

Hanover, Ind. - July 29/1875

My Dear Dr. Gray:

I most certainly beg your pardon for not sending my communication concerning Sullivantia directly to you & also that I did not send you dried specimens without your asking for them. My first thought after making the discovery was to send you some specimens, but a botanical friend informed me that he had sent you some from this locality, so I supposed you had all you desired. I might still have sent you a letter about it, but I knew that, occupying the position you do in the botanical world, you must be overburdened by letters from amateur botanists upon trivial matters & I did not know how much importance

you would attach to my "field."

I send you by this mail a small package containing about 25 specimens of Sullivantia. If you desire more I will be glad to get them for you - One paper of specimens was collected in '74 and is poisoned. The remaining specimens are of this year's collection & have not been poisoned - I will most certainly accommodate you with roots if I am able - How can I best send them to you? Will it do if I pack them in damp moss? You say that you can pay for any trouble in procuring the roots & shipping them - My dear Dr., I am not a botanist for money, but for love & I would not count anything a trouble which might do something towards the advance of the science which has my warmest affections - If,

however, you have a few duplicates you could spare from your herbarium, I would esteem it a very great favor to receive them - I hope if there is anything I can do for you in this region, over in Kentucky, or out on the Wabash, you will let me know at once - I have found Isopyrum biternatum, T. & G. growing here in great abundance - Do you care for any of it?

I have in the forthcoming report of our State Geologist a list of the flora of the five counties bordering the Ohio River above the falls at Louisville -

Hoping to hear from you at your convenience -

I remain

Most respectfully yours -  
John M. Coulter.

J. M. Coates

Crawfordsville, Ind.,

April 6-1870

My Dear Dr:

I really feel very much discouraged over the appearance of your article on Leavenworthia, in fact so discouraged that I would not write about it, feeling that if you dropped me it would be nothing but right. I really never took more pains with an article in my life, determined to have no mistake, or nothing to mar what I knew was an exceedingly valuable article, and after all I never saw an article in the Gazette look worse! If the

Gazette had not been so impes-  
sionous I would have cheerfully  
borne the expense of a reprint. The  
printer of course, was to blame  
for the crooked lines, but I was  
to blame for making L. stylosa  
have a seed vessel two inches  
wide! I suppose the mistake is  
so apparent that botanists will  
readily correct it.

I enclose an <sup>note</sup> ~~article~~ from  
Mechan, simply to ask whether  
I shall print such stuff. If there  
was only a fling at you & Prof.  
Eaton, I think I would suppress it,  
but he tries to slap me, & I rather  
enjoy printing a fling at myself  
when it don't hurt. I called  
his article "stuff" & will take the  
consequences.

The Gazette has many more  
subscribers than ever before

& the encouraging part of  
it is that new subscribers are  
those who have never heard of it  
before. They have taken hold  
so energetically that my sets  
are exhausted in supplying the  
demand for back Vols.

Excuse my frequent calls  
& believe me

respectfully yours  
John M. Coulter



Crawfordsville, Ind., Jan 4-81.  
Mr. Sereno Watson!

My Dear Sir!

Upon looking over my *Amer. Nat.* for July I was surprised to see a review of Vol. II of the *California Botany*. It was the first intimation I had received that the 2<sup>d</sup> Vol had been issued.

I can hardly understand why I have been kept in such ignorance of the matter. The Constituency of the Gazette is a very large one, embracing I believe, every working botanist in this Country and many in Europe. Should not such a Constituency be kept informed as to the publication of such an important book? Why should

Journals making no special  
pretence to Botany be the  
first to note its publication & the  
nature of the changes it proposes.  
It is by just such slighte that  
journals are weakened, their  
subscribers finding that they can-  
not be depended upon for prompt  
information. It is with considerable  
mortification that I, with my supposed  
familiarity with the doings at Cambridge,  
must take my information of your  
publications at second hand.

If not a book, at least an advanced  
notice of its appearance & contents  
would have been very desirable—

Sincerely yrs.,  
John M. Coulter,  
Ed. Bot. Gazette

Crawfordsville, Ind - Oct. 13-81

My Dear Mr. Watson:

I am going to inflict more of a letter upon you than I am in the habit of writing, or you in the habit of reading probably. In the first place, please send me Cusick's plants & I will remit the necessary \$4.50.

There is a matter several of us restless fellows out west have been considering, and as things have about come to a head, I propose to lay the matter before you & ask your unbiased opinion. To plunge in medias res, that great belt of states beginning with Minnesota & Dakota on the north and ending with Louisiana & Texas on the south, is unsupplied with any manual of botany that can be of use in the schools & to ordinary collectors. Why can they not have

one? I have been fairly overwhelmed with inquiries from botanists, or would-be botanists, in that region, the burden of their questions being, "Where can we get any manual to work up our flora?" That region is filling up with wonderful rapidity; educational facilities are multiplying & there is already a large demand for suitable books. The demand is such, that I venture the opinion that if a good manual of botany is not soon provided, some wretched make shift will be thrown on the market. The U.S. seems to divide itself so naturally into 4 or 5 regions, & they are so large, that separate manuals will be necessary for them all. The Appalachian region is already abundantly taken care of



by Drs. Gray & Chapman, especially since the latter is soon to republish. The great Mississippi Valley region is another distinct region & for it the manual is yet to be provided, except that those already mentioned cover its ~~western~~ <sup>eastern</sup> slopes. That might stand then, and let the western part be included in a Manual for the Prairie Region, running to the Rocky Mt. region, or about the meridian of  $103$  or  $104^{\circ}$ .

The 3<sup>d</sup> great region, needing a manual, will be the Rocky Mts; the 4<sup>th</sup>, the Pacific Coast.

The last region has now been well supplied, & we think the time has come to collate the results obtained between the Mississippi Valley & the Rocky Mts. Let such a work be small, compact & cheap, on the plan of Dr. Gray's Manual; a simple compilation not an Elaborate monograph. Hence no original work will be needed.

any great extent, simply access to books & herbaria. Of course, there will need to be a little original work in the matter of artificial keys etc., but not much. Dr. Gray <sup>or</sup> you would be the ~~best~~ most suitable persons to do such a work, but you have larger game in view & can't afford to fritter away the time it would take. Why cannot some of the energetic botanists out here undertake a work of the kind, with the understanding that access is to be had to the Cambridge library & herbarium & all questions of nomenclature and classification to be referred to the authorities there, that our work may all be uniform? For instance, we could ~~dig~~ collect all the information possible here during the winter, & then spend the summer in Cambridge, supplementing our list. & Let me once get a complete list of the plants of the region & I ask no better fun than arranging their descriptions & constructing analytical keys - Prof. Bessey is heartily in favor of pushing the work, and also J. Hill, of Englewood, & several others, who have all more than once had the idea of going into it themselves. If the work is not published in this way, as it were, under

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the Cambridge wing, it will be published independently by some one, & then there will be confusion worse confounded. The thing of it is to get a publisher, & if through Cambridge influences that cannot be done, there are several of us out here ready to take the risks. Please do not hesitate to express yourself fully upon the subject, whether with regard to the advisability of such a book, or our own competency in compiling it, & we will regard it as a favor.

Very sincerely yours

John M. Coulton

John. Coulter

Crawfordsville, Indiana - Nov. 26<sup>th</sup> 81

My Dear Dr. Gray:

Your welcome letter came safely to hand & I must say that it seems more like living to have you back at Cambridge. I have sent the money to Mr. Bentham as you directed & hope soon to be the possessor of the Jen. Plant.

And now for a matter, that, in my mind, should be referred to you first of all. In your absence I wrote of it to Mr. Watson & had a very kind response & I have written to Dr. Engelmann, receiving the answer which I enclose for you to read. Both of these might shape much of their replies for courtesy's sake, but you can speak with the ~~bluntness~~ <sup>directness</sup> of a father & feel sure of causing no offense.

As editor of the Gazette, which circulates widely west of the Mississippi, I receive many letters from the teachers & field workers of that region.



No 2681

The burden of most of them is, "Why can we not have some such convenient manual as our eastern brethren?" I have come to such suggestions from such men as Prof. Torrey, E. P. Hill & others west & south west that I should undertake the work of compiling such a work. I have been ~~then~~ turning it over in my mind & love for such work has prevailed & I would like to do it if practicable. Of course, I do not mean a critical ~~the~~ manual, but simply a collecting together of many scattered species & arranging them with suitable analytical keys and in every case referring to the original descriptions, etc. of species, so that the work may also be convenient even for those who possess all the necessary publications. The proposed range has the Mississippi for its eastern ~~border~~ <sup>limit</sup> & about the meridian of  $104^{\circ}$  for its western. That very nicely includes Dakota, Minn., N.E.B., Iowa, Missouri, Kansas, Indian Terr., Ark., La., and Texas. That really takes the flora of the prairie & plains to the foothills of the Rocky Mts.

I have quite a number of the publications

No 26/11

necessary & can do much work here. Then I can very easily spend the whole of next summer in Cambridge and supply the ~~last~~ deficiencies, by consulting your library and herbarium.

Now, my dear Dr., I want a frank expression of your opinion on the matter, and to you it would have been first referred, had you been in this country. If such a thing is feasible, any hints as to my methods of working, etc - will be of great service.

Dr. Engelmann suggests an extension of range, & you might give your notion of that. But I do not wish to burden you with correspondence when it has probably greatly accumulated owing to your absence.

I am

very respectfully yr  
John M. Coulter

Crawfordsville, Ind - Jan. 11-'82.

My Dear Dr. Gray:

Your kind letter has come to hand and its contents are surely very flattering to me. I must confess that the idea of a Rocky Mt. Manual has more than once crossed my mind, but I have always dismissed it on the supposition that the ground was much more effectually "pre-empted" by others than by myself. In a late letter to me I think ~~that~~ you stated that Mr. Watson had some such work planned for the future. With your assurance though that I am treading on no one's toes who has any better claim on the field than I have, I am more than willing to go into the work and I most certainly want to be "broken in" to the traces while I can be directed by such a competent and willing hand.

Jan. 11, '82

Now a word as to range. Three plans have suggested themselves to me.

I. To include the Rocky Mts. Exposed, which would be nicely done by including Montana and Idaho, Wyoming, Colorado & New Mexico, encroaching a little on the western borders of Dak., Neb., Kan., etc.

II. To add to the above range ~~the~~ New Mexico's twin, Arizona.

III. To add to the 2<sup>d</sup> range the only ~~two~~ region left this side of the Pacific slope, viz., the Great Basin, as covered by Utah & Nevada.

Much can be said in favor of each one of these plans. I have an idea that the first represents most nearly your own idea. It is New Mexico that led on to Arizona & that to the rest. The Gt. Basin is so much Mr. Watson's peculiar property that no one ~~else~~

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likes to trespass upon it. Please give  
your ideas upon this subject & the work  
shall begin. Holt & Co., who published  
for Bessey, have written to me (some  
time since) that M. E. Jones of Salt Lake  
City was in correspondence with them  
with reference to publishing a Rocky Mt.  
flora, & they wanted me to combine with  
him and ~~add~~ include the flora of the  
Western Miss. Valley. Of course I listened  
to no such proposition, for Mr. Jones  
was not the man I wanted to work  
with, as I had no more confidence in  
him than I have in myself.

I remain

Yrs as ever,

John M. Coulter.



Crawfordsville, Ind - Jan. 18-82.

My Dear Dr. Gray:

I am more than pleased with the "range" you suggest. I never thought of cutting off New Mexico, & that at once suggested Arizona, & that the Basin; but this arrangement settles all that nicely & I can work from Colorado north in a flora with which I am tolerably well acquainted. I am already at work, & hope to be able to report rapid progress. My plan is to do all the work I can here & then spend the summer, or part of it, in Cambridge, doing such work as I cannot here. If you think I should parcel out any more of the orders than those given to Dr. Engelmann I will gladly do so. It almost seems due to Prof. Porter that he be asked to do something, but the fact is, there would be no counting on him & he could not be depended upon "coming to times"

Jan 18/82

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If your Compositæ are so far under way that you can give me some definite idea as to the time of their publication, I would be much obliged. The F. N. Amer. T. & G., Mr. Watson's Index,<sup>+</sup> your own Gamopetalæ are of the greatest use to me, + also Benth. & Hooker's Gen. Plant.; but the poor Monocotyledons, except Liliaceæ, seem to be in a sad plight. I don't know what sort of work I shall make of them. Ready always for any suggestion,

I remain yrs as ever,  
John M. Coulter.

Crawfordsville, Ind. Feby 6 - 82

Dear Mr. Watson:

I write to you as the author of the "Bibliographical Index." Although you have followed Bentham & Hooker in the sequence of orders, you have not followed <sup>some of</sup> their decisions in regard to orders & genera. Now is the matter so far settled that I am to take your decisions in the Bib. Index as final? For instance, am I to keep Fumariaceae separate as an order, or reduce it to a suborder of Papaveraceae? Of course you may say, "Exercise your own judgment;" but I am not a judge of such things yet. I do not want to follow B. & H. when American Botany seems to demand a variation. Am I to merge Dentaria into Cardamine, and Physaria into Veicaria, or <sup>am I</sup> to follow you in Bot. Calif & Bib. Index? Shall I put Paronychiae after Caryophylls, or shall I call them Illecebraceae & put them near Amarantaceae?

I want to work uniformly with the decisions

Feb 6, '82

made at Cambridge. Another question, do you not think that Berberis Aquifolium is found in the Rocky Mts, even as far south as Colorado? Dr. Rothrock speaks absurdly in saying that he has not seen B. repens in Colorado, for all the specimens I have seen from there answer to it in leaf characters. Probably though, he was considering the height, which is surely not "less than a foot" in all cases. It occurs to me that as we thought they were all the same, our specimens might all be from B. repens, & our notes of height be from B. Aquifolium wh. we neglected to collect. I have plenty of B. Aquifolium from Oregon & can appreciate the difference now, but I may have seen it over & over again in Colorado & not have collected it. Excuse my questions, but I am simply holding you to your promises— By the way, what has become of that Berberis that Dr. Porter collected in the Uintah Mts., called B. (Aquifolium) repens, but suspected by you of being a new

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species? My specimens show leaves almost  
cordate and not at all sinuate-dentate, but  
merely closely toothed. From all I can find  
it is still called B. repens -

Sincerely yrs -

John M. Coulter.



