



Hunt Institute for Botanical Documentation
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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

THE NEW YORK BOTANICAL GARDEN

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HENRY DEB. BALDWIN
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TREASURER
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October 1, 1940

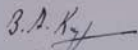
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Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Acknowledgement is made of the receipt of your letter of September 30. I have written to Dr. Folkers today concerning the sample of ripe fruits of Solanum carolinense, and he will be on the lookout for these.

I am enclosing the check which "failed to receive my signature."

Sincerely yours,


B. A. Krukoff

Bak/Jd
Enc. (Check)

DEPAUW UNIVERSITY

GREENCASTLE, INDIANA

Oct. 2, 1940.

Dr. Ray Friesner,
Bot. Department,
Butler University,
Indianapolis, Indiana.

Dear Dr. Friesner:

This is my annual request for a loan of mosses from your herbarium for another number in my series for the Indiana Academy of Science. I hope you will find it possible to loan me species of the following genera for study for a few days. Please.

Indiana plants only.

Astomum	Any other genera in Tortellaceae and Pottiaceae should be included if they are Indiana plants. Wb.
Weisia	
Gymnostomum	
Tortella	
Barbula	
Phascum	
Pottia	
Desmatodon	

Sincere thanks for your trouble. I shall gladly pay postage.

Yours truly,

Winona H. Welch
Winona H. Welch

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WILLIAM J. ROBBINS

October 7, 1940.

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

My dear Friesner:-

Thanks for sending the numbers 11 - 14, of the Butler University Studies. For some reason our Library did not get this issue. Hence it was missed in the last issue of the TAXONOMIC INDEX.

However, as an editor that has to check about 500 publications each month to glean the material for the Index, I would like to offer a few suggestions as to how you might make the lot of the bibliographer a mite easier.

Asplenosorus inexpectatus Braun ex Friesner, Butler Univ. Stud. 4: 154. 1940 (the correct citation) is apparently validly published. But what is its exact status? In the reference you cite, Dr. Braun published it as a hybrid. Are you changing its status to that of a valid species, or is it still a hybrid - one to which you have given a name? On the face of it, it looks as if either you or Dr. Braun (or both) have changed its status, for the name is not prefixed by the multiplication sign. However, the only clue you give to the plant is in the reference, which refers to a hybrid.

Also, I think it would be advisable to have your printer get some multiplication sign type. Throughout you have used the capital X instead, which sometimes is confusing.

In your paper on Solidago I offer the following two suggestions. The new combinations are quite valid, being within the Rules. But to dig them out is a little unhandy as you have not been completely consistent in the order of citation; also you practically force the bibliographer to consult the original literature. His work would have been speeded up had you done as follows:

Solidago bombycinum (Lunell) Friesner, comb. nov.

Oligoneuron bombycinum Lunell, Amer. Midl. Nat. 2: 59. 1911.

Thus, there would have been absolutely no possibility of confusion or error.

Dr. Ray C. Friesner

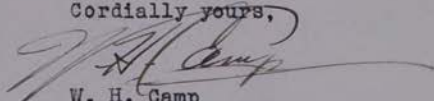
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October 7, 1940.

I also feel that you might have done a little better for your Solidago gigantea salebrosa (Piper) comb. nov. Just what is the status of salebrosa, a variety or form? If salebrosa originally was a variety of serotina and serotina has itself been made a variety of gigantea, do you accept Piper's ranking of salebrosa relative to serotina (therefore forcing it to sub-variatal rank) or have you changed its relative status and made it equal in rank to serotina? In other words is salebrosa now a variety or form? You did not designate its rank.

These little things, in themselves, are not serious, but to those of us who have to comb through so much material, it is pleasant to have such matters made as easy as possible. I mention these things, not so much by way of criticism but merely because I am probably a little lazy and don't like to have to figure out what an author meant, wanting him to do it for me.

Cordially yours,



W. H. Camp
Assistant Curator.

WHC/BP

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October 8, 1940

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Under a separate cover I am sending
you today forty-eight (48) specimens of Puerto Rican plants.

Very truly yours,

B. A. Krukoff
B. A. Krukoff

Bak/Jd

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DIRECTOR
WILLIAM J. ROBBINS

October 8, 1940

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Many thanks for your letter of October 3.

The sample of Solanum carolinense that you so kindly
sent to us is now being tested chemically at Rahway.

Sincerely yours,

B. A. Kruckhoff
B. A. Kruckhoff

BAK:JD

October 10, 1940

Dr. W. H. Camp
New York Botanical Garden
Fordham Branch P. O.
New York, New York,

Dear Dr. Camp:

Your letter of the 7th is at hand. I am deeply appreciative of the criticisms it contains. I can see your point plainly and am sorry that such things were over-looked on my part. Some of the points were plain blunders by way of omission and some are due to a habit of mine in omitting the taxonomic status of variety and form when I write field notes for herbarium labels. I shall file your letter and make an honest effort to make your work on the Taxonomic Index less burdensome in-as-far as my future material may be concerned. Part of the trouble is that I do too little of such work and too much time elapses between publications. At any rate, I think it was certainly kind of you to take the added time and trouble to write.

X Asplenosorus inexpectatus Braun ex Friesner. It was intended to keep this as a hybrid and the error is one of omission on my part.

Solidago gigantea var. salebrosa (Piper) comb. nov. It was my intention to keep salebrosa as a variety but make it a variety of gigantea.

Again I thank you for your trouble in calling my attention to these points and hope I shall not cause you extra labor again especially when so much of your work is a "labor of love" any way.

Sincerely yours,

Ray C. Friesner

RCF:mb

Dr. H. Hapeman
225 BROWN AVENUE
Minden, Nebraska

October 12th 1940.

Prof. Ray C. Friedener,
Indianapolis, Indiana.

Dear Prof. Friedener:

I thank you very much for the two botanical publications^s which you recently sent me. By this mail I am sending you seventeen herbarium specimens, some of which I hope may prove new to your collection.

Yours truly,

H. Hapeman

October 15, 1940

Dr. P. O. Schallert
1620 S. Main Street
Winston-Salem, North Carolina

Dear Dr. Schallert:

I have your card regarding some further botanical exchanges. I have quite a large collection of duplicates received from other persons with whom we have been trading. These are all labelled and could be sent to you on a few days notice in case you should care for them.

I also have a considerable number of duplicates from the present season's work but the labels for these have not all been typed. I could send you these duplicates of my own as soon as we can get around to typing the labels or send you either one or both of the above lots of plants. In some cases we have several specimens of the same species and we could include a number of specimens or only one of each species as you may choose.

If you will let me know whether you wish the duplicates collected by others or those of my own collecting or both and whether you care for more than one specimen of the same species, I will be glad to send them as soon as possible. We would be glad to receive specimens from you.

Sincerely yours,

Ray C. Friesner

RCF:mb

October 16, 1940

Dr. B. A. Bruckoff
New York Botanical Garden
Bronx Park (Fordham P. O.)
New York, New York

Dear Dr. Bruckoff:

Mr. Charles Ek of Kokomo, Indiana, informed me that he sent about eight pounds of ripe fruits of Solanum carolinense to Dr. Folkers late last week.

The package of herbarium specimens came yesterday and I express my thanks to you for them.

Sincerely yours,

Ray C. Friesner

RCF:mb

October 16, 1940

Dr. H. Hapeman
225 Brown Avenue
Hinden, Nebraska

Dear Dr. Hapeman:

Your package of herbarium specimens came this morning. I have not yet had time to open them but I am sure they will be very acceptable to our herbarium. Your specimens have always been very high grade.

I am sorry to report that I have been able to secure very few of the species you wished. What we have been able to collect I will send as soon as we can find the time to prepare the labels. I appreciate very much the relations we have had with you.

Sincerely yours,

Ray C. Friesner

RCF:mb



THIS SIDE OF CARD IS FOR ADDRESS

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Biology Building
University of Wisconsin
Madison, Wisconsin

10/16/40

Dear Dr. Friesner:

A package of sixteen specimens of *Solidago* collected in Wisconsin was sent you yesterday. These are in exchange for the copy of your key sent me last August. I trust you find them satisfactory. The specimen of *S. sciaphila* agrees with others identified by Professor Fernald. The plant occurs on bluffs in the Driftless Area, and commonly has sharply toothed leaves.

Very truly yours,

Lloyd H. Shinnars.
Lloyd H. Shinnars

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DIRECTOR
WILLIAM J. ROBBINS

Write Ek about Physalis

October 18, 1940

Dr. Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Many thanks for your letter of October 15th,
also for the sample of Solanum carolinense that Mr. Ek
so kindly sent to Rahway.

Under a separate cover I am sending you 15
specimens from the Philippine Islands and Surinam. I
think this small set will prove to be a fine addition to
your herbarium. They were received in connection with
our studies of Curare and fish-poison plants. The
specimens will be cited in chemical papers which eventual-
ly will be published on the subject.

