O. lutea*
but Fendler's specimen appears to be intermediate. I can
so far find no striking characters to distinguish them.
But what I have found most remarkable, is that there
can not be the least doubt, that the lobes of the
corolla (staminal tube) alternate with the anthers!!
and the calyx lobes. Now is it a *Crotalaria* or a
tube formed by the filaments? - Is any thing of the kind
found in other *Thymelaeaceae*? - I thought years

ago I had discovered the same thing in the dried spec. 40. found
but as the specimen was dry & the flowering immature I concluded
that I was mistaken.

Swells, set being the first and which contains all these
plants, when there were any duplicates besides ours, do you
can find in it each of those plants, where there is any doubt.
Streptanthus N^o 38 & 39 (Twins) N^o 23 according to my arrangement
N^o 9 was one spec. in fruit, without leaves - stem smooth and
leaf rough, serrate. I sketch of a branch for you. N^o 28 is
undoubtedly the same plant, but with flowers & leaves, it must
be contained in your set Swells' sets, base of stem and
lower leaves hispid with simple or 2 parted hairs - leaves
linear, toward base a little wider. - Near *S. hypericoides*, but
different, as I think. - I include a flower of it in this letter.

Salpiglossis 13 Twins, 11 in my arrangement is probably nothing
but *S. agaveorum*, more pubescent, spike long, crowded, passing
pale, greenish blue. You must have a specimen and
also the Swells, he under N^o 11 and you under 13 -
S. agaveorum 10. from the frontier was only collected in
one specimen and not distributed - it is the common
form with bright blue flowers etc - Fendler retained
the only specimen collected.

The red ink numbers have been used by Fendler
in the distribution of his plants, as far as they go
viz. to *Vernonia* 295 and so far you need not
refer to Fendler's original numbers. - but from these
Fendler's old numbers have been used on the labels
and you will have to include them in brackets
with those of your arrangement.
Your *Candollea cordifolia* is a beautiful species.

I am packing *Wrightia* & *Griffithia* *Compositae* for
you - You keep such duplicates as you wish
where there are any - the others please return when
convenient. - Writing our labels are not very
plausible and pretty - German. I have translated
what was necessary, especially color of flower - but

not, when that was easily recognized, as yellow in
compositae etc. —

I have just received a parcel from Germany, among them
100 plants from Texas, from Rush County (upper waters of
the Sabine, north of Navasota) which will be interesting
to you partly on account of geographical distribution, partly
and partly to see what they do with our species there,
sometimes. — I send them along for you to look
at them and perhaps publish a little note on them.
Is Schulz's new Aster not a *Diplopappus*? — I believe
the plants have been named by Prof. Schubert of Carlsruhe.
— I have also received his Monogr. of *Elatine* with
plates; his does not entirely agree with your *E. americana*
in *gen. americ.* —

I send you a copy of Heidelberg Gard Catalogue
(I have duplicates on account of description of
one of Lindheimer's new *Salvia's*, the same which
I had named *S. pycnostachya*; Bischoff publishes
it under the name of *S. trichostyla*. — In the same
Catalogue he publishes a *Vernonia emimens* raised from
seeds from here — One of the hundred varieties of
our *Vernonia* — I really don't know whether
pusilla novboracensis, *altissima fastigiale*, *Baldwinii*
are not all one — and the same; and I have
even my doubts about *V. arkansana*.

I send along the specimens received of Bischoff
as also a *Hemerocium* which he pretends I have sent
him the seeds from Illinois — but I don't recollect
ever to have met with a *Hemerocium* in the U. States.
I may possibly have found the seeds near Beardstown
Ill. where *H.* grows and where I was in ^{Nov} Sept 1834.
Look at the specimen and see whether you know
any thing about it. — You will oblige me by
returning all these whenever convenient. —

I send also along a few drawings and notes
on Fishes, to be added to my former collection
which must be in Prof. Storer's hands — I have never

2 / heard from him, except that he sent his synopsis —
— I have not done any thing about fishes since. —

My Dear Doctor

St Louis July 26th 1848

I have from time to time penned the foregoing pages
just as material offered. Your letters of June 13
& July 13th both reached me in due time. I am glad
Fendler's plants have all arrived safely. I hope those
for England have arrived there before this time. —
I always thought J. Carey was a subscriber, but I
can not find any Authority, nor as to Oakes —
I probably put them on the list because they were
subscribers to Lindheimer's plants. — I can
not get that copy of your manual from N Orleans.
I shall write again there by a friend who goes down
in a few days

Lindheimer was detained at M Braunfels till End
of June and was then preparing to go to the San Sabá
or Liano, where — the Indians permitting — he
will settle and remain at least next season
and then advance with the Pioneers of civilization.

I had begun to work at Cuscutae, but think it
best to lay that aside again and distribute now
Fendler's plants, before I do any thing else —
they have been accumulating too long.

At the same time I will study a few of the
families of Fendler & Lindheimer's plants.

Cacti, Cuscutae, Pinus, ^{Asimina} Asclepiadaceae — which you
of course will have to review. — Tell me, if you
conveniently can, whether I have sent you already
any full description to be printed with the account
of Lindheimer's plants. It is so long since, and
I have kept no memorandum, that I don't recollect

I have sent you some ^{small} sketches of flowers of *A. hololepis* from Texas - but whether a full description I don't know - also full descriptions of some of ~~our~~ my new species from here? *Echinodorus* - 2 *Cypripedium* - *Cuscuta* -

I am sorry to give you that trouble. If you don't have all those things, I will write them again, as I have the manuscript still here - and some of the plants' descriptions are also imperfect, especially some *Cacti* to which I have to add or alter. - On second consideration I think it better to write every thing over again.

I have also that *Malva* (near *reticulata*) of *Anders* in cultivation - it must be *Anders* *Anders* *Anders* but I can not compare specimens - we have here only *M. reticulata* L. with large flowers - this one from Santa Fe has very small flowers - in my cultivation plant the calyx is not so large as in the wild one - it is a poor specimen. - How should *M. Anders* come there?

Tender (the thin) *Boliviana* is in flower with one - Specimens that have got the seminal leaves on them! - both *lozan* species I have also in cultivation but they have no flowers yet; - another very large one must be named *longifolia* being so different in that respect from the others.

Can you distinguish two species among *Anders* numerous specimens of *Malva* *Anders*? It appeared to me as if there was a difference in the fruit and also in the stigma -

I close the letter today 27th in a hurry though I have several things to add - shall probably write soon again. - So Mrs has united our *Silene* *Anders* with *Anders*! - It may be right!

Very truly Yours
G. M. Emerson

Telium *Anders* is - fine flower, some 4 or 6 weeks and bears seeds abundantly; I include some - it is distinguished by having all parts larger and the style long exserted and declined it is quite ornamental. - Another *Telium* of *Anders* with oval capsule has come up from seed - I hope to see it in flower next season - You must have dried specimens of it. 77 & 78 *Anders*, 81 *Anders*. - The shape of the capsule appear to prove it distinct from either, the seed is hardly distinguishable from that of *T. Anders*.

Mr Trevel for Paris was here, recommended by De Caisne - to hunt for native trees plants in our western Prairies! He is gone to the frontiers, he appears to be very industrious but must first learn to travel and to collect in the west before he can accomplish much -



Prof. A. A. Gray

Cambridge Mass



Engelmann, George. 1848. "Engelmann, George July 26, 1848." *George Engelmann letters to Asa Gray*

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