

why put together any white or
rose-tinted H. spicata & sulphur
yellow H. hispida? And yet
again any white changing to
rose-purple H. oppositifolia and
yellow H. gracilis. For the
sake of consistency put H. spicata
and H. oppositifolia into H. multiglandulosa
if they are not to stand by themselves!
But this Calycadmonia problem will
I think easily solve itself if you
can be persuaded to give up your
tenacious clinging to uberes &
pappus, and give hold of the
well marked differences of habit,
and of chemical properties as indi-
cated by the odor of the herbage,
(which latter character one of the
very best, is not at all available
with you, but you must not
ignore it. It is the character by
which the botanists of the future

Berkeley, Aug. 24, 1882.

My Dear Dr. Gray:-

Your letter
about Hernandezia has just ar-
rived. Some of your enche-
risms greatly surprise me, and
none more than your disposal of
H. Lobbi, which I consider as un-
questionable a species as the genus
holds; and I too, have reached my opinion
not without having at hand a vast
amount of material of the fasciculata-
ramosissima sort, gathered in from
many localities. You have evidently
been misled, first, by the mere position
of a branch, as to the size and general
aspect of the plant. Had you seen
the specimen, a plant two feet high
simple up to the middle, then abruptly
parted into a half dozen equal,
virgate, racemose branches, you

would, at the very first glance, have
relegated it to the virgata group.
You could, on looking closer, have
noticed the dense, appressed foliage of
the floral branchlets, such as occurs only
in H. virgata & H. Hermannii.
Then, going to the chaff of the receptacle
you would have found it distinct,
each pale half enclosing a sterile akene,
(the good character of that group) like
which there is nothing in the fasciculata
neighborhood. So you might have
thought, perhaps, of making it a
few-flowered var of H. Hermannii,
but the exactly 3-ray. & 3 disk flowers,
the different shape of the ray-akenes
& the pappus of the disk, make it
clearly distinct.

It looks to me that in this instance
as in Bot. Cal. when you left the
beautifully distinct H. Parryi in
with H. Fitchii, & the very clear

H. Hermannii, in with
H. virgata, you have slighted
things which deserve closer looking into.
For H. Lobbiai you must, indeed
take heed only for its size & general
aspect; but - for the leafy branchlets
(- that char. is trifle, but a good
char of virgata group) and the
peculiarity of receptacle-chaff, you
can see for yourself, if you will
look, and compare with Hermannii.

In your disposal of Calycadenia you
appear to me strangely incon-
sistent with yourself. Why do
you keep H. Douglasii, & H.
multiglandulosa apart?
Your sole character, so far as I
can see is color of flowers.
No distinctions of akenes & pappus
can be found. But if you
keep them apart on that ground

will be led in threading this
whole calycadumia maze.)
You, I humbly believe, will
either accept this organization
and, taking the word of Californ-
-ians for good, act upon it,
or your work on the subject
will be undone, before your
volume shall have become at-
all antiquated.

But even with color & flowers
and habit, you can certainly
do better than, according to your
letter, you have determined on
doing.

H. tinella, H. spicata, H. oppositifolia,
H. multiglandulosa, + H. cephalota,
are all white or rose-tinted.

If you can not recognize differences
of habit, put the four into me.
But a Californian school master
might teach children to distinguish

each of the four, blindfold, by
odor of herbage alone!

I have told you this important
fact before, but you ignore it,
because, I suppose, you can not by
your own experience verify it.
I am so perfectly confident that, in
the two points, you insisted on, I
have the key to the enigma, that
I publish in Sept. Gen. Bull.

H. cephalotes, whose flowers are of
the same color as of H. multiglandulosa,
but whose habit + odor are very
widely different.

So securely do I trust in these points
that I doubt if, in H. Clevelandii's
description I have mentioned
that its rays are only half as long
as those of H. heterophylla. Though
I guess I did mention the
peculiar unfolding of the ray-anes
by the scales, which persists at

least one good technical
distinction. Even without
that I could trust it to
stand on the difference in
habit, pubescence & odor.

H. ligulifolia is of such a
sickening, filthy odor, that
I dread experimenting with it,
when fresh; but H. Clevelandi
is rather pleasantly aromatic.

I know not to what purpose
I write all this long protest.

But my faith in every one
of my species of this genus,
grows stronger every day, es-
pecially now, when their seeds
are in their prime on our
plains & hillsides.

I shall be sending you another
bundle before many days.

As Ever Yours

E. L. Greene.



Greene, Edward Lee. 1882. "Greene, Edward L. Aug. 24, 1882." *Edward Lee Greene letters to Asa Gray*

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