Dr. Walti is getting very interesting results
in his studies of enzymes of Solanum spp., and, in this
connection, it would appear most desirable to examine
fruits of Physalis. If you, or some of your friends, are
in a position to obtain 1/4 pound or more of fruits of
some sp. of Physalis, please do so and kindly send them
directly to Dr. Folkers by air express collect.
Disregard the request if the fruits are difficult to
obtain.

You will be interested to hear that a trip to
Amazonian Peru is now under consideration and it is likely
that I will leave New York within two or three months.

Sincerely yours,

B. A. Krukoff
B. A. Krukoff

Bak/Jd

October 18, 1940

Mr. Charles M. Ek
1812 No. Purdurn St.
Kokomo, Indiana

Dear Mr. Ek:

I wish to acknowledge receiving your card of October 10, 1940 informing us of the 8 lbs. of fruits of Solanum Carolinense. These fruits were received in good condition. We greatly appreciate the time and effort you spent in collecting these and in sending them to us.

It will take a little time in order to complete our tests on these fruits.

Very truly yours,

KF/NL

Karl Folkers
Assistant Director of Research

Copy for Dr. R. C. Friesner



THIS SIDE OF CARD IS FOR ADDRESS

Botany Dept. of Butler
University.
Indianapolis,

Dr. Ray C. Friesner.

Indiana.

Winston-Salem, N.C., Oct. 19, 1940.
Dear Fellow Botanist, -

I have just sent to your address two
parcels via P.R.-prepaid, the following;

127 specimens of the lower orders

233 " " " " vascular groups.

410 total.

You may send me all vascular specimens, if you so
prefer, and as many different as possible; And I
would rather have duplicates from others if you
have such through your exchanges as well as from
your own collections. Yours most sincerely

P.O. Schallert

1820 S. Main Street.

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October 22, 1940

Dr. B. A. Krukoff
New York Botanical Garden
Bronx Park (Fordham P. O.)
New York, New York

Dear Dr. Krukoff:

Your letter of October 18th is at hand. The package of species from the Philippines and Surinam arrived today. We are very gratefull to you for them because they make a very valuable addition to our herbarium.

We will be on the lookout for fruits of *Physalis* on our regular Saturday field work. I have also written to Mr. Ek at Kokomo asking him to do likewise. You may be interested to know that Mr. Ek is retired from regular work and gets real pleasure out of being able to help someone botanically. I assure you that it has been a satisfaction to us to be able to in some way pay you back for the specimens you have sent.

Our collecting work for the year is over and I have somewhere in the neighborhood of 200 non-duplicating species; to send you as soon as we can get the labels typed.

Sincerely yours,

Ray C. Friesner

RCF:mb

October 22, 1940

Mr. Charles M. Eke
1812 Purdue Avenue
Kokomo, Indiana

Dear Mr. Eke:

I am today in receipt of a letter from Dr. Krukoff in which he says that they are getting very interesting results in their studies of enzymes of Solanum spp. He now feels that they would like to look into the Fruits of Physalis. If it is convenient for you to look about for fruits either ripe or green of any species of Physalis I would appreciate it if you could send one quarter of a pound or more direct to Dr. E. Folkers, Merck and Company, Rahway, New Jersey, by air express. Dr. Krukoff says to disregard the request if the fruits are difficult to obtain.

I very greatly appreciate your help in the past in securing material for Dr. Krukoff. It has saved me several Saturdays and in return he is sending our herbarium many rare specimens from South America and other foreign regions.

We are looking forward to the time when we can be coming north again.

Sincerely yours,

Ray C. Friesner

RCF:mb

October 22, 1940

Mr. Lloyd H. Shinnars
Biology Building
University of Wisconsin
Madison, Wisconsin

Dear Mr. Shinnars:

Your package of specimens of *Solidago* reached me yesterday in excellent condition. I was interested in going over them immediately and I find two specimens about which I would like to write. Your number 2590 labelled *S. uniligulata* should be *S. gigantea* var. *leiophylla* (Ait.) Fern. The number of ray flowers and the pubescence of the achenes together with the sharp serrations of the leaves would require the latter name. The old name for this variety was *S. serotina* Ait. It was so called in my key published in 1933.

The other specimen is the one collected by H. C. Green on wooded bluffs of the Wisconsin River, 5 miles northeast of Mazomanie. This specimen is labelled *S. hispida*. It appears to me as probably a hybrid between *S. hispida* and *latifolia*. I feel confident that it is not true *S. hispida*, the stem is too much angled and not hairy enough and the achenes are too pubescent for *S. hispida*. Of course, leaves are not the true *latifolia* leaves, they seem to be more like *S. hispida*, but still not right for it. In case you have any more material like this one I would very greatly appreciate looking at it and returning it to you. If course, it may be that most of the material collected at this point was real *S. hispida*, but the specimen sent to me under this name cannot be so called.

I appreciate very much receiving these specimens.

Sincerely yours,

Ray C. Friesner

October 23, 1940

Dr. P. O. Schallert
Winston-Salem, North Carolina

Dear Dr. Schallert:

Your two packages of herbarium specimens were received yesterday. I have not yet had time to look into them but I am sure that there will be numerous specimens which do not duplicate others in our herbarium. I am sending you prepaid express a package containing 257 specimens of vascular plants. The balance necessary to the amount sent by you will be sent as soon as we can get the labels prepared. Nearly all of the specimens in this set are duplicates received by us from others with whom we maintain exchange relations. No doubt a considerable share of the remainder will need to be made up from our own 1940 collection.

Sincerely yours,

Ray C. Friesner

RCF:mb

Kokomo, Ind. Oct 23, - 1940. ^{EK}

1812 W. Purdue St. -

My Dear Dr. Friesner:

Rec'd your letter today, Wed. Tomorrow
Thurs - I will gather a lot of *Physalis*
subglobata - Dean's Flora - and send to
Dr. Falken - Each of the Drs. wrote me very
appreciative letters! It gives me much
pleasure and satisfaction to do these little
things that help - At that they are nothing
to what has been done for me - It's an
education to do these misc. favors. You
learn by doing. *P. heterophylla* is here, but
very scarce. Howard Co. is starred for
P. ambigua, but I have not separated the
lost 2 in 1940. Was out today in N.
Kokomo - gardens + waste places + located
quite a few patches. ^{Am} - Sure I can get
several lbs. - May go over and get a few of the
Horse-Nettles - ripe for sure now. - *Physalis* are in
all stages of ripeness. Spotted a lot 2-3 mi NW
+ some 2 3/4 mi. SE - but don't think I'll have &

leave my neighborhood or $\frac{1}{2}$ mile
I thought of this genus and *Solanum*
nigrum when searching for "Carolinense"
As yet, have done little toward separating
the New Co. record species from my
enormous stock. When is the dead time?
About Nov. 15 - I presume, or Acad. Science
meeting time. - Up to Dean's Oct. 15 -
5 hrs. - 9-2 - very nice day - As usual,
learned a lot.

Was w. of Goldenwith Oct. 6, - + Oct. 12,
Oct. 6, found a patch of *Aster amethystinus*.
Went back Oct. 12, to collect more and get
surroundings of patch better. Colony is
4-5-6 feet thru - 2° - $3\frac{1}{2}^{\circ}$ tall. - occupying all
the space - surrounded by *A. exiguus* on
2 sides + *A. novae-angliae* near on 2 sides.
There are numerous colonies of *A. exiguus* on
both sides R.R. also *A. novae-angliae* - *A.*
laevis. Saw his specimen from the east -
+ the 2 were very similar. It is a pure
instance of hybridism. - Color - bracts
leaves, pubescence - etc. It would make an in-
teresting story. - The 3 colonies of *A. multiflorus*
(all name) I remember here, - are all very dense.
Those in Tipton Co. were thinner + scattered.

Also got sotol missouriensis - with
its purplish lanceolate leaves. - Both trips
worthwhile.

Went thru the Flora and made a list
of Howard Co. species started - in all about
670. - Also another list not started ~~but~~
for several reasons - but which I know are
in Howard Co. - These were over 130. - Mostly
there are in Butler herbarium - So the
~~best desert~~ Howard Co. has over 500 species
(+ varieties) Hope to make the Butler collection
almost complete. - A few I may never get as
Fraxina carolinensis - roadside bluff of
wildcat - 1934. - Collected it but it got lost.
The C.W.A. vandals destroyed the station same
year.

Found no sotol *ericoides* in Tipton co. -
tho I examined many plants + patches.

Been collecting a lot of *Chenopodium* -
up-to-date. - Have been unable to do much
with Hunt's key. This is the poorest part of
the flora. In fact, the only poor part.
The *Striplex* genus works O.K. - Found
both " *patula* + var *hastata* +
" " var *littoralis*. - Each.

are abundant here⁴. - This is an interesting species.