Crawfordsville, Ind. - Feb. 13 - '82

Dear Dr. Gray:

I send you a list of what I have gone over so far. All these I have described (i.e. second-hand) and arranged with suitable keys for a Manual. I send the list for two things, viz., for any changes in Synonymy and for corrections of the text, crossing out or adding species. I suppose the work will naturally belong to Mr. Watson, but I send it through you. Of course, if I am asking too much, feel no hesitancy in saying so & I will wait for a personal interview, though, dear knows, I will have enough to ask about them. I send it in this piece meal fashion that it may not seem too much of a burden. The great majority of these species I have examined in my own herbarium. Just one question, in conclusion; has Sisymbrium humile 1 or 2 rows of seeds?

Faithfully yrs -

John M. Coulter.

Crawfordsville, Ind - Feby 23 - '82

Dear Dr. Gray:

I like your proposition exceedingly, for I ask for nothing better than to be trained in the school of your criticism.

I send you three small genera for more than three reasons, and I have selected them almost at random that they may the more fairly represent what I am doing and what I need. I have gone on the principle of never changing anything merely for the sake of change & when the work of description or grouping has been done far better already than I can hope to do it now I have freely made use of it. Of course, the matter of credit will be fully attended to. Two things have perplexed me upon which I would like your opinion, namely that very difficult thing of giving "common names", and whether I had better give a more detailed notice of stations and collectors than I have done.

Feb 23 '82

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I pull from my growing file of Mrs. Thun  
Apulegia, & ~~then~~ thinking that my work  
may be growing better or worse. send  
you also some of the later pages, viz -  
Stellaria and Arenaria & to the Synonymy  
of the latter I would call attention.

I have no copy of these pages, but send them  
unchanged, just as I had left them, so of  
course would be glad of their return at your  
own convenience. The use of the ma-  
terial of others is by no means from lazy-  
ness, but from a lack of confidence in  
myself —

Yrs with great respect,  
John M. Coulter.

Crawfordsville, Ind., March 2-82

Dear Dr. Gray:

Your letter with my mss has just arrived & I need hardly say that you have my thanks for many valuable suggestions. You have shown more painstaking in the matter than I had dared to expect & not a suggestion that has thus stolen time from one who can ill afford to lose it shall be lost. I shall in a few days send some ordinal characters & keys.

The necessity of giving a more extended range impressed me some days ago & I have been doing so as far as I can.

Just ~~in~~ one thing do I present for advice. I have all through tried to keep introduced species very distinct from natives and at the same time have given them their proper places in ~~ordinal~~ Keys of genera ~~and~~ <sup>or</sup> ~~and~~ <sup>or</sup> groups of species. My plan is briefly this.

If a whole genus is "introduced" it appears in its proper place in the Key of the genera but is prefixed by a Roman Numeral, in -

Nov 21, '82

stead of an Arabic. For instance, I have among Cruciferae Arabic nos 1-21, & <sup>placed</sup> scattered in their proper relations I, II & III prefixing Brassica, Camelina, & Raphanus. The explanation will be that these Roman numerals must be looked for at the close of the native genera. In the Cruciferae after I have finished the 21 native genera I have a heading "Introduced Species" & under that I <sup>have</sup> arranged these genera with Roman numerals and such introduced species as belong to genera represented in our native flora. These species are referred to in a note in their proper groups, with the statement, for instance, for C. Bursa-pastoris see p. —. Thus I think I have all introduced species to themselves under that distinct heading, & at the same time just as accessible through the keys as the natives. It sounds much more cumbersome in the explanation than it looks.

Yours faithfully,  
Geo. M. Coulter.

I enclose postage for Mrs. W. I neglected to do before.



# Wabash College,

Crawfordsville, Ind.

March 29-1882

My Dear Mr. Watson:

Have you any influence with the Zorrey Bulletin? What can it mean to admit new species described by Marcus E. Jones; in a magazine too that must be referred to? I confess to having published some of Marcus's "twaddle", but I have turned away his "new species", these very ones among the number, & thus incurred his lasting enmity. His honesty in giving you as differing in opinion is very amusing. But this is no worse than Francis Wollé's work, which I also had the privilege of refusing to publish.

Marcus has written to me that he is just about to publish a Rocky Mt. flora, and warns me off his ground. I have no doubt but that he will get it into print before I get fairly warm in my work. As I am going to spend next summer in Cambridge, will you please slip a word to that effect into Miss Sweetser's ears? & oblige-

Yrs. most sincerely,

John M. Coulter.

Crawfordsville, Ind., Sept. 16 - 82

My Dear Mr. Watson:

Mr. J. F. James of Cincinnati

has sent me a voluminous MS (40 pp of foolscap)  
entitled a "Revision of the Clematidæ of the  
U.S." It was read by title at Montreal, &  
the author desires me to print it in the  
form of extras to the Gazette. As he  
refers to you several times, I ask your  
opinion of him & his work. I am not  
in the least impressed with the latter  
& send you his "Preface" to judge of  
the spirit & aim of the work. He  
reduces your Fremontii to a var. of ochro-  
leuca, & ~~var. of~~ Pitchevi ~~to~~  
a var. of Giornai, things easy enough to  
do, but the question is, will they stand?

Please return the preface & find stamp  
Enclosed therefore -

Yrs very sincerely -

John M. Coulter.

# Wabash College.

Department of Biology.

Botanical Gazette.

Crawfordsville, Ind., Jan. 1<sup>st</sup> 1883

My Dear Mr. Watson:

I am very sorry to know that you cannot write the little biographies; but of course I understand your position thoroughly & know you have decided best. I shall be very glad to receive for the Gazette those notes of the N.W. Rocky Mts.

You ask about my work on the Rock. Mt. Manual. It is progressing slowly, as such work must when it is to be done at odd times and not made the business of life. I shall make arrangements very soon though to have more time. I have waded through ~~all~~ the Polypetalæ until now I am deep in Saxifragaceæ. I shall finish the Polypetæ very soon now & then I will find more help. I will depend upon Dr. Gray's Compositæ & the Panopetalæ pre-

# Wabash College.

Department of Biology.

Botanical Gazette.

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ceding them, which I suppose will be published this year. Then I have already his latest utterance on the remaining Gamopet., which it will not take long to bring up to date. Then come the Apet. & the fun begins, while in the Monocots, your Liliaceae gives me quite a start. I think that virtually then I am to the Apetulac.

Dr. Engelmann & M. S. Bebb are working at their specialties, while Eaton's Ferns will furnish plenty of material for compilation. I would give a good deal for a year at Cambridge, but I can hardly hope to bring that about -

Sincerely yrs -

John M. Coulter -

A Happy New Year to you all & may it be full of work and good results.

# Wabash College.

Department of Biology.

Botanical Gazette.

Crawfordsville, Ind., Feb'y 23<sup>d</sup> 1883

My Dear Dr. Gray:

Your notes and corrections were thankfully received & the instance of Dr. Torrey's generosity will be published, as also the fact about the "Le Conte boys," which seems to have escaped Dr. Gerard. Speaking of Le Conte, makes me enclose a postals card which speaks for itself -

As for my work on a Rocky Mt. Flora, my leisure hours have now enabled me to finish the Polypetalæ, which when I have polished up a little I shall send to you entire, that you & Mr. Watson may cut and slack it at your leisure & be as unmerciful as you choose, for I feel that it needs the refining of the fire.

I have already taken hold of the Apetalæ, & thanks to monographs upon the most difficult groups shall soon get them into shape, though such a help as the Bibl. Index. was for Poly-



# Wabash College.

Department of Biology.

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Feb 23 '83

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petalão, will be sadly missed. Then I shall attack the Endogues, & finally turn to the Gamopetalão, having your Synopsis with almost all that I need concerning ~~these~~ the orders after Compositae, & hoping soon to have your work upon Compositae, which will be even complete for me, because later.

I am sorry that Chapman's Flora could not have taken the form of a revision, rather than a simple reprint with a supplement, but I expect the Dr. hardly had the courage at his age to undertake it.

Very sincerely yn -

John M. Coulter.

# Wabash College.

Department of Biology.

Botanical Gazette.

Crawfordsville, Ind., June 18<sup>th</sup> 1883

My Dear Dr. Gray:

Our Professor of Astronomy, Prof. J. L. Campbell, started east today and will be in Boston this week or next. He is one of the pleasantest gentlemen ~~one~~ ever meets; was secretary of the Centennial Exhibition; has now charge of the Geodetic Survey of Indiana; & is on the lookout for Observatory plans. We expect to build one in the near future, & he desires very much to gain entrance to the Harvard Observatory for the purpose of getting hints for his own building. I write this in the hope that you or Prof. Goodale may obtain for him this privilege and in favoring him favor me, his most intimate friend in the faculty. I am supervising a building for the use of my own dept this summer. Prof. C. will call at the Botanic Gardens -

faithfully yrs -  
John M. Coulter.

# Wabash College.

Department of Biology.

Botanical Gazette.

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Inter nos.

It has just occurred to me to tell you something that cropped out in a recent conference I had with Prof. Arthur. You may know it already. Prof. Bessey, it seems, is contemplating a set of Manuals like yours, to cover the whole U. S. One the Atlantic Slope, another the Mississippi Valley, another the Rocky Mts, <sup>another</sup> ~~another~~ the Pacific Slope, thus making north-south slices through the country. His publishers (Henry Holt & Co.) are now considering it, & if decided upon, Prof. Arthur is to have charge of the editing.

Such is Prof. A's statement, & the question is whether it is becoming for me to rush matters somewhat & occupy the Rocky Mt. field first, or run the risk of competition. Prof. A. has the advantage of being foot loose & can thus go at once to Cambridge & do his work rapidly -

# Wabash College.

Department of Biology.

Botanical Gazette.

Crawfordsville, Ind., June 25<sup>th</sup> 1883

Dear Dr Gray:

I have just rec'd your last note, that on Rhododendron vaseyi. I have thus far rec'd from you (not yet printed) a paper on Ashes & a note on Cundmannys. These 2 are in the printer's hands & you may expect proof of them, at least of the "ashes" in a very few days. You are surely doing well by us & it goes without saying that we heartily appreciate it. We are to get out a special number to take to Minneapolis next August (that is, the regular July no.), 20 pp or so, & if you or your friends have anything specially good for it we will be very thankful. I am making rapid progress with the "Hera" & you would hardly recognize the old Mt. I wonder <sup>now</sup> how I could ever have sent it. I find at least half should be cut out -

Yrs. faithfully  
John M. Coulter.

Crawfordsville, Ind - Aug. 7 '83

Dear Dr. Gray:

One of my students, who is ransacking his neighborhood for plants, sends me from the southern part of the state some Habenaria peramoena, & calls my attention to the little hooks at the ends of the spurs, asking an explanation. I must confess my ignorance about them, never having seen them before & at a loss to explain their meaning. They are on none of my specimens collected elsewhere, but those from Gosport, are well supplied with them, ~~so~~ <sup>though</sup> some few are without them. I send you two flowers from a spike, as a sample -

Yrs. faithfully

John M. Coulter



Crawfordsville, Ind - Sept. 20<sup>th</sup> 83.

My Dear Dr.:

Yours of Sept. 17<sup>th</sup> came to hand today & I am sure I feel well "shaken up." The Sept. Gazette was either peculiarly unfortunate or it was the "last straw etc." I appreciate your castigations most sincerely & I hope that I profit by them, but the only thing that struck me unpleasantly this time was the idea of warning Foreign Botanists in the Am. Jour. Sci. against the Gazette, and so killing by a sentence or two the painful growth of years, when the Am. Nat. & Torr. Bull. go scot free although full of Marcus E. Jones' rubbish of new species & much other stuff which I have already had the honor of rejecting. Such a course would have been rather severe & hardly justified by the offense. But it is idle to talk of what you did not do, when I think you did the best thing & I will gladly print what you <sup>have</sup> written. And now for the questions sententia -

1. Dr. Torrey's letter has struck some persons differently, as I have already rec'd some letters from good botanists expressing great interest in it, & chiefly because it was

(over)

a youthful letter. A youthful letter, so far from detracting from the reputation of a man of such mark as Dr. Torrey, only encourages other young fellows, & we all like to catch the masters unawares occasionally. But really, in accepting this from J. F. James I took the lesser of two evils. For various reasons I don't want to offend this young man, & I had the choice between Dr. Torrey's letter & an elaborate (?) study of the genus Asclepias. I believe you would have made my choice, autograph & all.

As for the characterization of the Minneapolis papers, my initials are attached to that article, & the parts relating to Dr. Sturtevant I must confess were too hastily written, but he stuffed Prof. Bessey & me so full, & the former was apparently so struck with him that I said what I repented of before it was mailed. I hope it will do no harm.

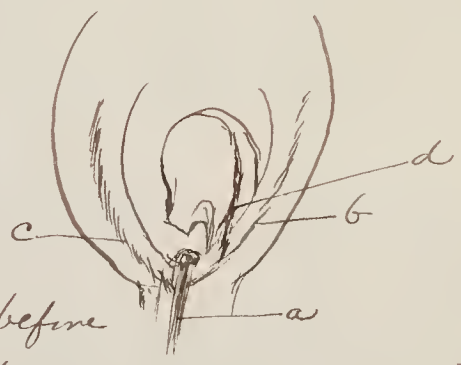

As for James on Compositae, the Esquette did not mean to express an opinion, but simply to state the drift of his paper, which, of course, we all knew was as trite as the catechism & ought never to have been admitted by the sectional committee, but I did not want to say so.

And now to ~~answer~~<sup>answer</sup> your question in reference to my own paper. Of course, what you refer to was put in by one of the co-editors, who may have stated it too strongly. I made no conclusions with regard to Compositae, but simply <sup>tried</sup> what I saw in Dandelion, nor did I commit myself to the idea of the Dandelion's ovule being produced from the midrib of a carpellary leaf, but said it looked like it & I will proceed to tell you in brief why I said so. Sachs & others claim that

Sept 20 '83

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Compositae & others have the ovules produced directly from the axis, & you that they are invariably outgrowths of the carpellary leaf. I started to investigate this, rather prejudiced I must say in favor of Sack's view, but guided by an unhesitating acceptance of yours, in this case at least.

This is what I saw. The fibro-vascular bundle of the main axis of the flower (a) ran straight up into the cavity of the ovary & ended in a little button or lump. Just before entering the cavity two lateral ~~branches~~ <sup>bundles</sup> (b & c) left it & ran up the opposite sides of the carpellary walls. The ~~branch~~ <sup>branch</sup> on the right soon gave rise to another (d) which ran straight into the funiculus as the axial bundle of the ovule. Moreover, in the development of the ovary I saw the two sides come over & meet like two lips, showing the double nature of the ovary. These two lips united into the style & afterwards spread apart above into the <sup>well-known</sup> cleft style. The ovary cavity was closed in like this . Putting these two cases together  I reasoned as follows: these two lateral fibro-vascular bundles, the only ones I can find reaching up from the floral axis seem to indicate the presence of two opposite carpellary leaves, over

& ~~the only bundles~~ <sup>if there is <sup>but</sup> one</sup> bundle running from an axis into  
a leaf it must run into the midrib, & surely one  
of these bundles sent a branch into the funiculus,  
therefore I said it looked as though the Dandelion  
ovule was produced from the midrib of ~~the~~ <sup>a</sup> carpellary  
leaf. I was not attempting to prove anything of the  
sort, that part of it simply coming in incidentally,  
but was only intent on showing that the ovule  
of Dandelion was surely not a direct growth  
from the axis but from a carpellary leaf.

Bessey asked for the ~~article~~ <sup>paper</sup> ~~from~~ <sup>for</sup> the Naturalist  
but I don't know when it will appear. In the summary  
you refer to in the Gazette, the ~~various~~ <sup>first two</sup> conclusions given  
should have been stated as being simply confirmatory, as  
Sachs states them clearly enough, wh. I mention in a  
foot-note; while the third referred to the discussion  
of the morphology of the ovule with the Dandelion as a  
text. I would like to know what you make of the  
facts I have given, or whether you would suggest any  
~~fast~~ means of testing the work. I examined I suppose over  
100 heads, & if any one thinks it is easy work let him  
try it. The fibro-vascular bundles were brought <sup>out</sup> very  
distinctly with magenta -

Yrs. as ever  
John M. Coulter.



WABASH COLLEGE.

Department of Biology.

Botanical Gazette

Crawfordsville, Ind., Sept. 18. 1884.

My Dear Dr. Gray:

It was a great disappointment to me not to be able to come to Philad., not the least of my desires being to have a talk with you. During my summer's absence I gave over the Gazette into Barnes's hands. I find that the September no., just sent out from the publishers, contains an unaccountable blunder. There are 3 notes in it from you, on Hibiscus, Uisce Toxicum, & Stipules in Saxifrag, which are word for word with those published among the "General Notes" of June 1883. I shall call B. to an account when I see him tomorrow, but the murder has been



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WABASH COLLEGE.

Department of Biology.

Sept 18 84

Botanical Gazette.

Crawfordsville, Ind., ..... 188.....

done. I am preparing a notice of the Synopt. Pl. for the October no—

Barnes writes that you offered us your Montreal paper upon condition of not cutting it in two. Please send it on at any time you choose & we will be only too glad to publish it upon any conditions. I will do my best with it & will furnish all the necessary reprints— I wd like if possible to have it at once & will bring it out in the Oct. no—

As ever yrs—

John M. Coulter.

WABASH COLLEGE.

Department of Biology.

Botanical Gazette.

Crawfordsville, Ind., Jan'y 31<sup>st</sup> 1885

My Dear Dr:

Of course you know, without my saying so, that I am very grateful for the trouble you are taking in regard to my Manual. I appreciate such criticisms heartily & want as thorough an overhauling as your time or inclination will allow. A great many of your corrections are such as I would have made anyhow; others convey information that I did not have and want. There may have been slips in punctuation in the M.S., but I am watching that all up in the proof—

In the batch rec'd today, you have, however, put your finger upon a most

decided flaw, & wh. I expected would "bring  
 you to your feet" were sooner. I freely  
 acknowledge the "hybrid" nature of the  
 treatment of genera, but that is fraudulently  
 explained in my preface, which you  
 have not read of course. So far as  
 you have seen it represents a phase  
 in the evolution of the method, towards  
 your treatment in the Flora, which  
 I believe is the correct, commonsense,  
 & scientific method. ~~the~~ In the first  
 part of my Mss. I gave in the Synopsis of  
 Genera, simply distinguishing characters,  
 sometimes important, sometimes not. Then when  
 I came to the genera heading their lists of  
 species, I carefully omitted all that had been  
 given in the Synopsis, to avoid repetition. The  
 consequence was, that characters appear in  
 rather haphazard fashion, & in some cases,  
 no characters at all. Then in all  
 the later parts of the work I drop com-

WABASH COLLEGE.

Department of Biology.

3 Jan 31, '85

Botanical Gazette.

Crawfordsville, Ind., ..... 188.....

pletely into the method of the Flora. In the  
 preface I caution all students in  
 regard to this, point out the two methods  
 of treating the genera, & say that  
 the ~~two methods~~ <sup>use of both</sup> in the manual simply  
 means that as the work progressed, the  
 Flora style was thought the best —

Of course I accept heartily what  
 you have said about references to  
 volumes (i ix, etc), & have adopted  
 it; the same with regard to punctu-  
 ation —

Yours as ever —  
 John M. Coulter.

I am ashamed about "Evolution" —

Crawfordsville, Ind., May 18-1885

My Dear Dr.

I was very glad to receive your note & know that you were again within the reach of your friends. I only hope that your very pleasant trip has stored up such a reserve of health that another year's work will not exhaust it.

The "Manual" comes on slowly, 10 pp. per week, at which rate the book will be published about next Christmas. We are just finishing up Compositae.

I want to ask if H. L. Britton has so pre-empted Cyperus that it would be unbecoming for Barnes & me to go to work at it. I have lots of material & more desire, but Britton has "warned us off." I want to take hold somewhere though & not be beating the



air. I have Canby's article on  
Fendless, & it is surely well worth  
the printing. I have <sup>just</sup> declined the chair  
of botany at the State University, for the  
good people here back me up so handsomely  
& have more money than the Univ. will  
ever have, so that I could only stay. But  
the point is that I am so situated now  
as to be able to pay my share in any  
collections that are being made. I have  
subscribed for everything of our regular  
collections, but if you have any plan  
in wh. you want me to take a share,  
only provided it will bring me plants  
& work, I can furnish them a moder-  
ate supply of "funds." Or if there  
are any books I need in my systematic  
work & am not likely to have, I  
can get them at any cost if only  
I hear of them. Excuse this  
"screech," but it feels good to have  
you at home again -  
as ever yours  
John M. Coulter.

# The Botanical Gazette.

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JOHN M. COULTER,  
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CHARLES R. BARNES,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., Apr. 24 '86

My dear Dr. Gray:

I have your very kind letter of April 20, and have been thinking over it for several days. I want to say in the outset that it never has been & never will be a part of my plans to interfere in the slightest with any cherished plans of your own. My love for you personally (which is a feeling common among botanists), and my appreciation of your work, would at once check any such desire. My whole feeling in the matter is simply this: I am young and vigorous, eager to work, & if I have what you kindly call "a knack for putting things in shape", here I am at your service, to do for you whatever I can.

My reply to J. B. T. & Co. was made under a

misapprehension. I took for granted that they knew even more of your plans than I did, & that when they asked for a Manual of the Miss. Valley that they knew you had no intention of covering that ground, & that they were acting upon such information.

Your plan is by far the best one, & is of course the one to be carried out. The little book I referred to was one <sup>by a Cincinnati firm</sup> I was asked to prepare, & was to be merely a small & unpretentious thing for local use. But that I am more than willing to lay aside, in fact did not want to do it at all except for the "bread & butter" the firm promised me.

You speak of "breaking out paths that others can walk easily & profitably in", but that is both the fate & glory of such pioneers & masters as you represent, & that is really what you have wanted to do for us. There will never be any lack of appreciation of the work you have done for us, & no botanist would fail to subscribe to your statement about "younger & not better men". I am sure I only aspire to become one of your followers

Apr 24 '86

in the paths you have broken so well & made so easy for us.

Your plan for endowing the Harvard Herbarium is just the thing, & should not be interfered with, & I am ready to help you in it all I can. Let that plan stand, & simply let me help you put it into effect. The Herbarium is for us all.

It occurs to me that the proposed Manual should include Dr Chapman's "bailewick"; for it needs a manual sadly, & it is out of the question for Dr Chapman to undertake it. He told me when he put out his Supplement that he did it that way because he saw no chance of his rewriting the whole book. He is very old, over 90, & as the proposed Manual could not appear for 2 or 3 years, he would still occupy the field for that length of time.

I believe you understand now my feeling in the matter, & can act accordingly. I can arrange for an interview with you whenever

you wish it, & am ready to go to work at once upon <sup>any</sup> plan you propose.

I hope the beautiful spring weather that is now upon us will free you from your colds, & that you can not only "not lose a day's work", but can work comfortably -

Always yrs -

John M. Coulter.



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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., May 3-'86

My dear Dr Gray:

I will work along on some illustrations for Umbelliferae, + I think the motion of putting illustrations in the text a most capital one.

In reference to arranging details. J. B. T. & Co., were speaking about wanting a triangular conference + I told them I could come at any time. This will be true up to June 15<sup>th</sup> — After that date my time will probably be taken up for some 8 weeks with state work.

My time now will be more my own than ever, as I am to have two competent assistants, + when I begin work it will be attacked steadily + with a fair amount of time daily —

yrs. faithfully  
John M. Coulter.

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AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., May 13-86

My dear Dr. Gray:

I think myself that there is no need of having an interview with the publishers now that the work has been "cut out."

In reference to the division of "the spoils", that matter had better rest entirely with you. If I could in any way afford to do the work for nothing I would gladly do so, but it is by the hardest that I can keep things going. However, I appreciate very fully the comparatively small contribution I bring to this business, & you need not hesitate to make my share quite a modest one.

I shall be glad to see the model you are preparing, & am ready to go to work. It would, by all means, be far better for you to do the Compositae as far as you can.

I am not clear yet as to our south-western boundary. Would it be practicable to make the 2<sup>d</sup> ed. of the Rocky Mt. Manual include New Mexico <sup>+ W. Texas</sup> (as it should), and so take <sup>E.</sup> Texas into this one & make a clean sweep of the country?

As to "farming out" some of the groups, I am decidedly in favor of giving over the Grasses, Sedges, & Willows to those who like them. Scribner, Bailey, & Bebb would do the work gladly & well, & with careful editing the two former could be trimmed down <sup>within</sup> to proper bounds. I already have Scribner at work on the Grasses for a 2<sup>d</sup> edition of the Rocky Mt. Manual.

Am working over all of Martindale's Hypericaceae with my revision, & find it works like a charm. It is strange to me what mistakes even very good botanists make in their naming. There seems to have been an almost universal misunderstanding of H. gymnanthemum, H. mutilum, etc. Martindale sends a "new species?" from W. Va., collected by himself, Canby, & Porter, & referred to H. dolabriforme as its nearest of Kin. It belongs to an entirely different section of the genus, & is the plainest possible example of H. virgatum (H. angulorum), wh. grows all about them in New Jersey - gn. very truly John M. Coulton.

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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., May 29 '86

My dear Dr Gray:

I have your "model" for the new manual, as set forth in *Casipifoliaceae* & have been "setting my mind to it." I can't, "for the life of me", see how the thing could be condensed any further. It seems to me you have reduced it to the lowest possible terms to make the plants recognizable. At the same time, I think they are recognizable, & clearly so, which is what is wanted, just enough & no more. I see you propose to treat

introduced species as heretofore, which is all that can be done with them now I suppose.

I am well pleased with the whole presentation, & have but one suggestion to offer. You have omitted synonymy entirely, and of course if any one wants that they must get the volumes of your *Synoptical Flor.* But we can add a little & make it a great convenience, without materially increasing the number of pages. Whenever a

for a species  
name, is changed from what it was in Gray's or  
Chapman's Manuals let that fact be expressed by  
the synonym. For instance under ~~Viburnum~~ Lonicera  
glaberrima, L. parviflora appearing as a synonym  
will save botanists a lot of trouble in identify-  
ing their already labeled specimens.

Remanding the derivation & meaning of generic  
names to an appendix is a most excellent  
thought. The glossary is essential & the few  
hints you propose giving will save trouble &  
do good.

Altogether I like the model & think it  
will make a book of reasonable size and  
great clearness.

Shall I begin on the post-Compositae?

Yrs. as ever

John M. Coulter.

What would you think of putting the range & all remarks  
made outside of the technical description in smaller type?  
It would look well & save space.



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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind. - June 10 - '86

My dear Dr Gray:

I have studied the thing of indicating geographical ranges, & think that one can be very brief & still very clear. I see no objection to indicating directions by W. N. etc. It is clear enough & catches the eye as quickly as the whole word. I also see no objection to abbreviating all the names of states. You say you would use Mass., but dislike Miss., Minns. etc. For my part I don't see how Mass. differs from the others in propriety, unless that you are accustomed to hearing the natives commonly use the abbreviation. Miss. & Minns. & just as pleasant words. Mo. I confess is rather brief, but it is to the point & every one knows what it means.

The abbreviations for measurements I had noted & approved of most heartily. I think it is a happy solution of that problem.

I "acknowledge the corn" on question of different

type for range. In looking over what would be put  
in such type I found that we would lose space  
rather than gain, as such statements are almost  
invariably compressed within a line.

I have already "broken ground" in Rubiaceae & feel  
as eager as a good hunter in a game country.

I have one thing for you to think about. It  
would be a very great convenience to our botanists  
if we should number our species consecutively. The  
reference by numbers instead of names is a great thing  
in exchanges, & such a thing would take no extra  
space. I have noticed this method in Jordan's  
Synopsis of N. Am. Fishes & it looks well. Of course  
such a scheme will permit species to be intercalated  
as long as the letters of the alphabet hold out  
between consecutive numbers. 560b is just as  
convenient a reference as 562. I have heard a  
desire for some such thing expressed by several  
botanists, & thought it would be worth thinking  
over.