That Cornfield Polygonum where we ate dinner by the Birch trees was *P. lapathifolium*. Also that Rudbeckia you asked about - 3-lobed leaves - was "subtomentosa". - Big patch $\frac{1}{2}$ mi. E. of Lake Cicott.

Forgot to tell you the R.R. west of Goldenith on S. side was burned & or moved to the woods - & all the wide part " on N. side was moved - Nothing until I got W. of where big ditch crosses R.R. - just W. of ditch on N. side level place 5-6 700' W. ~~on N. side~~ was very beautiful Aster amethystinus - worth walking for Road 31 - 2 miles - to see - About Oct. 1. it would be in its most glorious state. -

Moving - burning. - the Bastards - Ah why does Joe Louis waste all his energy punching - striking at some other pugilist? - Why do the Big Leagues waste so many strikes? - Why not

5

hunt these mowers and burners
 and use their fists & ball-bats on
 those that so ignorantly and illiterately
 destroy our beauty? ~~But~~ When I first
 viewed this terrible sight, I was
 enraged. On such occasions I am
 a master of both the sacred and profane
 Languages. I have put these problems
 up to Isaac Walton League & got no-
 where. Now I ask you what the
 Acad. of Science can do to save the
 Railroads - such as we saw -
 Cass-white & other N. W. Counties.

Dean wants me to write to Dr.
 Cummins - Purdue. & come thru
 Kokomo - or get some one else to - tho
 Lafayette is 4-5-6 mi. to the south. - I
 want to go to Muncie to the Acad.
 meeting - if it is at all possible. The
 big item is to meet others.

Sorry the season is nearly ended. - I
 have been out locally almost daily - Only
 Hunt Institute for Botanical Documentation

only the *Chenopodium* & *Striplex* remain.
& much of these are ripe. I think that
like Dean's *Thalictrum*, the "master
key" has yet to be found.

As to my specimens - inevitable
some collected out of season ^{or} will have
to be discarded. - But I KNOW - you will
make the best possible use of them - as ~~an~~
exchanges - students - closure - etc.

Sometime before real cold weather - soon
after Acad. meeting. - maybe you could do
tree counting in 1 of the two good woods
here - I've told you about. or in both - They
are not far apart. - both off the road.

My next big job is to separate the CV
record species - new. I hated to get at it
as long as there was field work to do. I have
the last few packages labeled so that it will
be easy - but for all the early bundles - it will
be a monotonous job. --- *Permsystematic*
old C.M.K. is.

This is enough of scribbling for
one issue.

7.

I see in papers where your Pres. is
going to support Willkie - While I can't
vote for either, - I think F.D.R. is much
the lesser of two Evils. Willkie will
turn it over to Big Business and will
soon pass into a Hoover Depression.
F.D.R. will bring us into a "gradual"
There is little - too little - to choose from.
There are no issues, - only the Ins
and the Outs.

Best Wishes to you - Cotyler -
Evans - and all the others. -

Very Sincerely Yours.

Chas. M. - Ek

October 28, 1940

Mr. Charles M. Ek
1612 N. Purdue Avenue
Kokomo, Indiana

Dear Mr. Ek:

Your letter of the 23rd is at hand. I cannot tell you how I appreciate your help in collecting the fruits of *Physalis* for Doctors Krukoff and Folkers. I am sure that it does not matter much to them at least at present what species you send.

The Academy meetings will be held the 15th and 16th of November at Muncie. I shall be glad to call for you about 7 o'clock Friday morning to take you to the meetings. I shall probably go to Muncie Thursday afternoon for some committee meetings and for a meeting of the executive committee in the evening. I shall stay all night at Muncie but will be glad to drive to Kokomo for you Friday morning. I think you should plan to stay all night Friday so that you could attend the taxonomists meeting on Saturday morning. It will be at this meeting that the new county records will be discussed and plans made for publishing them. I judge your best procedure would be to come with a list of species and the counties for each together with the herbaria in which the species will be deposited. I do not know who will be chosen to edit these so I cannot say just what would be the exact form for presenting your data. I am quite sure that most any form containing the information will be usable this time. I shall see to it that you are made a member of the Academy.

I am glad to know that you found the colonies of *Aster amethystinus* along the railroad west of Goldsmith. I had not found it there. The last time we were there in autumn the banks were lined with *A. exiguus*. I am sure that we will be able to use them for exchanges and student work whatever duplicates you may have collected.

Thanks also for the determination of the *Rudbeckia* collected at our last stop in Starke county. I had been so busy that I had not had a chance to look into it carefully.

It will probably be early in December before we can come north to do quads in the forest which you mentioned. We still have about four Saturday's work.

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)
NEW YORK, N. Y.

PRESIDENT
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October 28, 1940

Dr. Ray C. Friesner
Butler University
Department of Botany
Indianapolis, Indiana

Dear Dr. Friesner:

Acknowledgement is made of the receipt of your letter of October 22nd. I am told by Dr. Folkers that they are in receipt of a sample of fruits of Physalis from Mr. Ek, and that they now have ample material of Physalis and Solanum for their work.

I am sending this letter by airmail in hopes that it will reach you before you make an attempt to obtain further supplies of Physalis for us.

I note that your collecting work for the year is over, and so is the case with us as far as the U.S. is concerned. It appears that we were fortunate in obtaining various samples that will occupy my chemical friends for some time to come.

There seems to be one more matter, however, that I would like to discuss with you.

In connection with the "preparedness program", we are cooperating with a certain branch of the U.S. Government in a search for a substitute of quinine in treatment of malaria. Among the active principles that we wish to test are Gratiolin (source - Gratiola officinalis L.), and Syringin (source - the bark of Syringa vulgaris L.). We have already clipped the plants of these two species that we have on the grounds here.

If you are in a position to send me samples (dried!) of Gratiola officinalis (whole plants) and of Syringa vulgaris (bark of branches or of stems), please do so, otherwise disregard the request. The active principles will have to be tested first on canary birds, and then by clinicians on human beings, so that we are trying to obtain as large samples as possible. Naturally, I will leave it up to you as to how you will wish to charge me for the samples in terms of specimens. The samples may be sent by parcel post collect.

Sincerely yours,

B. A. Krukoff
B. A. Krukoff

Bak/Jd
Airmail

October 29, 1940

Dr. E. A. Kruckoff
New York Botanical Garden
Bronx Park (Fordham P. O.)
New York, New York

Dear Dr. Kruckoff:

Your letter of the 28th is at hand. I have written Mr. Ek thanking him for sending the material of *Physalis* and informing him that you do not need any more of this. I have also told him of your need for lilac bark and *Gratiola* plants. I do not know where we could get any of these about Indianapolis, but I will be on the lookout about some of the abandon dwellings in the southern part of the state. It may be possible that we can spare some material from the Botanical Garden. At least I will do my best to help out.

In so far as exchange species are concerned I shall not worry about making "any exchange charge" for the material we have been sending.

Sincerely yours,

Ray C. Friesner

RCF:mb



THIS SIDE OF CARD IS FOR ADDRESS

Dr. R. C. Friesner
Butler University
Indianapolis, Indiana

Biology Building
University of Wisconsin
Madison, Wisconsin
October 30, 1940

Dear Dr. Friesner,

Thank you for your comments on the *Solidago* specimens. We have one duplicate of the questionable *S. hispida* from Mazomanie, but it has not yet been mounted. As soon as this is done - within a few days -- it will be forwarded on loan with a few others which you may find worth examining. Might the plant be *S. ulmifolia*?

Very truly yours,

L. N. Shimmers

Pennell for Pres.
Shorff - Council.

NOMINATIONS FOR OFFICERS

11-1-40

The American Society of Plant Taxonomists will meet with the Systematic Section of the Botanical Society of America in Columbus, Ohio, Dec. 28 - 30, 1939, in connection with the sessions of the A.A.A.S.

A president is not eligible for re-election for two years after his term is finished. The presidents of the Society are:

H. A. Gleason, 1937
M. L. Fernald, 1938
J. M. Greenman, 1939

Council members are elected for seven years and may be immediately re-elected on the expiration of their terms. The present members, and year of expiration of term of each are:

P. A. Munz	1945
N. C. Fassett	1944
M. L. Fernald	1943
H. A. Gleason	1942
F. W. Pennell	1941
LeRoy Abrams	1940
E. E. Shorff	(Term expires 1939)

Each member of the Society may nominate one member for President and one for the Council.

November 4, 1940

Mr. John S. Wright
Eli Lilly Company
Indianapolis, Indiana

Dear Mr. Wright:

A short time ago, near the conclusion of a conference at which the results of the dendrometer and dendrograph study on beech was discussed, I alluded to plans for next year and you asked me to write you regarding these plans and our needs for carrying them out.

1. I would like to continue the study of growth behavior in the beech for at least two more seasons so that our results may be more dependable. For this we would use the same instruments purchased this year.

2. I would like to carry out the same type of study on white pine in Maine. I am interested in the white pine because no study has heretofore been made on it and, in addition, because it will give us an evergreen for comparison with our deciduous trees. The relation of diametral growth activity to bud activity is usually different in the two types of trees. This study would require three additional dendrometers of the type that measures radial changes.

3. I would like to correlate time of growth activity (i.e. what months of the year) with the type of correlation we find between annual growth and rainfall in as many tree species as possible over a period of years. For example: annular growth in beech shows a closer correlation to the amount of rainfall during the month of June than for any other period of the year. Our dendrometer study this summer gives a clue as to why this is true. That is, the trees this summer grew primarily from May 15th to July 15th approximately 67 percent of the increase in radius occurring in June.

In a similar manner annular growth in white, red, black, scarlet, and chestnut oaks show closest correlation with rainfall for the three summer months of June to August. In ash there seems to be

a closer correlation between annual growth and rainfall for June than for any other period. For this third type of work I should have three additional dendrometers.

For all of these studies I would like to correlate evaporation data with growth and especially with the daily reversible variations in diameter. For this I would need about 30 atmometers.

I have corresponded with Dr. MacDougal regarding the dendrometers and with Dr. Burton E. Livingston regarding the atmometers. Dr. MacDougal gave me an estimate of \$100.00 for six dendrometers and Dr. Livingston quoted me a price of \$1.75 each for un-standardized atmometers. (We can standardize them ourselves at much less than the difference of 50 cents in price between standardized and unstandardized instruments.)

If you should feel disposed to help out on the above equipment it would help us because it would thereby release more of our regular botanical appropriation for publication of our "Butler University Botanical Studies" manuscripts which have already accumulated beyond our ability to publish them. Whether you are in a position to help us or not, I want you to know that we very greatly appreciate what you have done in the past and the interest and encouragement you have always given us.

Sincerely yours,

Ray C. Friesner

RCF:mb

JOHN S. WRIGHT
4411 Washington Boulevard
Indianapolis, Ind.

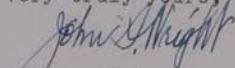
November 5, 1940

Dr. Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Answering your letter of November 4, if the election does not go too hard against business I will be glad to give you enough money to continue the work that you contemplate on the basis of your estimate. I hope to see you in the next ten days, in which time further details can be arranged.

Very truly yours,



John S. Wright

Ell Lilly

M

November 8, 1940

Miss Elsa Nyholm
Lund Botanical Exchange
Lund, Sweden

Dear Miss Nyholm:

Your letter of September 17 reached me today. I am forwarding to you a package containing approximately 200 specimens, that is, 10 species, 20 specimens each. I am unable to say just what species are in this particular package since I have had the entire lot sealed since October, 1939. I shall be glad if you will inform me as to the arrival of these specimens and I shall be glad to send more as you may direct.

Sincerely yours,

Ray C. Friesner

RCF:mb

from Bicknell

Received 11-11-1940

My dear Dr. Friesner,

A very strenuous October, and a November attack of gripe have delayed my acknowledging the receipt of the bird books and botanical studies. You are kind to have sent me the bulletins, which I shall enjoy. Your fern key has been helpful with *Dryopteris spinulosa*, *intermedia* etc.

I have mailed the pressed plants which I offered you, and in close locality and date list. I am also sending you an account of the last Jusselyn Botanical Society meeting, which I wrote for a club and a few friends. As the friends, who live elsewhere, couldn't see the pressed specimens which accompanied the ^{reading of the} club paper, I had to put

11-21-40 from Bicknell
in descriptions. It's rather a hodge-
podge, but it may give you an
idea of the trip. When you have
read it, if you care to take the
time for reading, will you please
send it to Mrs. Carl Sonntag,
118-42nd St., Sandusky, Ohio.

Mr. and Mrs. Sonntag were in
the group to which you talked ^{last} year
at my cottage. Mr. Sonntag has been
for several months in South America,
advising about the location of a
Cement plant. No doubt, he is botan-
izing there, as he does everywhere he
goes. For though Chemistry and geolo-
gy are his special subjects, his very
good in botany.

I note in your letter that you
thought *Chamaecyparis* didn't grow
so far north. Mr. Keistad thinks he
found it in a swamp around Apple-
ton. By the way, he speaks enthu-
siastically of his hours with you
last summer.

I found my first *Cystopteris*

11-XI-410 (from Bicknell)
fragilis for Waldo Co., this year, on
the opposite side of Norton Pond.

Yours sincerely,

Edith Bicknell

Lincolnville Center, Me.

Y. Richard Moody.

Nov. 6, 1940

P.S. If you find errors in state-
ments made in my paper, I'd be
grateful to have my attention
called to them.

E. B.

11-81-40 from Bicknell
Moench
Juniperus horizontalis L. Coll. by Edith
Bicknell, on Thruway farm, Lincoln-
ville Center, Me. Aug. 1, 1940

Veronica agrestis L. Coll. by Dr. Anne
Perkins at Castine, Me. July 6, 1937

Panunculus (*Helianthus* Raf.)
delphinifolius (R. Woodw.) 3877, 1936
Edith Bicknell, in Norton Pond, near
L. Center bridge July 9, 1940

Chamaecyparis thyoides (L.) BSP
Knight
Pond, Northport, Me. Josselyn Bot.
Soc.

Lathyrus pratensis L. Coll. by Henry
Merill at Frankfort, Me. July 23, 1940

Amelanchier Wiegandii July 1940
Common around here in Waldo Co.,
but not recognized until within a
very few years. Coll. by Prof. Heyland.
U. of Me.



THIS SIDE OF CARD IS FOR ADDRESS



Dr. Ray C. Friesner,
Dep't of Botany
Butler University
Indianapolis Indiana



THIS SIDE OF CARD IS FOR ADDRESS



Dr Ray C. Friesner
Indianapolis
Botany Dept
Butler University. Ind.

Delavan, Wis., Nov. 13, 1940
Dear Dr. Friesner:

I want to express my deep appreciation of your kindness in sending me copies of Bot. Studies for August. The Fern and Fern Allies key is particularly valuable.

May I send you a Solidago from Door County, Wis. for your opinion? It does not seem to fit any description I can find.

With personal regards,

Yours very truly;

S. C. Wadmond
S. C. Wadmond

WINSTON-SALEM N.C., 11/2-40
Dear Fellow Botanist, - Thank you, very much indeed for your recent reprints. I have several hundred duplicates from N.C., S.C. Ga., and Fla. - mostly made during the summer months. Can you use a pkg of those and send me some of your duplicates? If so, I can send mine on at once.

Yours sincerely

P.O. Schollert, MD

1820 S. Main St.

November 14, 1940

Mr. John B. Wright
Eli Lilly Company
Indianapolis, Indiana

Dear Mr. Wright:

Your package containing the part of a dendrometer came yesterday. Please accept my thanks for it. I am not sure just how it can be put into use but a way may occur as future work develops.

Thanking you again, I remain

Yours sincerely,

Ray C. Friesner

RCFamb

7. *Cystocarp*



C -

November 14, 1940

Dr. B. A. Krukoff
New York Botanical Garden
Bronx Park (Fordham P. O.)
New York, New York

Dear Dr. Krukoff:

I have located a number of lilac bushes from which some large stems could be spared. I am writing to ask whether you would like the bark sent before or after it is dried. I should think that we might be able to secure 2 or 3 pounds of bark even after it is dried.

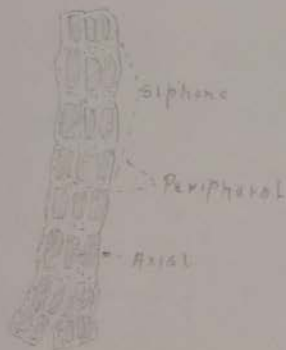
Sincerely yours,

Ray C. Friesner

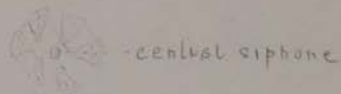
RCP:mb

Rhodophyceae

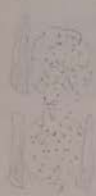
1 Portion of vegetative filament



2 Cross section



3



4 Asexual Phase



5



6 Antheridium



SOUTHERN APPALACHIAN BOTANICAL CLUB
WEST VIRGINIA UNIVERSITY
MORGANTOWN, W. VA.

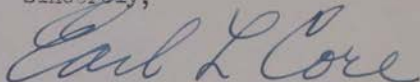
November 16, 1940

Dr. Ray C. Friesner
Professor of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

We will be able to use your paper on the genus Solidago in West Virginia soon after the first of the year, probably in the January issue of Castanea if you can have it ready by that time. We could publish it in two parts, as you suggested, or, if it is all ready, we might get it all in one issue, possibly a double number.

Sincerely,



Earl L. Core
Editor of Castanea

ELC/eab



THIS SIDE OF CARD IS FOR ADDRESS

R. C. Friesner
Butler University
Indianapolis, Indiana

11/17/1940

Dear Dr. Friesner,

The goldenrod specimen you requested was sent yesterday, after some delay due to the temporary absence of the regular herbarium assistant. Included with it are several others which I thought you might find of interest. Please return the specimens to Dr. N. C. Fassett, Biology Building, University of Wisconsin, Madison, Wisconsin.