Yrs. as ever  
John M. Coulter.

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AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., June 29<sup>th</sup> 88

Dear Dr Gray:

I am home again after a short trip and find your letter of the 15<sup>th</sup> awaiting me. I am glad to hear your good opinions of Barnes. Of course, I always had it, & knew there was good stuff in ~~him~~, but it is pleasant to hear others bearing the same testimony.

Upon thinking it over, I am not at all impressed with the numbering scheme

As to abbreviations of states. I have been looking the matter over carefully & have come to the conclusion that it will not save a single line to

abbreviate, & I am in favor of writing them all in full. Our statements of range are very brief, & you will find it a rare case for any abbreviation to save any space. I had already used the "corolla-lobe," etc., expressions, in working over the Rubiaceae -

I am decidedly in favor of running the generic name into a side heading, rather than a center, & with proper type it will stand out distinct enough & look better, to my notion.

I think the type of the Manual is small enough for the average botanist. I am afraid there would be complaint if it was made any smaller.

I shall send on the Rubiaceae as soon as I am through. I can't promise rapid work in summer, but in the fall will make up for it -

yrs. as ever -

John M. Coulter.

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AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind.

July 17-88

Dear Dr. Gray:

I enclose Rattan's new *Campanula*, as you have requested. It has not been put in type, as R. rather wants a plate with it. I don't know whether we will make one or not, I am inclined against it.

In reference to abbreviated States. It is my opinion that a line will be saved so seldom that it will hardly count. That is what I meant by the rather too strong expression "it will not save a single line."

I am not in favor of enlarging the page, as it is wide enough to be used as pocket manual. I am strongly in favor of a thin margined edition, which can be slipped into the pocket & used in the field.

I am very glad to know that you are getting along so well with the *Polypetalae*. Through "The Violets" saved as though progress is being made -  
as ever yr - John M. Coulter,



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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., Sept. 10-'86

My dear Dr Gray:

I am glad to report that I have again settled down at home for fall & winter work. My time is so arranged now, with two assistants, that I shall make large inroads on the Manual. I only wish that I had some small group of plants to work up as I did *Hypericaceae*. I have accumulated literature enough now to make a stagger at it, Michaux, & Haother's *Fl. Bor.*, being my last finds.

Have been studying Dr Gattlinger's *Hypericum*. One is undoubtedly *H. Kalmianum*!, & being from Tenn. is surely interesting.

The other, of which he has now sent <sup>me abundant</sup> fresh material, is to be considered a new species, provided that species can be made for convenience. It has the 5-celled capsule of *H. Kalmianum*, the leaves

of H. prolificum, & flowers (in size & clusters) & general habit of H. densiflorum!

In these 3 species I have found that the number of cells varies from 3 to 6, in almost any of them & they are really <sup>so</sup> closely related, ~~being~~ <sup>that they may be said to be</sup> separated for convenience.

The fact now is, that here comes a form from Tenn. which has characters from all three! separated from all well enough by this very combination, but none the less related to all. Hence I say, that so long as species are often made for convenience this had better stand as one, for if it goes under any one of these three, the others must follow, & we are not ready ~~to~~ for that yet.

Hence this Hypericum I record, but it's my hobby just now

Yrs. as ever -  
John M. Coulter.

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J. C. ARTHUR,  
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Crawfordsville, Ind., Jan'y 7-'87

Dr Asa Gray, Dr

to Botanical Gazette

to 150 extras of Asimina paper —

\$ 2.00

rec'd payment

John M. Coulter

# The Botanical Gazette.

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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind. -  
Jan'y 15<sup>th</sup> '87

My dear Dr:

Enclosed please find receipt.

The Manual was stopped by the holidays (spent at the old homestead), but is now under way again. I will have the *Ericaceae* & all before ready to send you in a few days.

I am deep in Umbellifers & am having fine success with the fruit characters. Their relationships seem distinct enough, but they are by no means always in the right genera. For instance, *Conioselinum* is a good genus & not *Selinum* at all. If in *Selineae* at all it is *Ligusticum*, but is much more closely allied to *Angelica*. *Angelica* & *Archangelica* cannot be made

separate genera on any grounds  
& must be thrown <sup>as Angelica</sup> together. Arch-  
angelica Gmelini is not Archangeli-  
ca at all, nor even Angelica,  
nor even <sup>of the</sup> Angeliceae!, but belongs  
to Selinaceae, & is best considered  
a Ligusticum. And so you  
have it. It is immensely in-  
teresting to see relationships  
show up in the minute  
structures of the fruit. I am  
getting <sup>up</sup> a series of illustrations  
of them in the Gazette which  
I am satisfied will let day-  
light through our E. U. S. frouns -

Yours, as ever  
John M. Coulter -



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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind. -

Jan. 24 - '87

My dear Dr.;

Of course we can print  
your *Delphinium* article all  
at once! & be glad to.

We are not relying too strongly  
on vittae, but are under the  
impression that B. & H. do. In  
no other way can they keep apart,  
*Ligusticum* & *Selinum*, & even  
that won't work.

The broad (lateral) winged character,  
much dorsally compressed <sup>fruit</sup>, sets  
out the *Angelica* group nicely,  
& no man can draw a line

bt. Angelica + Archangelica.

Vittæ won't do it, + Arch. Thirsuta has a seed about as tightly fastened to pericarp as Ang. Curtisiæ. In fact it ~~to~~ loosens so slowly that even mature specimens seldom show it. Such a character I do not consider a useable one.

As to Arch. Gomelini, with no broad lateral wings, with no dorsal compression at all, ~~but~~ a slightly lateral one, if any, how can that be forced into Angeliceæ! Its compression is like Ligusticum, but oil tubes won't work, neither will they in Selinium, nor in Pleuro-spermeum to which Bongard referred it. In short I believe it is Sci-generis, + if so, I suppose it is Cœlopleurum of Ledeb., who defines it well, but makes an awful mess of his hollowed out ridges.

I think you will like our plates of sections. They are faithful camera drawings + very telling. Jm. as ever Jno. M. Coulter

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PURDUE UNIVERSITY, LAFAYETTE, IND.

J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind. - Feb 15 - '87

My dear Mr. Watson;

Parish's #987 is labeled  
from San Bernardino  
Carum Guadnesii. It has somewhat the  
external appearance of that species &  
a hasty glance might consign it there.  
However it is a typical Pimpinella.  
It is much like P. apiadora of <sup>further</sup> ~~the~~  
north, but differs in the following characters:

1. Broader bracts
2. Narrower fruit
3. Vittae 3 in the intervals, instead of 4-6.
4. " 6 on commissure, " " 8 or more.

It is also not at all pubescent in the  
inflorescences. My specimens (in good fl.  
& fr.) have no leaves, except the persistent  
bases of the petioles, hence I am at a  
loss to know what they are like. I  
enclose camera drawing (X54) of a  
cross section of the carpel. Will you  
please inform me whether you have  
"laid hold" of this & drawn its characters

or whether you have not looked into it. If the latter, how to the leaf character compare with those of *P. apiadora*? Ought it to be merged with *P. apiadora*, as a Pacific Coast species, south as well as north, or set up as a southern species?

Yrs. very truly  
John M. Coulter.

Would you be kind enough to see if Dr. Gray has a copy of his Contr. Proc. Amer. Acad. Vol. VII to sell? I want to secure one,

Crawfordsville, Ind. - Feb. 22 '87

Dear Mr. Watson:

Excuse paper, but I am over in the herbarium. I mail you today the sheet (from Martindale's collection) containing his 987 Panish, labeled Carex Gairdneri, & put on same sheet with a genuine C. Gairdneri. I also include a camera drawing from the [987 Panish] you sent me, & which is of course (with large single vittae in the intervals) a Carex, & we have your word for the <sup>general habit</sup> ~~external herbage~~ that it is C. Kelloggii. I also include another camera drawing from <sup>Martindale's</sup> ~~and~~ 987 Panish, which, with its 3 or 4 vittae in the intervals, is undoubtedly a Pimpinella. The only question is whether it is sufficiently distinct from P. apiodora to rank as a separate species, or whether P. apiodora will have to be enlarged to include it & thus extend its range southward. The <sup>fruit</sup> differences between P. apiodora & this Panish Pimpinella are as follows:

P. apiodora - vittae 4-6 in intervals; 8 or more on commissure -

Panish Pimpinella - " 3 (<sup>rarely</sup> 4) " " ; 6 on commissure -

My inclination would be to enlarge P. apiodora to contain <sup>or leaves?</sup> this, unless you discover other characters, say in the bracts?

We have no specimens of P. apiodora, except the var. & that not in fr. It surely looks nothing like that in habit.

Thank Dr. Gray for me, for the VII Contribution just received —

Yrs. as ever  
John M. Coulter,



Crawfordsville, Ind., April 5, '87

Dear Mr. Watson:

In reference to Deweya & some other matters I want your opinion. As you well say, generic lines are hard to draw among Umbelliferæ, & make all genera of equal rank, & I believe that after all, we will have to be somewhat arbitrary about it. Now for some hard questions:

It seems clear that Deweya should be merged with Arracacia. That we will grant, for the very deeply sulcate seed in both cases is a good character, although the stylopodia differ. Eulophus peucedanoides has exactly the same seed section, & the depressed stylopodium of Deweya. It seems clear that it should go along with Deweya. Eulophus Americanus, however, is a different matter. The face of its seed is not deeply sulcate, only concave (mostly slightly so) even in the ripest fruit (We have a very fine display of this species). This being the case, it cannot be separated from certain species of Pimpinella!, which have & seeds fully as concave. It also has a conical stylopodium. It seems absurd to draw generic lines based upon relative concavity of the seed face, a thing which varies to a certain extent with age. If Eulophus Americanus is a Eulophus, so is the new Pimpinella we sent you the other day, & so are ~~some~~ <sup>some</sup> old world Pimpinellas. If these old world forms & our new Parish plant are Pimpinellas, so is Eulophus Americanus. All this looks as if E. peucedanoides should go with Deweya into Arracacia, & E. Americanus into Pimpinella! What, <sup>testimony</sup> E. Texanus gives we don't know, as we have no fruiting specimens.

Cordoba

If the all generic name of *Europhus Americanus* is kept up, we must without doubt call our new least *Europhus Caninus*, & not *Caninus*. We take it, from the fact that *Europhus Americanus* was originally *Caninus*, that it also has a very likely chance of not including *Caninus*, & should go with *E. Caninus* & *Caninus* into *Americanus*.

John W. Coultas

Yr. very truly

Very glad to hear from you.

to have to proceed "in the premises," we will be yours. If you have any clear notion as series of common sketches to illustrate our *E. Caninus* & *Caninus*? We include a *Americanus* all a *Europhus* & call our *Caninus*. Or had we better consider *E. Americanus*, a character hardly in accordance with of *Caninus* *Caninus* as also found in *Europhus* do all another complication, the evident copy-like

# The Botanical Gazette.

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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

Crawfordsville, Ind., June 6-87

Dear Mr. Watson:

I am sorry that your search for the *Mss.* was fruitless, but don't bother yourself about it further. Dr Gray has probably stowed it away in some safe place & it will be forthcoming when he returns.

I am sorry for the mistakes in your paper & will print the corrections, & send your slips of them so that you can distribute them with the others & they can be pasted on the reprints themselves.

You speak of preparing a paper on a new genus of Umbellifers, with notes on others. Did you mean <sup>for</sup> the *Gazette*, or for *Proc. Amer. Acad.*? I would be very glad to get the Umbellifer genus & notes for the *Gazette*, & that need not prevent their appearance also in your usual channel.

I would promise you a plate of it, & that would make it very complete. If you could

have a drawing of the plant itself made, also  
its fruit, & sections, we would prepare the  
plate. Or if you cannot go to that trouble,  
but will send us a typical plant & its fruit,  
we will do the drawing ourselves. We  
could promise it for the July or August no.,  
& of course, you could have the proof reading  
in such a particular paper.

Yrs. as ever  
John M. Coulter.



WABASH COLLEGE,

Crawfordsville, Ind., Sept. 7 1887

Dear Mr. Watson:

In getting together your "Contributions" for the binder I find I lack the 1<sup>st</sup> & 5<sup>th</sup>. Can I buy or beg these to complete my set?

Our study of Eastern Unbelievers will be completed in two more papers, now almost ready for the printer. We published this series rather to "try the thing on" than anything else, & also to secure a large amount of material.

Now that this is done we want to turn to a more general study of N. Am. Unbelievers, & to stop publishing the ~~results~~ in a serial form. We want now to study the thing in all its relations be-



fore we publish anything. It seems to me  
that a whole ~~month~~<sup>year</sup> spent upon Umbellifer,  
by two of us, with the experience now acquired,  
with our complete arrangements for careful  
sectioning, should help along to an understanding  
of our N. Am. forms. We would be  
glad to hear from you in the way of  
advice before "enlarging our borders."

Will submit to you in a few days what  
we take to be a new Lizia from  
Colorado.

Yrs. faithfully  
John M. Coulter,

Crawfordsville, Ind. - Sept. 23 - '87

My dear Mr. Watson:

Would it be asking too much to let me have a look at Podosciadium? I have specimens so labeled, but I think they cannot be right. I would like to see something authentic, & this genus comes right in our way at this time. I will return promptly any material sent.

Yrs. as always  
John M. Coulter.

Sent the entire P<sup>th</sup> corr. - by mail  
- 30¢ postage - Sept. 27/87 S.W.

Ret<sup>d</sup> - Apr. 1888

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J. C. ARTHUR,  
AGRIC. EXPER. STATION, GENEVA, N. Y.

C'ville - Oct. 6 '87

My dear Mr. Watson,

Podocarpium has  
come safely to hand, & will be  
tenderly cared for & returned.

Your query whether one of the sp.  
is one *Pimpinella* we can answer  
in the negative, but external resemblances  
are great. There is a great deal of  
mixing in collections, & the whole thing  
is puzzling just yet.