Very truly yours,
Lloyd N. Shumner.

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)
NEW YORK, N. Y.

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DEB. BALDWIN
JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

November 18, 1940

Dr. Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Acknowledgement is made of the receipt of your letter of November 14th. We would prefer to receive the bark of lilac after it is thoroughly air dried. Kindly note that two pounds of dried bark will cover our needs very well.

Sincerely yours,

B. A. May
B. A. Krykoff

Bak/Jd

November 19, 1940

Dr. Lloyd H. Shimmers
Department of Botany
University of Wisconsin
Madison, Wisconsin

Dear Dr. Shimmers:

The specimens of Solidago came in excellent condition yesterday.
I appreciate your kindness in sending them and will do my best
to get them back not later than the first week in December.
I am sorry to hold them that long but I am pretty well tied
up until then.

Sincerely yours,

Ray C. Friesner

RCF:mb

Alternation of Generation

The zygote, formed by the union of the sperm with the egg (2n number of chrom) In first division reduction in the number of chrom; occur. In the lower red algae while there is a definite alternation of chromosome numbers from haploid to diploid & back to haploid, there is no corresponding alternation of plants with different functions.

Some life histories (Red Algae)

Batrachospermum & genus growing in the fresh waters of north temperate regions & *Ulothrix*, a marine genus, representative of the lower or single red algae. The genera are characterized by drab plant bodies of delicate branched petioles varying in size from a few to several inches in height.

Ulothrix. Plant body is characterized by the haploid. Male sex organs are produced in clusters. Spermatozoa corresponds in a general way to the sperm of other plants.

November 19, 1940

Dr. S. C. Wadmond
Delavan, Wisconsin

Dear Dr. Wadmond:

Your card regarding determination of a specimen of *Solidago* is at hand. I shall be very glad to have you send me this specimen and I shall try the best I can to determine it. As you know this is a very difficult group and I feel quite humble in approaching a specimen that has troubled others.

Sincerely yours,

Ray C. Frienner

RCF:mb

& finally produce the sex organs. The spore is short lived, the first structure produced during the gametophytic phase. The mature spore contains chloroplasts & stored food said to be oil. The spore generally germinates immediately after being shed.

2. Sexual Reproduction: The sex organs are produced upon the gametophore either terminally or on side branches. In many genera the male & female plants are strikingly different & may be recognized at a glance. The mature antheridium is a short, stalked, club shaped structure. It has chloroplasts in the cells of the jacket & wall. The mature archegonium is an elongated structure with a long neck & rather massive center & stalk. When the archegonium is an elongated structure with a long neck & rather massive center & stalk. When the archegonium is fully mature the cover cells are ruptured, the neck cells & the venter canal cell disintegrate, providing a continuous passage through the egg in the venter. The maturation of the sperm & the egg ends the gametophytic stage.

3. The Sporophytic Phase: The sporophyte of the true mosses is the most highly developed structure in the life cycle.

November 19, 1940

Mr. C. M. Ek
1612 Purdue Avenue
Kokomo, Indiana

Dear Mr. Ek:

Your letter of Sunday is at hand. I am glad that you enjoyed the Academy meetings, and what I was able to contribute to that end gives me as much satisfaction as it does you. I am deeply appreciative of the fact that you send your specimens to our herbarium. The first new list of plant records will be largely a "B" list. Your list of 147 specimens has contained more than 90 percent non-duplicating records.

I am glad that Dr. Krokoff is appreciative of your efforts in his behalf and while I know that you did not enter into the work with the thought of financial reward, yet I am sure that all that comes your way will be deserved. We will be sure to let you know just when we will be able to come north again.

Sincerely yours,

Ray C. Friesner

RCF:mb

Sex Organs - An outstanding feature of the organs of ferns is the reduction of the sterile tissue such as the walls cell of the antheridium and the neck cells of the archegonium. This structure might be roughly visualized by placing two hollow cups, one above the other & then closing the opening at the top with a spherical ball of the proper ball. The enclosed central portion originally consist of a single cell (central cell), primary spermatogenous cell. The number of spermatogenous cells is sometimes larger, regularly so in the antheridia of the brown & more primitive members of the ferns.

November 20, 1940

Dr. Earl L. Core
West Virginia University
Morgantown, West Virginia

Dear Dr. Core:

Your letter regarding the Solidago manuscript is at hand. I do not have the manuscript finished, as a matter of fact, I have not had a chance to think of it since last spring. I could finish the taxonomic part by the first of January but I have not gone over the specimens in any of the other herbaria of the state. I should think however that it would not take long to go over all of the other specimens, so that if you are urgent in needing this for the January issue I will make an effort to have it ready.

Do you wish me to take the initiative in seeking the loan of specimens from other herbaria or would you prefer to take it yourself. In either case the specimens could be sent to me by express collect and I would endeavor to get them back within a month after receiving them.

Sincerely yours,

Ray C. Friesner

RCF:mb

ing called "indusium." This is a thin membranous tissue attached in some way to the leaf surface. The development of the sporangium of the common fern arises from a single superficial initial cell of the sporophyll. The initial cell divides forming a transverse wall parallel to the surface of the sporophyll. The upper cell takes no further part in the development of the sporangium and its identity is eventually lost.

The Gametophyte. Non-germinale, the spores produce, at first, a short filament of cells resembling a green alga or a moss, protonema. Further development of these structures varies considerably in the different genera and according to light and temperature conditions. There are fern gametophytes which continue in the filamentous condition even to maturity, but the typical gametophyte soon gametophyte is a small flat heart-shaped structure.

CLARK UNIVERSITY
WORCESTER, MASSACHUSETTS

DEPARTMENT OF BIOLOGY

November 20, 1940

Professor R. C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Professor Friesner:

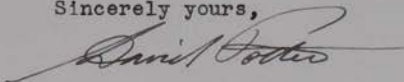
I regret exceedingly that I have failed to answer your kind letter concerning an exchange of the herbarium specimens.

I am still interested in an exchange, although the great majority of my Labrador material has now been used.

If, however, you are interested in Massachusetts flora, particularly the central area, I shall be very glad to exchange with you, as I am anxious to get Indiana plants.

Thanking you again for your kind letter and trusting that I am not too late to effect an exchange, I remain

Sincerely yours,



David Potter
PROFESSOR OF BIOLOGY
CLARK UNIVERSITY

132.

DP:W

JOHN S. WRIGHT
4411 Washington Boulevard
Indianapolis, Ind.

November 22, 1940

Butler University
Botanical Department
Indianapolis, Indiana

Attention Dr. Ray C. Friesner

Dear Dr. Friesner:

In final reply to yours of the 4th, I am sending Butler University herewith my check for \$200.00 to enable you to buy six additional dendrometers and thirty atmometers at a total estimated cost of \$152.50. The remainder of the fund is to be used at your discretion for defraying incidental additional expenses that may be incurred in connection with your studies of tree growth.

With best wishes, I am

Sincerely yours,

John S. Wright

John S. Wright
c/o Eli Lilly & Co

M

Delavan, Wis., Nov. 22, 1940

Dear Dr. Friesner:

Thank you for your note of the 19th. I am sending the *Solidago incognita* under separate enclosure. Dr. Ehlers thought it might be referable to *S. racemosa* var. Gillmani; Mr. Weatherby (Gray Herb.) wrote it was not this var. and he appears to be quite right. Plate 418 opp. pg. 202 *Rhodora* vol. 38 no. 450 June 1936, illustrating rosette leaf from original var. Gillmani material, shows conclusively that my specimen is NOT that variety. Mr. Weatherby (in same letter, Feb. 23, 1935) wrote that this number #43634 was best matched at Gray Herb. by Indiana specimens collected by Deam and passing as *S. erecta*, perhaps incorrectly. I have a single sheet, only, of the latter, from Dist. of Columbia (not a very good one) and it does not seem to fit my sheet very conclusively. Will you check it against your material of *S. erecta*?

tegules ⁶ = 7mm
too long for
S. erecta

The Univ. (Wis.) sent me recently a sheet of *S. sciaphila* Steele coll. in the Driftless Area of Wis. (Grant County), and apparently very rare in the state. I have no literature in which it is mentioned. Can you give me some information about it? *Steele U.S. Natl. Herb. 13371, 1911*

Again thank you kindly for taking time out to look over this material. I shall await your opinion with great interest.

With kindly regards to yourself and Mr. Harmon,

Sincerely yours;

S. C. Wadmond

S C Wadmond

Keep the specimen, of course!

Prob. *S. deamii*

Achenes = ca 1.5 mm long = ⁵⁰1.25 - 1.75 mm
Ray: 13 ^{light yellow}
Disc: 17 ¹²
Corolla lobes of disc flowers ca 1.75 mm
Stigmas 1.2 mm (of disc fl.)
Anthers 2.0 mm (of disc fl.)
Tegules ^{7 mm} ^{slightly dilated}
with green costa and white margins, obtuse apex

Ray akenes ^{1.50-1.75} ~~1.25-1.50~~ / Strigose
Disc " 1.5-1.75 / pilose

If new, follow *S. deamii* for description style

Plant A

Plant B

Achene 1.5-1.75 mm strigose-pilose
Ray: 11
Disc: 12 Corolla lobes = 1.5 mm Stigmas 0.7 mm Anthers ^{1.6 mm} ~~1.3 mm~~
Invol. 6 mm
Tegules 4-5 rows - ^{dilated costate} with ^{apex obtuse} swollen green tips except underneath

(over)

- Stem**: erect or slightly ascending; glabrous ~~below~~ in lower half below inflorescence, slightly to densely appressed pubescent in upper half below inflorescence, densely appressed pubescent in the inflorescence; 6-12 dm high
- 8 **Basal Leaves**: spatulate, oblanceolate to obovate, entire or shallowly serrate; ^{glabrous;} tapering to long margined petioles present in basal rosettes at flowering time, those on sterile shoots similar and often larger, 3-15 cm long, 1.0-3.5" wide
- 16 **Lower Cauline Leaves**: oblanceolate to obovate, tapering to long margined petioles; entire or ~~or~~ shallowly crenate-serrate; glabrous except for slightly scabrous margins; 6-15 cm long, 1.5-3.5 cm wide.
- 24 **Upper Median and upper upper Cauline leaves**: oblanceolate, elliptical to lanceolate, gradually reduced upward, short petioled to sessile, ^{with cuneate base}, otherwise similar to lower.
- 30 **Inflorescence**: dense narrow thyrse, 3-5 cm wide, 10-40 cm long.
- 34 **Heads**: non-secund; ^{appressed pubescent} on pedicels 0-8 mm long.
- 36 **Involucre**: 6-8 mm high, campanulate
- 38 **Teagules**: in 4-5 rows, oblong with green dilated costa, the lower and middle with conspicuously swollen green tips, apex obtuse.
- 42 **Ray**: 10-15
- 44 **Disc Flowers**: 12-18
- 46 **Corolla lobes of mature disc flowers**: 1.5-1.75 mm long
- 48 **Anthers of disc flowers**: 1.5-2.0 mm long
- 50 **Pappus bristles** ^{4.0-4.5} **signas of disc flowers**: 0.6-1.2 mm long
- 52 **Achenes**: 1.5-1.75 mm long, strigose ^{pubescent}
- 56 Sand hillocks back of boulder strewn beach, e. of Detroit Harbor, Washington Island, Door Co. Wisconsin.

November 26, 1940

Mr. John S. Wright
Eli Lilly Company
Indianapolis, Indiana

Dear Mr. Wright:

Please accept my sincere thanks for the check you sent recently. I have turned this over to the University Bursar together with a statement of the purpose for which it was given. Dr. Robinson was greatly pleased and will write you soon. My earnest hope is that the work done as a result of the gift may be worthy of it.

I have dismantled the dendrograph and filled the two holes in the tree with antiseptic grafting wax. The apparatus has left no other noticeable marks on the tree. The two dendrometers are being continued and are still yielding results. The one may be unreliable during snow but I believe the other will not be affected by snow and I shall continue both of them as long as they continue to yield results. It may be that they will be worth continuing throughout the winter. I would be glad to have a complete 52-week record if such is possible.

I hope to have a manuscript ready to publish on the data up to the end of December. I have it written now, so far as it can be and expect to finish it during the Christmas vacation. I hope it will be convenient for you to criticize it before publication.

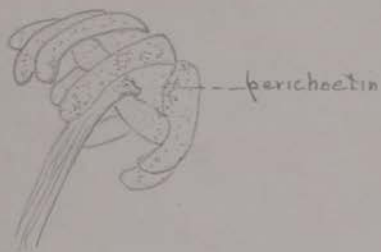
Again, appreciating your interest and aid in this work, I remain,

Sincerely yours,

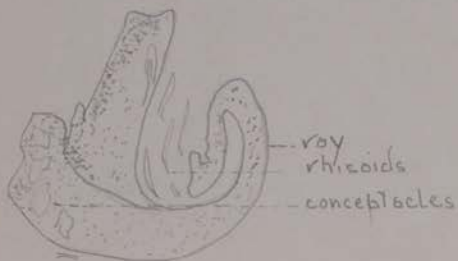
Ray C. Friesner

RCF:mb

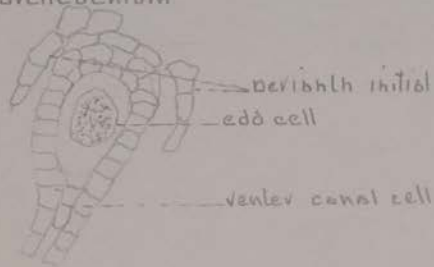
Female disc (Ventral)



Female rosette



Single archegonium



November 26, 1940

Dr. David Potter
Clark University
Worcester, Mass.

Dear Dr. Potter:

Your letter of the 20th regarding exchange of herbarium specimens is at hand. I am sending you a package containing 152 specimens mostly from Indiana. There are some specimens from Maine and in case you do not care for these I would be glad to have you discard them and count them out when you send your material. I shall be glad to have Massachusetts plants or from any other part of New England.

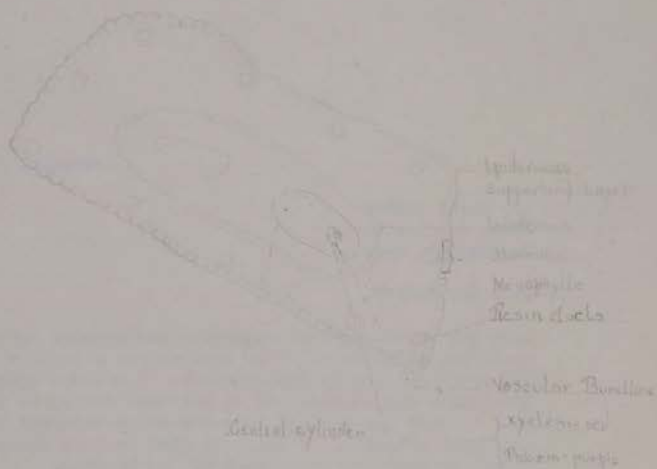
Sincerely yours,

Ray C. Friesner

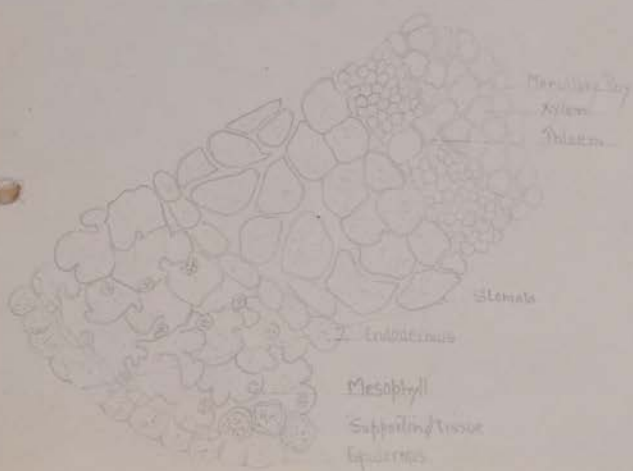
RCF:mb

II

Cross Section



III Single Vascular Bundle



November 27, 1940

Mr. S. C. Wadmond
Delavan, Wisconsin

Dear Mr. Wadmond:

The specimens of *Solidago* reached me safely on Monday. I have made a complete analysis of the plants and am satisfied that they cannot possibly be either *S. racemosa millmanii* or *S. erecta*. The nearest described species is *S. deamii* (See *Rhodora* 38:204 and plate 418. 1936). Your specimens differ from *S. deamii* as follows:

	<u><i>S. deamii</i></u>	<u>Your specimens</u>
Stem	4-5 dm. high	6-10 dm. high
Inflorescence	1 dm. long	1-4 dm. long
Ray	8	10-15
Disc flowers	Ca 12	12-18
Corolla lobes of disc flowers	2 mm. long	1.5-1.75 mm.
Anthers	2.7-3 mm. long	1.5-2.0 mm.
Achenes	Immature in orig. desc.	1.5-1.75 mm. long

You will note that your plants are much larger with the corolla lobes and anthers considerably shorter. The only difference of real significance, in my opinion, is the anther length. I am withholding final judgment until I receive one of the co-type specimens from Mr. Deam to whom I wrote yesterday for a loan. If your material proves to be *S. deamii* you will have made an excellent find in extending the range of that species and I would be glad to publish a brief note to that effect in the next issue of our *Botanical Studies* if you would care to have me do it. In case the material does not prove to be *S. deamii*, it will warrant description and naming as a new species. I shall let you know as soon as I have time to compare after the arrival of Mr. Deam's specimen.