Yrs. as always

John M. Coulter

Crawfordsville, Ind. - Oct. 13-'84

My dear Dr. Gray:

I was more than glad to receive your announcement of safe arrival & good health. It is good to have you within reach again, for some of us have run rampant, & you will have your hands full suppressing Greene, Coulter, et id omne genus. You need not mind returning the extra Gazettes. I thought you would like them across the water, in the same way that a traveller likes to receive a home paper, not so much that it is good, as that it is from home. The Gazette has kept you posted in botanical news; as for personal, Barnes has gone to Univ. Wisconsin, & Arthur succeeds him at Purdue. I have had several good chances for a change of base, but it would always involve the accumulation again of herbarium & library, & I have no time to do that. The Manual is progressing

steadily, & I will have no trouble in keeping up with the demands. As you know, for a year now I have been eating, drinking, & sleeping Umbellifers. They have fairly possessed me. We have finished our eastern job & the last two papers will appear in Nov. & Dec. Gazettes. The amount of exhaustive study we are expending is enough to bring some result. We have now turned our faces towards N. Am. Umbellifers & are making good progress. We have all of Martindale's & Donnell Smith's Umbellifers, besides many other lesser collections such as Canby's, Porter's, Bronson Univ., etc., & of course have been imposing upon Mr. Watson & the Torr. Herb. We don't propose to do any more publishing until the whole thing is done. We have just been considering Podocladium & I have 2 or 3 conundrums to propose, which you need not answer unless you want to.

1. On what character, from long styles & conical stylopodia down to fascicled tuberos



roots, can Podosciadium be separated from Eulophus? I am prepared to show generic identity to the last detail.

2. Your sheets show a new ~~species~~, collected by Pringle in Calif. & now sent to me by Marcus E. Jones, A.M. from another Calif. station. It is a very distinct species & is called (in herb.) Eulophus (Podosc.) Pringlei.

3. Mr. Watson thought he was sending all his Podosciadium, but if he will look in his Carum bundles, amongst Carum Gairdneris & especially Cusick's & Howell's <sup>recent</sup> specimens of C. Oregonum, he will find plenty of Oregon Podosciadium Bolanderi; at least we find it so in Smith's, Martin's, & my own collection; & doubtless you have from the same distributions. I never saw such random naming (by collectors) of the forms of Carum & Podosciadium. The genus is often mixed, when they should never

be mistaken.

4. You will have to discover some new leg for *Glycosma* to stand on, or it will tumble bodily into *Osmorhiza*. It is far enough from *Myrrhis*.

5. I forgot my second commandment, which is; how can *Eulophus Texanus* + *E. pseudanoides* be *Eulophus* at all? They are "horres of another color" entirely.

But you have no time to read so much -

Yrs. as always -  
John M. Coulter.

We are still making careful camera drawings of <sup>fruit</sup> sections of every Umbellifer species.

—THE  
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PURDUE UNIVERSITY, LAFAYETTE, IND.

J. M. Coulter

Crawfordsville, Ind.,  
Dec. 3-87

My dear Dr. Gray:

What in the world is going to become of us, with Greene stirring up synonymy as with a pitchfork? His Pittonia #2 (wh. you review in Dec. no. Am. Jour.) is bad enough, but has Pittonia #3 come to your hands? It reads like the work of a crazy man, at least one lacking to all sense of propriety. Is he not a second Rafinesque?

What is to be your policy with regard to the priority of specific names? For instance, I restored Conioselinum Canadense. Walter had described it as Apium bipinnatum, & along comes Britton in last Jour. Bull. & changes it to Conioselinum

bipinnatum Britton. I rebel against  
such a raking up of old specific  
names, but if it is to be done I  
prefer to do it myself.

I have finished up *Peucedanum*  
after the toughest tussle of my life,  
& am now in the beauties of  
*Cymopterus*. I have all the Umbellif-  
ers in the country nearly except  
those of Cambridge. My plans now  
are to drive away all this  
year at them, & spend next sum-  
mer in the Cambridge collection  
& library -

Yrs. as always -  
John M. Coulter.

—THE—  
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Crawfordsville, Ind. -  
Jan. 19-'88

My dear Dr. Watson:

As I have a lot of new <sup>western</sup> Umbellifers "in pickle", it has occurred to me to ask whether you have any new Umbellifers ready for publication, as I don't want to play at cross purposes. I believe I have told you that Mr. Rose & I intend to spend next summer at Cambridge studying your Umbellifers. By that means we hope to have ready <sup>in the fall</sup> a complete revision of our N. Am. Species, with illustrations of the fruit of every species. We are now among our western Angelicas, & find a considerable mixture. -

Yrs. Sincerely  
John M. Coulter.



—THE—  
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Crawfordsville, Ind. -  
Jan. 20-'88

My dear Dr. Watson:

I have lots of material  
professing to be your Angelica Lyallii,  
& it suits in every particular, except  
the fruits are at least 3 lines long.  
You say that the fruit is smaller  
than that of A. genuflexa, while  
our material shows the opposite.  
Our A. genuflexa has fruits but 1 to  
2 lines long, ~~and~~ and the specimens  
are undoubted. Can it be that  
in contrasting your A. Lyallii with  
A. genuflexa you meant to say larger  
rather than smaller fruit? Would  
it be too much trouble to ask  
you to send me a little fruit of  
undoubted A. Lyallii? We have  
undoubtedly found Nuttall's old A.  
arguta among Howell's collections  
from Hood River & Mt. Adams -  
A. lucida I feel like "kicking" out entirely -  
Yrs. Sincerely, J. M. Coulter

—THE  
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PURDUE UNIVERSITY, LAFAYETTE, IND.

Both the Peucedanums below you had  
guessed to be P. Nevadaense, from  
imperfect material. What do you  
think of them? We enclose print  
also + camera drawing of           .

Crawfordsville, Ind. — Feby 9 - 88

Dear Dr. Watson:

I send you today by mail  
a little package of plants.

# 1 we call a new Peucedanum, to be called  
either tuberosum or Carbyi. + Cusick -  
collected by Howell

# 2 we call another new Peucedanum, to be called  
P. Sandbergii. It has been abundantly  
collected by Sandberg (in Idaho), by Carby further  
north, + by Dawson.

The following are out of my beat, + you can  
~~I~~ do with them as you please, though  
I want to report names to Mr. Sandberg,  
who collected all of them in N. Idaho.

# 3. Nymphæa, that I can do nothing  
with - said to be very local.

# 4 - Can this be a new Hermidium?  
along Mt. streams.

# 5 is a Pentstemon I cannot locate -  
Rocky hillslopes -

Yrs. as always  
John M. Coulter

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PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind. —  
April 2 - '88

My dear Mr. Watson:

I have mailed you with this your Podosciadium bundle. We have discovered no way to distinguish Podosciadium from Eulophus, & hence propose to merge the two genera. You will discover our proposed changes in pencil on your sheets, so that you can erase them & retain them as you choose.

In regard to your San Luis Obispo thing. It is clearly a Eulophus, that is, what has been called Podosciadium. You will discover it among your sheets as #40 Pingle, coll. of 1882. We also have it from M. E. Jones collected at San Luis Obispo, with good leaves, which are very characteristic. Our specimens, however, did not show the tuberous-rooted character, which we felt must be the fact, & are very glad to hear of it from you. We have called it Eulophus Pinglei.

Yrs. as always

John M. Coulter.

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PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind. -  
April 2-88

My dear Mr. Watson:

Yes, the Gray *Mes.*  
came through all right & is now  
in type. It will appear in  
the April Gazette.

Don't you have some notes  
occasionally that are aching to  
see the light? The Gazette would  
be exceedingly well pleased to get  
an occasional contribution from  
you —

Yrs. as always

John M. Coulter,

—THE  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind. —  
April 9-88

My dear Mr. Watson:

Your subscription for yourself  
& the Herbarium is at hand. I  
will mail back nos. to the latter, as  
well as the nos. you desire.

The Gazette editors have been seeing  
about their dividend & have ~~concluded~~  
that the time has come when they can  
begin to pay a little for articles that  
are worthy. We cannot pay much, in  
fact, hardly anything, but we want to  
make a start & will then increase.  
We believe in the plan, & that every  
"workman is worthy of his hire", &  
although it is not much, it will  
serve to remind him that he gets a  
slight recognition. We can afford  
to pay \$1 per page to those whose  
writing we care for. Therefore, my  
dear Sir, whenever you can furnish  
us an article you will be paid  
on that basis —

Yrs. very truly  
John M. Coulter,



—THE  
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PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind.

April 18 - 88

My dear Mr. Watson:

I am very glad for your encouraging words concerning the Gazette. It is trying hard & will continue to do so. The mania for digging up old & very doubtful names we are not in sympathy with at all. I shall be glad to publish the anonymous communication you refer to, coming as it does upon your recommendation.

Did you receive the Podocarpus bundle in good condition? And what do you say to our proposed changes?  
Yrs. sincerely  
John M. Coulter.

—THE  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind.  
April 27<sup>th</sup> 1888

Dear Mr. Watson:

Your "N. am." mss. is at hand & is just the thing. It puts the thing in a telling way & expresses my sentiments exactly. The "priority" business is running out to absurdities & they had better be shown up.

In reference to your "Angelica" fruit.

All our Angelicas have plane seed-face, excepting A. Lagallii, & that has a broad & shallow concavity. The fruit you send has a deep sulcus, like this , otherwise it is like our Angelicas. But, your fruit cannot be told from Angelica Mexicana Vatte, & unless there is some decidedly <sup>different</sup> foliage character it is probably that species. However, if you have two different things <sup>in</sup> ~~the~~ Angelica Mexicana & this fruit you send, as they are both so much alike & so markedly different from our Angelicas, I would look

out for a new genus embracing <sup>at least</sup> these two  
species. Is this ~~the~~ <sup>your</sup> new genus I notice  
in Pringle's new list? Prinosciadium, if  
I remember the name. If so, & you  
have established the genus, Angelica Mexi-  
cana should go with it.

Yours very truly  
John M. Coulter.

—THE—  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., May 16 - 1888

My dear Mr. Watson:

All right, if you say so I will suppress your "Open Letter" in reference to Cozies's mistake. Dr. Vasey has already sent me a very satisfactory explanation for the Gazette, which I think will put things in good shape.

Have you looked over the Torrey Catalogue of "Anthophyta" + Pteridophyta? What can we do with Britton? He goes slap dash at the thing, without any critical knowledge whatever, & hauls up old specific names which may or may not have been applied to the species. Look at Coriovalinium Canadense called C. Chinensis on the strength of your synonym Althamantia Chinensis L. How did he know it was that any better than you did? If such changes are to be made they should never be ~~allowed~~ <sup>made</sup> by catalogue makers, but only by monographers, who have the requisite knowledge. I anticipate a sickening confusion of synonymy in the near future. If, however, we hold on to the manuals, catalogue makers can have but little influence.

I want to ask your judgement upon the following points:

Essential characters

<u>Tiedemannia</u>	tall branching - wet ground - conic. stylop - solitary oil-ducts -
Foreign <u>Peucedanums</u>	tall branching - wet ground - conic. stylop - solitary oil-ducts.
American <u>Peucedanums</u>	<sup>low</sup> mostly caudex cut - dry ground - stylop. wanting - <sup>very commonly</sup> numerous oil-ducts

1. Is it consistent to keep Tiedemannia distinct & merge our Peucedanums with the foreign ones?
2. If Tiedemannia is to be kept distinct, does it <sup>consistency</sup> not necessitate the isolation of our American Peucedanums?
3. Would it be better to call <sup>our</sup> Tiedemannias <sup>real</sup> Peucedanums & provide for our Peucedanums in some other way?

I don't think Bentham & Hooker had a clear conception of our Peucedanums.

I have formed no opinion at all, but simply present facts & would like to know how you would act in the premises -

Yrs. always  
John M. Coulter.





Terre Haute, Ind. June 13 1888

My dear Dr. Watson:

I have been flying about since my return, but am about ready to settle down. I wanted to see you after I left Pres<sup>t</sup> Eliot, but I barely had time to get to Boston, make a few purchases, & catch my train.

The lists you refer to are good & I have all of them. Certainly Prof. Bessey will gladly help, but he will be on his way to Europe by the time this reaches you. But I have correspondents in E. Nebr. & E. Dakota that can be depended upon.

It occurs to me that the best thing to be done is for me to begin at the beginning & make up the copy, adding the species necessary, changing nomenclature, & correcting range. As fast as I get a little done, I will send

it on to you. You can either accumulate it or send it to the printer as you are through with it. If you think a preliminary list of species to be added is necessary I will prepare it. But it occurs to me that time will be saved to ~~make~~ make them out as each family is being studied. For instance, if I am working out the range of the Ranunculaceae, the same <sup>investigation</sup> ~~operation~~ leads me to the species to be added.

The exceptions made in the arrangement by which I am to prepare the first copy, is in the case of Compositae (about which you spoke to me), & whatever other families we ~~can~~ <sup>agree</sup> to upon, of course also excepting those prepared by specialists. Now what do you want to prepare first copy for, besides the Compositae? I want the privilege of writing Umbelliferae de novo. I don't see how I can modify its present shape & do it as it should be done. I can do it in that way as rapidly about as to attempt to modify the old presentation. If agreeable to you, therefore, I will begin at once upon Ranunculaceae -

Yrs. faithfully John M. Coulter.

—THE  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind. -  
July 16-88

My dear Mr. Watson:

The box from  
Jort. Herb. came safely to hand Satur-  
day, & I am much obliged to you  
for forwarding them.

A surprise awaited me here in the  
shape of a letter announcing that  
all the Umbellifers of the California  
Academy were on their way to me.  
The request came that I should  
name them & make whatever notes  
were necessary, & publish results in  
their Bulletin! How is that for con-  
cession? I suppose it is better  
to consent with alacrity & thus

I suppose I  
am trying to work at such long  
& it seems to me as if I lose time  
to work at Cambridge all my time.  
I wish I had money enough

head off any possible dabbling in Umbellifers on the Pacific coast. It would be a great thing if I could thus spike that gun before it went off even once.