CHAS. C. DEAM

BLUFFTON, INDIANA

Nov. 27 1940

Dear Friesner: I have your letter on Code for additional plants to Flora. It is all O.K. with me.

I am pleased to inform you that the *Solidago Deamii* is here and I take pleasure in loaning it you. I have taken the liberty of stuffing the order and I am sending you all of my *S. racemosa* and var. *Gillmanii*. You may wish to study them with the *S. Deamii* which I suggest in the Flora under *S. Gillmanii* that it ^{seems to} be an intergrading form, etc. On sheet of *S. Deamii* I say part of type. My memory is getting so bad now I fear to say any thing for sure but it runs in my head that I found the plant on the Keiser Blowout and that the plant was double. That is the rhizome had divided and the whole plant was made up of two quite different plants, one from the old rhizome and the other from the offshoot. So while Fernald did not see my plant it is a part of the type. In the Flora I mention the action of aphids on the roots of the species. You will note that but few plants have fully mature achenes and those measured show wide variation in size. Why, etc. In the event you wish to find the species in quantity go to the east side of the Dune State Park where you will find a cement road over to the beach where you can park. Well the Keiser Blowout is just west and just south of where you park you will find this species quite frequent both in sheltered and in exposed places which gives a chance to study pubescence and habit of stooling.

The bag of excelsior in box is only packing and contains nothing for you. Now I have no use for the specimens at all and I wish you to keep them until you can not use them any longer. No hurry to return them. Better keep them to Spring, April 10- when we will have returned from Florida. We plan to start about Jan. 15 if I think I can make the grade. I close like Walter Winchell, "with oceans of love" until next Sunday night at the same time. ✓

OVER

I regret to read in Indpls Star of the passing of Frank M. Andrews,
which reminds me of the epitaph on a monument which read: Where I now
am you soon will be"

Received a letter from Dean Coulter this morning. He is about
passed on writing. One can not read it but my wife can.

I have no botanical news so I close with very best wishes to you
all, I am sincerely yours,

Chas. C. Deam

Bluffton, Indiana.

*P.S. To my group leave today. Since there is no great
risk delay until tomorrow.*

Bicero Indiana
Nov. 28th 1940

Box 194

Dr. Friesner:-

Dr. Potzger:-

Department of Botany
Butler University

Indianapolis Indiana

Dear Brethern:- Not knowing just how soon I can get out to talk to you, decided to write you, explaining developments to date.

Also find enclosed "map" which I hope will be useful to you, in case you wish to examine the Fossil proposition.

Noting the meeting at Ball State, I wrote Prof. Christy regarding the deposit, with the intent that it should be of interest to such ^{as} might do something about it.

Prof Christy is greatly interested in it; so he wrote to each of these four:-

Dr. Marcus Lyon
Mr. Wm. B. Thornbury
H. A. Hiestand and
W. P. Allyn.

To each of these he inclosed a copy of the letter to him from myself

As yet I have not heard from any of them.

At Ball state, contact was made with Prof Malott of J. N. - he does not believe it possible.

Maybe, the four mentioned above think the same way.

The trip to the meeting at Muncie was at Prof Chasely suggestion, hoping the item could be gotten into the printed record, and thus increase the interest therein. But it was too late for that.

Went to Crawfordsville and had a very nice visit with Dr. Howell. He immediately became greatly interested. His suggestion is to report to the State Geologist.

Before this is done it would be fine if you could investigate to see if your equipment would be capable of penetrating to the deposit; as the county map shows so bare where the large farm holding is shown on enclosed map; this may be a great deposit, and if so you may be able to work it, if you should see fit, then if your survey located the deposit and enabled the securing of a sample, then you could give

so much better report to the State
Geologist than I can as it is.

Also, I have again contacted
Mr Krier, and each time I learn
more very interesting facts about
it; thus he further pesters my
curiosity.

Surely all will be interested
when and if this mess is thrown
afer.

Thanking you for thus
taking your time

Yours Truly

Ray P. Clements

P.S. I was not out to these places:
got my information from a friend
in Lebanon and the county map;
enclosed map drawn from memory
but is accurate in regard to the distance
and direction.

R.P.C.

THE UNIVERSITY OF GEORGIA
DIVISION OF BIOLOGICAL SCIENCE
ATHENS, GEORGIA

BOTANY

December 2, 1940

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Under separate cover we are sending you some specimens of Solidago which I hope you will have time to identify for us. The number is rather small this time. I have been collecting trees and shrubs and have been keeping my eyes in the air instead of on the ground. I hope these will be of some use to you.

Please retain specimens for yourself and return duplicates to us.

Hope to see you at Philadelphia.

Sincerely yours,

Wilbur H. Duncan

Wilbur H. Duncan, Instructor
Department of Botany

WHD:kra

Mr. Roy P. Clements
Box 194 Cicero, Indiana

Dear Mr. Clements: The National Aeronautics and Space Administration will like to

Your letter of November 28 with map to the old lake bed east of Lebanon came yesterday. I am grateful to you for this because it is almost certain to be of distinct value in helping us to find the area. I am not sure just when we will be able to look into this but I hope that it will be before December is past. I will let you know after we have had a chance to look at it.

Sincerely yours,

Ray C. Friesner

RCF:mb

Delavan, Wisconsin, Dec. 5, 1940

Dear Dr. Friesner:

I appreciate your prompt reply of Nov. 27th;

The specimens of *S. erecta* reached me safely. It is quite evident that my material does not belong to this species. Thanks very much for clarifying this. Yes, I read the description of *S. deamii* and studied the illustration (*Rhodora* 38:204 and plate 418. 1936) but it just didn't seem to fit my material altho strongly suggestive of it. It will be most interesting to see how actual material of *S. deamii* compares with mine. Fernald (38:205 *Rhodora*. 1936) says that *S. deamii* is suggestive of *S. randii*. I have a single sheet of the latter from N. H. but it looks nothing like my material.

I appreciate greatly the copy of your "The Genus *Solidago* in Northeastern North America." It is proving wonderfully helpful. As a result, I am transferring all my Wisconsin *S. missouriensis* (and some Indiana specimens taken on our 1938 field trip as well) to *S. glaberrima* Martens. My Wisconsin *S. uliginosa* (so determined at Gray Herb. and I am afraid distributed as such here and there) I have transferred to *S. uniligulata*. If sometime in your wanderings you run upon an honest-to-goodness sheet of *S. uliginosa* Nutt. I wish you would grab it for me.

S. sciaphila: to the single locality cited, add "Talus slope Mississippi River bluffs at Glenhaven, Grant County, Wisconsin."

Again my very great appreciation and heartfelt thanks for your good help.

Sincerely yours;

S. C. Wadmond
S C Wadmond

Indianapolis Dec 8, 1940

Professor Fehrmann
Butler University
Indianapolis Ind

Dear Mr. Fehrmann, I am sending to you a list of
Some Botanicals which I desire the Family Names,
May I ask of whom do you purchase your Mounting
Paper I would like to know as my supply is about
as low as the water. Supply is in Southern Ind.
I have a number of mounted Plants mostly from CP &
I would like to exchange for mounted or unmounted
Plants that I have not already got, or I would exchange
for mounting Paper I could let you have 500 or more
you could select those you especially desire
Awaiting your favor I remain Yours very truly
Lm Kloodas
1521 North Rural St
Indianapolis Ind

We are not in a position to use any
mounted plants because we cannot unmount
them to poison them. We can use unmounted
Herbarium paper from Lesh.
Will send families as soon as time permits

December 9, 1940

Dr. B. A. Krukoff
New York Botanical Garden
Bronx Park (Fordham P.O.)
New York, New York

Dear Dr. Krukoff:

I have sent via parcel post a package containing bark from the lilac bushes to Dr. Folkers at Rahway. The material was secured from bushes on our university campus and in case more should be needed we could readily spare an equal amount.

Sincerely yours,

Ray C. Price

Dr. Karl Folkers
Assistant Director of Research
Merck and Company
Rahway, New Jersey

Dear Dr. Folkers:

I mailed to you via parcel post today a package containing bark from lilac bushes growing on the Butler University campus. In case this should not be enough material for your purposes, I shall be glad to send more. This is sent to you in response to a request from Dr. Krukoff.

Sincerely yours,

Ray C. Friesner

RCF:mb

Cicero Indiana
Dec 9th 1940Dr. Ray C. Friesner.
Dept of Botany
Butler University
Indianapolis Indiana

Dear Prof Friesner: - Your letter of last week received and your interest appreciated; but surely the latest development is the most important yet; - Mr. Krier called here during the week-end, but I missed seeing him; but he left word for me that he had received request from the owner of the farm to come and examine the well in question as it is giving trouble, the water is receiving gas or "something" and has become unfit for use.