We worked over the Philad. material completely & found many Nuttallian types. The collection of Umbellifers there is not large. In fact, I believe I have the best collection of Umbellifers in the country, carrying old types. But I have plenty of new ones to make up. It does look as though 4 years of unremitting study ought to make us somewhat familiar with our N. Am. forms. With the study of the Torrey & Pacific Calif. Acad. collections, we will have made the whole country tributary to our work.

I have finished *Cepripoliaceae* for the Manual & will send you a batch of Mss. to look over presently. It is a good large job, & we have no time to spare -

Yrs. sincerely  
John M. Coulter.

—THE—  
**Botanical Gazette**

EDITORS:

JOHN M. COULTER,  
WABASH COLLEGE, CRAWFORDSVILLE, IND.

CHARLES R. BARNES,  
STATE UNIVERSITY, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Coville, Ind. - July 24 - '88

Dear Mr. Coatsworth:

I send you with this  
some of what I called Infolium Kingii  
from Dakota. I can't see what else  
it can be.

I began with Gamopetalae (Caprifoliaceae)  
& have just now finished Ericaceae. Of  
course the Gamopetalae can be done more  
rapidly than other parts. I think I will  
send you my first batch this week-

Yrs. as always

John M. Coulter.

over



A detail or two that has come up -

1. I understand that we are not only to put introduced things "solid", but are not to number such species.
2. What abbreviation can we use for that oft-recurring "Saskatchewan"? It is a most useful limitation, & comes in more than almost anything else. Sask.
3. Shall we not omit all synonymy, except that which is necessary to "fit on" to the ~~present~~ <sup>old</sup> manual? This will cut out a good deal of synonymy from the old manual, which seems rather out of date now.

Yes.

—THE—  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Aug. 16 1888.

Dear Mr. Watson:

I want to ask your advice about publishing our Umbellifer work. We have pounded at it persistently now for four years, and feel that it is ripe enough to be published. It is just about ready for the printer & could be furnished now on short notice. There will be

plates of the fruit-sections of every species of which fruit could be obtained.

These plates Mr. Faxon will get ready for the photographing process. Would the Proc. Am. Acad. be feasible? or shall I send to Philad. Academy, <sup>who</sup> ~~that~~ want it, but I don't like the "set up" or tone of their publication -

Yrs. very truly

John M. Coulter.

# Botanical Gazette

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WABASH COLLEGE, CRAWFORDSVILLE, IND.  
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STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Aug. 20. 1888.

Dear Mr. Watson:

I mail you with this a batch of MSS. for the Manual, being the Gamopetalae, excl. Compositae, as far as through Borraginaceae.

Of course I made no attempt to number the Orders.

I think the printers better be instructed to treat the accents \ / all alike, & make all of them /, as in the Synopt. Flora. I think the accented syllable is enough to indicate.

I will go right ahead and complete the Gamopetalae. If after looking over this first batch of MSS. you have any suggestions, please let me know them -

Yrs. as always

John M. Coulter

—THE—  
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STATE UNIVERSITY, MADISON, WIS.

J. C. ARTHUR,

PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Aug. 27 1888.

Dear Mr. Watson:

I have made a close calculation on my Umbellifer paper, comparing with the Proc. Am. Acad. "Contributions," & it will take nearly 110 pages.

There will be 10 plates, like those that were published in the Gazette, except that they will consist only of fruit sections.

These plates we will have prepared for printing, so that presswork need be the only expense. Mr. Faxon is to prepare them.

I would be very glad to consider this paper a Contribution from the Gray Herbarium, as much as the Hypericum paper. It would be perfectly fair to call it such, for

it most certainly originated there, was constantly assisted from there, & the consultation of types there was like putting the foundation stones under the structure.

I hope also that it embodies the conservative spirit of the Gray Herbarium.

Very truly you -

John M. Coulter.

---



—THE—  
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STATE UNIVERSITY, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Sept. 11, 1888.

My dear Mr. Watson:

If "Tuhaha" proves by its  
fruit to be a Peucedanum, it is P. farinosum

Geyer. "Chucklusa" is our new P. Canbyi.

"Skelaps" is P. Eurocarpum C. & R.

I am particularly pleased with the big  
tuberous roots of the last, for it is one  
of the cases when I can say "I told you so."

Finding that P. macrocarpum was usually  
tuberous, I thought ~~that~~ from the general  
look of the imperfect roots we had that  
P. eurocarpum would prove so, & here it  
comes tuberous with a vengeance -

Yrs. as always -

John M. Coulter.

—THE—  
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STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Oct. 3 1888.

Dear Dr. Watson:

I mail with this another  
batch of Manual Mss.

It completes the Gamopetalae, & the pages  
are numbered consecutively with those I sent  
you before. In addition to these pages,

I send the Umbelliferae, Araliaceae, &  
Cornaceae. This makes a continuous

Mss. from Umbelliferae through Gamo-  
petalae, excepting your Compositae. I  
paid no attention to the numbers of <sup>the</sup> orders,  
as you will have to attend to that when it is  
all together.

Please inform me of any changes <sup>you think desirable</sup> in my  
way of getting the matter together.

Unless I hear from you to the contrary I  
will make a dash at the Apetalae.

Yrs. as always

John M. Coulter.

—THE—  
**Botanical Gazette**

Have just finished the Chenopods, &  
attack Polygonaceae Today.

EDITORS:

JOHN M. COULTER,  
WABASH COLLEGE, CRAWFORDSVILLE, IND.  
CHARLES R. BARNES,  
STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Oct 13 1888.

Dear Dr. Watson:

I have noticed the "running in" of many varieties in Gray's Manual, & while it saves a little space & emphasizes the small importance of the distinctions, I know that it is a thing not generally liked by the Amateurs who use it, & its patrons are mostly of that class.

Hence I have not been doing that; but if you think well of it, all right.

I certainly think we had better strictly conform to our range, & leave out such forms as *Alypum Lescurii* - It is too evident a clogging in.

I notice in your Bot. Calif. that you do not <sup>exactly</sup> follow Benth. & Hooker's ordinal sequence in Apetalae. Whether there was a set expression of opinion involved in this, I did not know. But as we had agreed upon R. & H.'s sequence I have been following it. However, the orders can be shuffled around easily after the thing is finished -

Yrs. sincerely

John M. Coulter. over

In *Amarantaceae* I find many questions as to whether species are indig. or intr.; and also whether certain species catalogued in various lists are to be included or not. For instance, Dame & Collins' Middlesex Co. catalogue adds largely to *Amarantus*; but the additions seem to be principally on "wool waste", & I have treated them as ballast plants, that is, left them out.

—THE—  
**Botanical Gazette**

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STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Oct. 17 1888.

Dear Dr. Watson:

I know of no such man  
as Fitchie of St. Louis.

I am decidedly in favor of the  
1-2<sup>o</sup> proposition, as you have it in  
the King's Report. In fact, I was  
about asking you the same question,  
so we may consider it settled.

In reference to the Umbellifer  
paper, I am sorry too, but it can't  
be helped and I must seek some  
other channel of publication -

Yrs. very truly  
John M. Coulter.



—THE—  
**Botanical Gazette**

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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Nov. 12. 1888.

Dear Dr. Watson:

I am rattling around among the oaks just now, & will soon be through Apetalae & Gymnosperms, & have them in your hands. Shall I not go on with Monocotyledons, having a goodly number of monographs in hand? I think I can finish them speedily, up to Cyperaceae. Does Bailey take all of Cyperaceae, or only Carex?

Then I can turn back & dig away on Polypetalae. Of course, if you can attack Polypet. with Dr. Gray's Mes., it is just the thing to do. I am confident I can finish Apet. & Monocot. by the end of the month.

What think you of Britton's Hicoria? It looks like priority over Carya, but what a fearful tearing up of specific names!

And Greene's Unifolium!

I am afraid our troubles have only begun—

Yrs. as always—

John M. Coulter,

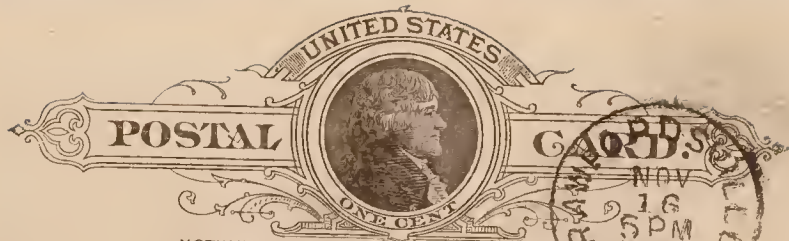
Crawfordsville, Ind., Nov. 16 - '88

I send by express today, prepaid, Manual MSS., covering  
apetalae + Gymnosperms (except Salix). Will begin  
on Monocots. today.

Will you please suggest to me some group of plants  
for study now that will be useful? I want to be  
collecting together material for work after the  
holidays. In what condition are the Haloragaceae  
(incl. Callitriche)?, or is some one after them?

Your note for Sage is at hand &  
will appear in Dec. no. Nov. no.  
is for the mail.

Jm. Coulter.



NOTHING BUT THE ADDRESS TO BE ON THIS SIDE

Dr. Seneno Watson

Cambridge

Botanic Garden }  
}

Mass.

—THE—  
**Botanical Gazette**

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CHARLES R. BARNES,

STATE UNIVERSITY, MADISON, WIS.

J. C. ARTHUR,

PURDUE UNIVERSITY, LAFAYETTE, IND.


Crawfordsville, Ind., Nov. 21, 1888.

Dear Mr. Watson:

I enclose Oyster's list, which I find among my "effects". I am glad to know that Hickoria, etc., are not contemplated. I like involucral "scales". Every one understands what is meant, & there can't be any reasonable objection to retaining the term.

I have finished the Orchids & Iris, & am ready to "tackle" the Liliaceae tomorrow. I think you can count on the rest of monocots, up to Carex by Dec. 1<sup>st</sup>.

I imagine that our delay will be chiefly owing to the "distinguished specialists" we have called in to assist. —

Yrs. as always —  
Coultter,  


-THE-

# Botanical Gazette

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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Nov. 26. 1888.

Dear Mr. Watson:

I am delighted that the "New Index" is with us, for it began to seem as if we were fast drifting towards chaos.

I have been having my desires on Cactaceae ~~abroad~~ for a long time, but the awful paucity of material has held me back.

If you are willing to entrust the Cambridge material to me, I will secure all the other collections, & will do the very best I can.

My Umbellifer paper will be ready to distribute in January. Faxon is making the plates. I comfort myself with the idea that if the text is not worth anything, the plates of sections must be a contribution to science -

Yrs. as always  
Coultter.



—THE—  
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J. C. ARTHUR,

PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Dec. 10 1888.

Dear Mr. Watson:

I am just about ready  
to go at the remaining Polypetalae.  
Will send you Monocotylae to  
Carex in a short time now.

Did you mean (in your letter)  
for me to begin with Leguminosae,  
<sup>first</sup>  
or after them? I write simply  
for information & to avoid  
danger of duplicating -

Jo. Coulter

—THE—  
**Botanical Gazette**

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STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Dec. 13 1888.

Dear Mr. Watson:

I express, with this, the MSS.  
of the Monocotyledons to Carex.  
From that genus on we are provided  
for. I will turn at once to the  
remaining Polypetalæ, from Leguminosæ  
to Umbelliferae. The last named order  
you have in hand, & from there on —

Yrs. as always —  
John M. Coulter.

Your Bible Index will make the  
Polypet. easier than the mess I  
have just finished. Please let me  
hear of the safe arrival of this

Assignment. Am I not, to help you  
read the proof? <sup>make the index?</sup> I can do it, & have  
had large experience. I would really  
like a specific index.

—THE—  
**Botanical Gazette**

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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., Dec. 21, 1888.

My dear Dr. Watson:

Most certainly Elodea needs some explanation. Elodea in Hypericaceae is Dr. Gray's work. He told me to put it that way, & that he would write up the literature of the thing, which he never did. I failed to see his reason for it, & had reached the conclusion you express in your letter. Therefore, I had decided, in my own mind, to use Elodes in the new Manual, & so let Elodea stand for Anacharis. I am glad that this seems also to satisfy your view of the case.

In reference to proof-reading, I had not the faintest notion that that would come into the financial part of the

business. I take it that my pay time  
expires when I have furnished you with  
~~the~~ my last batch of MSS. I simply  
thought that you were very busy, & that  
it would save you a deal of drudgery,  
& that I could do it as well as not.

I shall enjoy seeing it through the press,  
& shall certainly expect to receive nothing  
for it, as it seems to be a part of the  
job. Also, if the proof is sent to me I  
will ~~make~~ keep the index going, so that  
it will be ready to ~~send~~ send with the  
last batch of proof. I should think a  
species index would make a difference  
of only a few pages and I will gladly  
make it. I like your Synoptical Key in  
Bot. Calif. & would advise its adoption,  
if possible. Can't we make a bargain that  
you make the ordinal key & write the preface,  
& I read the proof & make the index?

Yrs. as always

John M. Coulter.

I am in the Onagraceae now,  
having begun with Rosaceae.  
When I'll go back  
to Leguminosae.

—THE—  
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STATE UNIVERSITY, MADISON, WIS.  
J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., July 24. 1886

My dear Dr. Watson:

I have not heard whether you received my copy of Leguminosae, but I presume you did. If there is any more "finishing up" work to be done please let me know. I know that you are having a tussle now arranging the completed copy. Now that the job is done, will you please tell me what steps I am expected to take to get at the money? I want to put it largely into the Gazette. Counting my time fairly, by the hours of work given, I ~~have~~ <sup>was</sup> ~~been~~ at the thing just 6 months.

Of course, I expect to do proof-reading + indexing as a part of the job, like distributing type in the printing office —  
Yrs. Sincerely John M. Coulter.

The  
Botanical Gazette.

EDITORS:

JOHN M. COULTER,  
WABASH COLLEGE, CRAWFORDSVILLE, IND.

CHARLES R. BARNES,  
UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

In re ~~Manuscript~~

Coville, Ind. - Feb'y 12 '89

My dear Mr. Watson:

Barnes writes me that the  
"Moss-men" have a claim on Leersia &  
mean to hold it. You may know all  
about it already, but these are the facts.

Hedwig in 1782 gave ~~it~~ the name to  
what we have been calling Eucalypta.

Schreber in 1791 superseded Hedwig's name  
with Eucalypta, & Leersia was again used  
by Swartz in 1788 for the genus of grasses which  
Miq. had already (1776) named  
Homalocenchrus.

Botanists therefore have a clear title  
to Leersia, & Eucalypta is to be sunk!

Yours cordially

John M. Coulter.



The  
Botanical Gazette.

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UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., March 12 '89

My dear Dr. Watson:

In reference to *Hypericum*, I hate the change more than you do, but the truth must be stated so far as we know it. *H. sphaerocarpum* is one of the most easily recognized species that I know of, & I remember calling Dr. Gray's attention to certain characters which make it unmistakable. If he took these into account in his decision of '87, I would not hesitate to make the change. Therefore,

*H. sphaerocarpum* Mx. becomes *H. cistifolium* Lam.

& *H. cistifolium* of my Rev. becomes *H. nudiflorum* Mx.

Lamarck & Michaux seem to come out even in the exchange at any rate.

Of course you know that the change <sup>made</sup> ~~you~~ in my revision was based upon Dr. Gray's Paris notes, made at his last visit.

*Dryas* should have been queried as from the White Mts. I know no more of it from that station than what is given in the old

Manual. As it is throughout Lower Canada, how-  
ever, I think it should be included.

When following Maximowicz in arranging  
Shirata et al for my Rocky Mt. Manual,  
I had only your notice of it in Bot. Calif.  
I asked Dr. Gray about the advisability of follow-  
ing Max. & his reply was that "he did  
not know but that it was well enough."  
It was just the kind of answer that is  
non-committal. I thought that he did not  
object, & did not approve, because he had  
not considered it enough to speak decidedly.  
You may be able to judge of his attitude  
from the answer given better than I.

I would say, however, that if you have  
been looking into the matter, you are the  
one to ~~look into the matter~~ <sup>decide it</sup> & I will gladly abide  
by your opinion. When preparing that  
part of the copy for this new manual,  
I thought at first of writing to you, but  
~~finally~~ <sup>finally</sup> concluded to put it in as I had it  
in the Rocky Mt. Manual, understanding  
that you had the last shot at it.  
My whole feeling is against the change,

The  
Botanical Gazette.

EDITORS:

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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Mar 12 '89

(2)

+ if you feel justified in retaining *Aruncus*  
in *Spuræa* I would say do it by all means.

I struck a snag in *Spiræa lobata* that  
I recognized at once, for I saw that it wd  
not fit in any of the groups as laid down  
by Maxim., but I had no information about  
his Filipendula. This was really left  
for you to straighten out, but I should  
have called your attention to it.

I have a batch of proof from Wilson  
which I will read at once & return  
to you with copy. You speak of having  
ordered the ~~discontinuance~~ <sup>disuse</sup> of semicolons,  
but they are in ~~the~~ <sup>your</sup> copy & in the proof.  
Do I understand that they are to be  
replaced by colons? I will not mark  
them in this proof, but will do so here-  
after, if I understand aight.

Would it be possible for you to send

me, ~~the first 12 pages~~ or have Wilson send  
me, paged proof, so that I may keep  
notes for the Index? I can do it as  
well as not & would like to relieve  
you of the drudgery. Shall we <sup>simply</sup> make  
an Index of Orders, Genera, & Common  
names, as ~~has~~ the old edition?

I am promised all of Engelman's  
Cactaceae, & expect them soon. Of  
course they are a sine qua non.

Yrs. faithfully  
John M. Coulter.

The  
Botanical Gazette.

EDITORS:

JOHN M. COULTER,  
WARASH COLLEGE, CRAWFORDSVILLE, IND.

CHARLES R. BARNES,  
UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., March 28-89

Dear Dr. Watson:

I release says I can have the use of Engelmann's Cacti in the summer. At present, things there are in too chaotic a state. The notes and sketches I can have at any time. In the meantime I have a term's possible work before me, with a capital assistant, & I want to begin. We know all our own Cactaceae "on sight" & have made some sort of a start.

Don't you think it wd be well for us to work over the Cambridge collection first & so be better prepared for Engelmann's? Or is that putting the cart before the horse?

I know you are fearfully overwhelmed with work & have no time to get out the collection; but I can call on Deane to help you & I know he will be pleased to be of any service -

Faithfully yours  
John M. Coulter.

127.119  
125.37  
125.37  
127.119



The  
Botanical Gazette.

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WABASH COLLEGE, CRAWFORDSVILLE, IND.

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UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

C'ville - may 11- '89

Dear Mr. Watson:

I think the best plan with the Cactaceae will be for me to study first the Engelmann collection, & use that as a base line. Trelease says there are 12 cubic feet of them, & many growing in the Shaw Garden. We will ~~go~~ go to St. Louis presently and study them. After we are thro' there, I think we will be in condition to call in the other collections & do something with them. I have a large number of Col'do & Arizona cacti in bloom in my rooms, sent in by my correspondents. Echinocactus Simpsoni is in one mass of bloom before me as a write, & its stems are the most sensitive things I have ever experimented with. Before I am thro' with the job I expect to go to the land of the Cactaceae & see them in their native haunts.

In reference to the Manual, your changes are all right. As this is not a monograph I am no great stickler for my opinions.

The Umbellifer Business has so many points

of views, that I was very far from expecting that we would all look at it in the same way. The fact is, I shall probably change my own views in many directions, or at least I hope so, for change of <sup>usually</sup> views implies increase of knowledge.

Iverson & Blakeman are growling to me about the unfortunate publicity of the Manual work. In Garden & Forest, just to hand, I notice an account of the work which will probably make the publishers still more provoked. I wrote them some time since that it would be impossible to keep hidden a work that was committed to so many, & that was of such general interest.

Yrs. very truly

John M. Coulter,

The  
Botanical Gazette.

EDITORS:

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WABASH COLLEGE, CRAWFORDSVILLE, IND.

CHARLES R. BARNES,  
UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

C'ville, Ind., June 14-89

Dear Dr. Watson:

The enclosed specimen speaks for itself. I can't make it out, although it looks like many things. The fruit consists of 4 follicular things, & that is what throws me off. I enclose in the small envelope a flower or two & some of the fts. There are plenty still on the plant-

yrs. faithfully

John M. Coulter.

The  
**Botanical Gazette.**

EDITORS:

JOHN M. COULTER,  
WABASH COLLEGE, CRAWFORDSVILLE, IND.

CHARLES R. BARNES,  
UNIVERSITY OF WISCONSIN, MADISON, WIS.

J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind. - July 1 - '89

Dear Dr. Watson:

I chased that thing down repeatedly to *Spiraea* + even to *Sp. caespitosa* + the single flower kept staring me in the face. I am glad I was not so far off + that it is new. I sent you all I had, but I have written for more + hope I can get it.

I did not detect more than a single flower in any case.

Why can't you make a note, with drawings, for the Gazette? It won't interfere with any more leisurely publication you may have in view -

Yrs. truly

John M. Coulter.

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J. G. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., July 8-89

Dear Mr. Watson:

I have just received fine specimens  
of Claytonia Chamissonis, collected in abundance  
in a wooded ravine 20 miles below Winona,  
Minn., in the Mississippi Valley. I think it  
should go in an appendix -

I happen to note your range of Brachycheila  
cordata. It is not put far enough south. It  
is abundant in the Ohio River ravines in Southern  
Indiana.

Yrs. as always

John M. Coulter.

The  
Botanical Gazette.

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PURDUE UNIVERSITY, LAFAYETTE, IND.

Crawfordsville, Ind., July 13-89

Dear Mr. Watson:

It is so that I cannot go to St. Louis to begin Cactus work until next winter. I expect this is better all around, as St. Louis is reported to be a dreadful place in summer. In the mean time I am occupying my mind by looking over the Cornaceae, of which I seem to have quite a full set. I was first drawn to them by their nearness to the Umbelliferae. There are not many of them, & if I am not treading upon any one's toes I would like to buckle to and give them a raking over, "just to keep my hand in."

I have just been looking over the last no. of Engler & Prantl's Die Nat. Pflanz., in which Pax treats Caryophyllaceae. What does he do with our peculiar western species of Lycium? The genus seems to have been dissipated into spray. Either he did not



consider all our forms or I have lost my way.  
I don't think I like bringing Illecebraceae back into  
the order again, but I suppose that such will  
be the <sup>eventual</sup> fate of all apetalous orders.

Sincerely yrs.-

John M. Coulter.

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PURDUE UNIVERSITY, LAFAYETTE, IND.

Coville, Ind., Sept. 28 '89

Dear Dr. Watson:

Can you send me your Cornuaccae now? I won't keep them very long, as we have already gotten several large collections "by the heels." I find some very tough problems in it.

I suppose you have been notified of the part assigned you in S7 next summer. I hope you will certainly be present, & of course you will visit me. It will do you good to be dragged out of the herbarium for a few days even if you do have too little time already.

I see that Sargent (last Garden & Forest) has improved on Britton & changed Hicoria to Hicorius & given all the specific names masculine to endings! The hickories will need all their strength presently to carry their load of synonymy-

Yrs. as always -

John M. Coulter.

All returned Dec. 10/189

Canad <sup>s</sup> + Mexica	16	(10+6)	
florida + Nuttallii	12	(6+6)	
circinata &c	3	2	
sericea	14	10	Anglican 9
asperif <sup>a</sup> &c	12		167
Stolonifera	22		185
Stricta, panic <sup>a</sup>	1	(4-7)	
at hemitobica	4		
glabrata, similis	10	(6+4)	
Zorney, Calif <sup>a</sup> , pub <sup>s</sup>	17	(1+3+13)	13
Mex	9		
	<u>130</u>		

34

Sent Sept. 30/189  
 "Value # 50"

Crawfordsville, Ind., Oct. 3-'89

Dear Mr. Watson:

The index has been kept going as the proof pages have come in. Your suggestion strikes me exactly, & I have already indexed the species of Aster + Solidago (incl. synonyms in italics). Carex has not yet made its appearance. Within 24 hrs. after the last pp. of proof come to me the index will be mailed. I will mail it to you unless you otherwise direct.

N. L. Britton has declined to send me his Cornus material. All other herbaria have ~~it~~ sent their material cheerfully. <sup>(even E. L. Greene)</sup>  
I wonder what the matter is.

Yrs. John M. Coulter.



NOTHING BUT THE ADDRESS TO BE ON THIS SIDE.

*Dr Sereno Watson*

*Cambridge*

*Mass.*

*Botanic Garden }  
}*

Crawfordsville, Ind., Oct. 24 '89

Dear Mr. Watson:

In indexing Gramineae I discover a blunder or two which should be corrected on the stereotyped plates if possible. In the synopsis of genera four of the numbers are wrong and do not tally with the numbers given to the same genera over their species. If these 4 nos. could be cut out of the generic Key, & the proper ones inserted, ~~it was~~ the reference would be all right, which is the main thing, although the sequence of nos. would be interfered with, which is a minor thing.

<u>Leersia</u>	should be made	<u>12</u>	instead of	9.
<u>Lizania</u>	" " "	<u>11</u>	" "	10.
<u>Tripsacum</u>	" " "	<u>9</u>	" "	11.
<u>Rottboellia</u>	" " "	<u>10</u>	" "	12.

Of course I see how it was done, by transposing the order of the 2 pairs of genera in their specific presentation, without making the same change in the generic Key, or vice versa -

Yrs. sincerely

John M. Coulter.



Crawfordsville, Ind., Oct. 31 '89

Dear Dr. Watson:

I mail with this the index, through Asplenium. Of course I have made the first entry (for generic key) for all the fern genera, to which will have to be added the second entry for the genera after Asplenium. The index has also been verified, so that I believe it is as accurate as indexes go. As to hyphens & capital letters in the common names, the old manual showed no consistency. It is a matter of small importance, but I like uniformity. I have followed the plan of generic & specific names; i.e., capitalizing the second word only if a generic or proper name, & using a hyphen only in cases of three words, to show the two that belong together. It is a simple rule, & gets rid of hyphens & capitals, both of which look better when freely omitted. Certain obvious exceptions to the rule may commend themselves or not.

As to Hepaticae, I ~~was~~ would very much like to see them omitted. They seem rather lugged in at best, & are not important ~~about~~ enough to raise a <sup>discussion,</sup> ~~conflict.~~

I include my idea of the title-page with the index Mss. You will see that I want to keep the old title, which means "Gray's Manual," & then simply add a line to show that it has been revised & extended & by whom. I can think of nothing simpler, that will ~~also~~ both preserve

the old & indicate the new. I have no idea about the dedication. Has not the day of dedications passed? If it is best to have one, what more appropriate than in a few simple words to dedicate it to Mrs. Gray? As a dedication is mere sentiment, & directed towards some one living, I know of <sup>appropriate</sup> ~~now~~ one left excepting Mrs. Gray. If not that, then to no person, but to American Botanists, as a legacy left them by Dr. Gray.

And now for corrections. Mine are of a minor kind, as I have noted no additions to be made.

↓ Page 97. In generic key, Sphaeralcea should be 6 and Sida 7, or their numbers & positions changed on p. 99.

↓ Page 185. Dele 4 before L. Salicaria.

Page 187. Put a 7 before Circaea in generic key, & also

Page 198. Dele 1 before M. verticillata.

↓ Page 235. Change 88 Pieris to 88 Picris.

Page 253. Twist, under Brachycheeta cordata, that the range could be extended to "S. Inds."; as the plant is such a well known one on the "river hills".

↓ P. 269 - Dele 1 before J. Helenium.

↓ P. 286 - Dele 1 before G. parviflora.

↓ P. 355. 2<sup>nd</sup> line from bottom, should not Hanover read "Crawfordsville"? It must refer to the form I sent you, & I am not at all satisfied that it is a "form"; as the prominently acuminata petals seem to be constant over ~~an~~ two or three <sup>plants</sup> ~~across~~, <sup>as well as</sup> ~~of plants~~, the very reduced size.

↓ P. 337. Dele 1 before L. vulgare.

↓ P. 413. The names "S. Sclarea" & "S. verbenacea" should be in Small Caps & not in heavy-faced type.

Oct 31 '79

- ↘ P. 416 - Dele 1 & 2 before the species of *Nepeta*.  
 ↘ P. 411 . No. 11 before *Origanum* should be changed  
 to 12 , + <sup>nos. of</sup> all subsequent genera of Labiatae  
 changed accordingly. By repeating 11 no  
 reference number in the generic Key after 11  
 hits the mark.  
 ↘ P. 553 . Change "6" before *L. gibba* to "5".  
 ↘ P. 623 . The changes in nos. of genera of Grasses I  
 have already sent.  
 ↘ P. 639 . Change "*Hierochloa*" to "*Hierochloe*", or  
 else vice versa in the generic Key.

yrs as ever

Geo. M. Coulter  


---

*Erythraea* = *Renealmia* (1611) or Richar. S.

Coville, Ind., Dec. 10-'89

Dear Dr. Watson:

I have expressed the covers of Cornus to you & hope you have received them in good condition. I prepaid the charges, & if any accumulate on the way please let me know. I want now to ask for Nyssa & Garrya, which we shall need but a short time, as we have them tolerably well in hand from all other collections. I believe we have Cornus in fairly good shape, though some of it was very perplexing. If any error of treatment has been made it is on the side of conservatism. I am getting to shrink more & more from making changes.

Garrya interests me very much. I wish I had material to work the whole genus. I can't see now why G. Lindheimeri Torr. is not the Mexican G. ovata Benth. Dr. Torrey had only sterile specimens, in which the lvs. had become somewhat glabrate. I have his original

Wright specimens, & also those of Fendler that he referred to the same species. Your G. flavescens in some of its forms is perilously near G. Fremontii, but the more I look at it, the more I like it as a species.

In the stones of Nyssa I find a very pretty gradation of characters, as the following <sup>partial</sup> sections will show:



= N. aquatica L. (in great part) = N. sylvatica -



= N. Caroliniana { I think a good var. of the former }



= N. uniflora



= N. capitata = N. Ogechee.

Jos. John M. Coulter.

Crawfordsville, Ind., Dec. 11-'87

Dear Mr. Watson:

I have not been able to get hold of  
Garrya  
veatchii Kellogg, & I fear you don't have it. I see  
further that the Calif. people say that it is the  
same as your G. flavescens & that it antedates  
it by a month! If you have any information  
on this point, will you please let me have it -

Yrs. sincerely  
John M. Coulter.



Crawfordsville, Ind., Dec. 12-89

My dear Mr. Watson:

What about Eriogynia uniflora  
Watson? I am very anxious to get a good  
plate of it made. I sent you on some better  
material, & I have a splendid sheet of it.

If you could turn it over to Mr. C. E. Faxon,  
with directions what  
Jamaica Plain, <sup>me</sup> to draw, & prepare for a  
drawing for a plate, I will pay the bill & have the  
plate made. You can then describe

it, with remarks on "elevating" Eriogynia,  
etc., etc. It would be a nice piece

of work for an early number of the  
Gazette.

Yrs. always

John M. Coulter.

Crawfordsville, Ind., Dec. 24-'89

Dear Dr. Watson:

It will be a capital thing to attend to the whole genus of Eriogynia at once, & if you can get it all on one plate all right.

I will want the paper either by Jan. 15 or Feb'y 15. Have Mr. Faxon send the

drawing of the plate to me.

If you care for the <sup>sheet of</sup> E. uniflora I have please call for it -

Yrs. sincerely

John M. Coulter.

The  
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J. C. ARTHUR,  
PURDUE UNIVERSITY, LAFAYETTE, IND.

Lafayette, Ind.

March 10, 1890

My dear Mr. Watson:- It seems to me that advantage might be taken of the World's Fair in 1892 to secure an international congress of botanists on American soil. Questions of nomenclature, the distribution of species, etc., etc., might be made the subjects of profitable discussion with a chance of reaching greater uniformity in practice, or at least of a better mutual understanding. The meeting could not fail to be profitable and interesting for botanists from abroad as well as for those at home. It would also, I am certain, have a direct and lasting influence upon the development and standing of American botany.

Will you kindly let me know your views in regard to the advisability and feasibility of such an enterprise.

Yours truly  
J. C. Arthur

Crawfordsville, Ind., April 16-90

Dear Mr. Watson:

I have been fearfully busy in Washington & at home have not written to you as I should. I suppose you have, ~~we~~ this, recovered from the shock of Porter's criticism. I know him well, but I never imagined that he wd let his spleen display itself in such a childish fashion in print. I have met a good many botanists since the review appeared, & have heard from a good many more, & they are universal in their condemnation.

I have rec'd Mr. Faxon's bill for the drawing of the *Emigymia* plate, but have not rec'd the plate. Probably it is in your possession. If so, that is all right & I will pay the bill.

I have some good things from Keuley's

Texas collection to send you soon. A  
Dept Bulletin will soon be issued containing  
a list of that collection, with notes, descriptions  
etc..

yrs. as always -

John M. Coulter.

Crawfordsville, Ind., June 12 - '90

Dear Dr. Watson:

Mr. F. W. Anderson & Mr. Kelsey,  
~~both~~ of Montana, have both written to me  
about that "Enogygia" plant which Mr. Kelsey  
found. Mr. Anderson sends in a plea that  
it be named for Mr. Kelsey. I only for-  
ward his plea & make no comment.

Can you give any definite infor-  
mation as to when the plate can be  
used in the Gazette?

I suppose we have had the last ex-  
plosion in reference to the ~~new~~ <sup>new</sup> Manual,  
as I have just read what Greene has said  
in Pittoria. It is the raving of a mad-  
man, which I must believe is <sup>literally</sup> more <sup>true</sup>  
than figurative. If he could only quietly  
pass away in one of his apoplectic  
fits, how much better for American botany!



That is a dreadful speech, but I have been honest enough to write what I thought.

I hope you are remembering all this while that the few who write have written, some of them in a scolding way; but that there is <sup>yet</sup> the great body of American botanists who do not write, but who approve of the book, will buy it & use it. It has reminded me somewhat of the ranting of Socialists, at all other times, who grow red in the face & gesticulate frantically, while the great American public moves along as usual —

Yrs. sincerely

John M. Coulter.

Cranfordville, Ind., July 14-90

Dear Dr. Watson:

I write now as Secy of Section  
7 of the Amer. Ass<sup>n</sup>.

You remember that special <sup>assigned</sup> papers are  
to be presented at Indianapolis on the gen'l  
subject "The Geog. distrib. of N. Am. plants,"

& to you was assigned "The relation of  
the Mexican flora to that of the U.S."

Time limit is 20 min.

Please don't disappoint us, either ~~wrote~~ as to  
the paper or your attendance -

Sincerely

Jno. M. Coulter.

Crawfordsville, Ind., July 19, '90.

My dear Dr. Watson:

There will be a lot of very much disappointed people if you don't get to Indianapolis. It may be a bore to you, but your being there will be a help to a good many others. If it is absolutely impossible to come please send your paper to me that it may be read, but I still have strong hopes of seeing you here.

A suitable wall map will be furnished for this series of papers.

I shall be very glad to get Dr. Robinson's paper on Apodamites, whenever he is ready to send it.

I have a lot of Donnell Smith's <sup>new</sup> Guatemala material that I am coming to Cambridge with this fall to study.

The west is delightfully cool now, & I can work 10 hours a day in perfect comfort. The "Flora of <sup>W.</sup> Texas" that the Depart. of Agric. has engaged me to prepare is a much larger thing than I at first imagined, & as new & Mexican species are being found there all the time it will be exasperatingly incomplete when completed.

Sincerely yrs.-

John M. Coulter.

Crawfordsville, Ind., Sept. 29 - '90

My dear Dr. Watson:

I am glad to know of your safe return to Cambridge, & hope that your "outing" did you any amount of good.

The *Ipomoea* you refer to is *I. Texana*.

It is on p. 45 of the Contr. U.S. Nat. Herb.

No. II. I have written that you be sent duplicates of all the ~~herb~~ collection, especially those ~~specimens~~ species that are new or rare. Of course you have copies of the "Contributions" -

Yrs. sincerely

John M. Coulter.

Crawfordsville, Ind., Oct. 9-'90

My dear Mr. Watson:

Here is a coincidence for you! I had worked over the Acacia flexicaulis business & had concluded that it was all my new Pithecolobium, & had prepared a short announcement of the fact for the Gazette.

Then came your letter raising the same question. And now Rose writes that he has looked into it & has come to the same conclusion. If in the mouth of 2 or 3 witnesses a thing is proved, this is a strong case -

Yrs. sincerely

John M. Coulter



Crawfordsville, Ind., Dec. 13-90

Dear Dr. Watson:

I am coming to Cambridge on or about Dec. 27<sup>th</sup>, to spend two weeks or such a matter in the herbarium. I want to look up certain matters in connection with Capt. Smith's Guatemalan *Compositae*, dissections of which have all been sketched + the genera determined.

Yrs. faithfully

John M. Coulter.

Crawfordsville, Ind., April 20- 1891.

My dear Robinson:

I am glad to get your letter of April 17<sup>th</sup>. You are just the sort of man that I would like to see helping develop the botany of the State University. I have no question of your fitness. It is only a question of making a place for you next year. I shall have turned over to my hands a full faculty, some 30 men, and after that I can make any changes I think advisable. The departments are well split up, ~~tho~~ as there is a competent geologist, + also zoologist; so that there is no need for a man to tack on any appendage to his specialty. While not seeing my way clear to an immediate appointment, I consider the present arrangement in botany, but a temporary one. There have been appointed 2 very competent assistants, + my only teaching is to be a course or two of botanical lectures. My purpose, however, will be to appoint a full professor of morphological +

cryptogamic botany, retaining for myself only  
what might be called a chain of systematic botany.

The former chain will be to your taste, I think, &  
I shall be glad to put you first on my list of  
"desirables" when such a chain is fully established.

Yrs. very truly -

John M. Coulter -

By the way, if you have received John Darnell  
Smith's new Part II of his Guatemalan list, you  
will see that he has put my Bassovia variety(?)  
in in an entirely unauthorized way. It was taken  
from a private letter I wrote him, simply telling  
him what we had taken it to be, & not even  
intimating that you joined me in naming the  
variety. As I shall soon have something to say  
concerning his Solanums in the Gazette I shall  
take pains to correct the Bassovia business.

BLOOMINGTON, INDIANA, Aug. 4 1891

Dear Dr. Watson:

Your letter reached me at Washington. You see by the heading of the letter that I have moved. The new position will give me greater advantages for botanical work. I have transferred my herbarium & books from Crawfordsville, & the Board of Trustees has given me \$2000 to spend for plants this first year, and \$1500 for books. I think that is well enough for a start in addition to what I had already accumulated.

I shall put in Kirk's notice in the Gazette for Sept., today gone to press, & shall order a set of 1000 species myself.

Any suggestion in the way of sets of plants or books will always be gladly received.

Yours sincerely,  
John M. Coulter

BLOOMINGTON, INDIANA, Sept. 18. 1891.

My dear Dr. Watson:

I have your letter of Sept. 11<sup>th</sup>  
& am much obliged for your congratulations.  
My purpose in reference to books is  
to look out for those that I know are  
useful, as proved by whatever work I  
have done at Cambridge, & then to  
encroach upon new territory as I am  
referred to it by bibliographical references.

I should like very much to obtain  
some of the John Ball material, & will  
pay whatever my share of the cost  
of partition will be —

Yrs. faithfully

John M. Cooper

BLOOMINGTON, INDIANA, October 29, 1891.

My dear Dr. Watson:

I don't know why Cardiospermum Halimifolium was omitted from the 6<sup>th</sup> Edit. I thought not to have escaped me, as it is common enough in Indiana, & thence westward to its native haunts. Suppose you make a good large memorandum of it.

I have just been looking over the last Pittonia, & have been immensely entertained by Greene's last scheme for stealing species. I had thought that he must be coming to the end of his ancient genera; but he has opened up a new



vista of possible renaming by his  
announcement concerning "revertible"  
generic names. He is proceeding  
now to coin a new generic name  
(+ of course rename all the species)  
for all genera ~~that have~~ <sup>whose</sup> names appear  
<sup>more anciently</sup>  
in the Synonymy of other genera!! And  
so Darlingtonia goes, etc., etc. Such  
vagaries will <sup>finally</sup> succeed in making  
him more amusing than troublesome,  
& I hope he will get wilder with  
each succeeding year —  
Yours as always —  
John M. Coulter

BLOOMINGTON, INDIANA,

Dec. 1 1891

Dear Dr. Watson:

I am very much obliged for the loan of Hoffmannseggia;

I want to ask your candid opinion about poisoning plants. Have we all for years ~~long~~ been expending time + money to do a useless thing? I would be delighted to know that we are rid ~~off~~ of the trouble; but I would want to be sure that poisoning has been proved useless.

I should think you would be having an exciting time with Britton, Greene, & Kuntze all at once; Kuntze has sent me a copy for review, + as he writes that

he is going to the wilds of S.  
America, to be gone until 1893,  
it will be a good time to sit down  
on his book -

Sincerely yours -  
John M. Coulter

Coulter

Bloomington, Ind., April 7, 1892.

Dear Robinson:

I think that by this time you must have received my acknowledgement of the MS. It came safely and we are glad to publish it. I presume you refer to the article by Dr. Watson.

Yours as ever,

*John M. Coulter.*

Dictated.

Dear Dr. Watson:

I had no thought of your being away this afternoon. I have to go to Washington this evening & spend a day or two there before going home to college work. My visit has been a very pleasant and profitable one, & I am under renewed obligations to you for all your kindness. Please give my regards to your sister & niece, & tell them that I regret very much that my arrangements were such as prevented me from calling, for I could take no daylight from my work, & at night I was in Boston —

Yrs. faithfully  
John M. Coulter.

Dr. Serena Watson  
Addressed.



fever. I am away from my supplies  
of information & therefore can't answer  
about Schott's Peltaudra Virginica. I expect  
you are right though in your surmise  
concerning it. I can be reached at  
any time by addressing me at Craw-  
fordsville.

Sincerely yrs. —

John M. Coulter