His expectations are that of trial drillings to avoid the deposit; but he thinks it can not be missed.

In any case, the pipe in use can be pulled up to the deposit and samples can be pumped or dipped, which of course can be subjected to analysis.

I am to see Mr Krier this next week-end and will plan with him,

if at all possible, to have this work accomplished by Xmas vacation hoping we can arrange to be there together, and any others that may wish so to do.

I will therefore, keep you posted as regards progress with this program and will work to the end of accomplishing complete investigation of the proposition.

Mr Krier, like myself, is deeply concerned in the whole affair and he also desires, that whatever evidence is there, may become available to all that are interested therein.

To me, the fact of this circumstance arising at this time, is something to think about, but of course the thing is on my mind every day.

If fossils are there, as I firmly believe they are, the bones will be in excellent condition if they really are as "green" as Mr Krier and I believe them to be.

So surely a lot of valuable information will be secured from the finding of this deposit.

Thanking you yours Truly Clements

50. Section a prepared slide of a cross section of the stem of the
 Vitis (Vitis rotundifolia). Study with the 25 mm. objective
 and 2 or 3 mm. eyepiece. Identify the following:
 a. The pith - the lighter region in the center of the section.
 b. The cambium - the narrow band between the pith and the
 next proportion of the stem. The diameter of the stem is composed of
 several concentric rings of wood. How many years' growth of wood
 are present in this section? Of what does an annual ring of wood
 consist?

c. The medullary rays - The bright red lines radiating from the
 pith through the wood. Do all the rays begin at the pith? Do they all
 reach entirely to or beyond the outer circumference of the wood?
 d. The bark - All of the tissue outside of the wood. Is the bark
 homogeneous in structure, or does it consist of a number of different
 types of tissues? How does the bark as a whole differ in appearance from
 the wood? Why does it look so different from the wood?

e. The very narrow black band surrounding the section.
 This is a part of the bark. DRAW A SECTION IN PENCIL SHOWING ABOVE PARTS.

December 9, 1940

Miss Elsa Nyholm
 Lund Botanical Exchange
 Lund, Sweden

Dear Miss Nyholm:
 The package of exchange specimens consigned to you have been
 returned by the United States Post Office, with the information
 that no packages can be accepted for Sweden. We will store
 this with our other material for you and will send it as soon
 as the embargo is lifted.

Sincerely yours,

Ray C. Friesner

51. Study the two-year-old section of the stem of the
 Tulip (Lilium) with the 4 mm. and 15 mm. objectives.
 Note the following:
 a. Pith - Dark shape in the center of the section.
 b. The medullary rays - The bright red lines radiating from the
 pith through the wood. Do all the rays begin at the pith? Do they all
 reach entirely to or beyond the outer circumference of the wood?
 c. The bark - All of the tissue outside of the wood. Is the bark
 homogeneous in structure, or does it consist of a number of different
 types of tissues? How does the bark as a whole differ in appearance from
 the wood? Why does it look so different from the wood?

52. Study the two-year-old section of the stem of the
 Tulip (Lilium) with the 4 mm. and 15 mm. objectives.
 Note the following:
 a. Pith - Dark shape in the center of the section.
 b. The medullary rays - The bright red lines radiating from the
 pith through the wood. Do all the rays begin at the pith? Do they all
 reach entirely to or beyond the outer circumference of the wood?
 c. The bark - All of the tissue outside of the wood. Is the bark
 homogeneous in structure, or does it consist of a number of different
 types of tissues? How does the bark as a whole differ in appearance from
 the wood? Why does it look so different from the wood?

RCF:mb

entire wide and forms the floor of the pollen chamber at the micropylar end of the ovule, but becomes very narrow around most of the ovule.
 c. Inside of the nucellus lies the endosperm which in the genus is the female gametophyte.
 1. At the micropylar end of the endosperm are one or more much reduced crop cells.
 2. The integument contains a single egg cell which contains a very rounded ovule and much reserve food.
 3. The nucleus of the egg cell is found near the upper part of the egg in most of our slides. This position is due to the fact that the nucleus moves to the upper end of the egg in the early stages of development. The latter persists for a very short time and is not likely to be found.
 4. The neck of the archegonium is composed of four rows of cells, each four cells deep. How many rows are shown in the section? Why? NAME THE ROWS OF THE SECTION DETERMINING ARTERIES.
 December 10, 1940

19. Secure a mature seed, split open longitudinally, the following manner:
 a. The outer hard seed coat or testa. It developed from the integument. What is its function?
 b. Looking the testa is a delicate brownish inner seed coat. It is
 After a careful analysis of Solidago deamii and comparisons with the specimens under your number 43634, I have concluded that your material is S. deamii Fernald. I am basing the decision on three points in which your specimens are nearer S. deamii than S. racemosa gillmanii, viz.,

	<u>gillmanii</u>	<u>deamii</u>	your plant
Inflorescence	Broad, open panicle	Contracted, compact	Contracted
	5-12 cm wide	panicle, 2-4 cm	compact panicle 3-5 cm wide
Pedicels	(4) 8-13 mm long	0-8 mm long	0-8 mm long
Achenes	3-4 mm long sparingly setulose	1.5-2.0 mm long strigose-pilose	1.5-1.75 mm long strigose-pilose

My honest opinion is that S. deamii will not be maintained if a lot of material is studied. I really think it is only a narrow extreme of S. racemosa gillmanii.

Sincerely yours,

Ray C. Friesner

3. The word is traversed in a radial direction by thin walls
cells containing protoplasm. These are the radial walls. How far from
the periphery do they go? What is their function?
4. Scattered about in both the bark and the wood are numerous
small, round, or oval cells. These are the parenchyma cells.
The different parts of the bark in outline is this drawing after consulting
fig. 100, page 100.

5. Select the very thin part of the bark and study
carefully under the high power. Note the following arrangement:
a. If the bark is young the outermost row of small cells will
be the epidermis. The epidermis will be present. The epidermis will
be the outermost row of small cells and the epidermis will be the
outermost row of small cells. On what side is the epidermis? It is on the
outside.
b. The bark is formed by a region of cells, known as the phloem
and phloem. What value does the bark have? The phloem
is (1) present and the bark is the outer bark.

c. Just beneath the cork is a region of large, thin
cells which is the phloem. The phloem is the outermost row of
large cells. The phloem is the outermost row of large cells.
The phloem is the outermost row of large cells. The phloem is the
outermost row of large cells. The phloem is the outermost row of
large cells. The phloem is the outermost row of large cells.

6. The phloem is the outermost row of large cells. The
phloem is the outermost row of large cells. The phloem is the
outermost row of large cells. The phloem is the outermost row of
large cells. The phloem is the outermost row of large cells. The
phloem is the outermost row of large cells. The phloem is the
outermost row of large cells. The phloem is the outermost row of
large cells. The phloem is the outermost row of large cells.

7. Within the cambium lies the phloem or wood. Each wood
cell is composed of an elementary. How do they compare with the
cells of the epidermis? (a) thickness of wall, (b) size of cell,
(c) shape of cell, (d) position of cell, (e) position of cell.
8. The radial walls of the phloem (transverse) in case of the
wood are composed of secondary cells. These will appear in the
wood. The wood is the outermost row of large cells. The wood is
the outermost row of large cells. The wood is the outermost row of
large cells. The wood is the outermost row of large cells. The
wood is the outermost row of large cells. The wood is the outermost
row of large cells. The wood is the outermost row of large cells.

9. Each annual ring of wood is composed of two very different
regions of secondary cells. These include the spring and summer
wood. The spring wood is the outermost row of large cells. The
summer wood is the outermost row of large cells. The spring wood
is the outermost row of large cells. The summer wood is the
outermost row of large cells. The spring wood is the outermost
row of large cells. The summer wood is the outermost row of
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wood is the outermost row of large cells. The summer wood is the
outermost row of large cells. The spring wood is the outermost
row of large cells. The summer wood is the outermost row of
large cells. The spring wood is the outermost row of large cells.

December 11, 1940

Your letter re arranging exchange of plant materials as a very

day. We would not be able to use any mounted specimens because we cannot remove them satisfactorily for poisoning. We can

use unmounted material and will be glad to send you whatever
 duplicates we have available as soon as we get the labels

It will be some little time before we have all the labels for last summer's material completed.

We purchase our herbarium paper through the C.P. Lesh paper

do many here in Indianapolis, but they have to re-order it for us so that I do not know the original source.

We will send you the family names for the species listed

look them up.

Sincerely yours,

December 11, 1940
 Dr. L. H. Shimmers
 Biology Building
 University of Wisconsin
 Madison, Wisconsin

Dear Dr. Shimmers:
 I have pondered over the specimen collected by Dr. H. C. Greene from wooded bluffs along the Wisconsin river 3 miles northeast of Marquette for some little time. I have tried comparison with every species I can think of even remotely resembling it and have come to the conclusion that your suggestion of October 30, viz. that it might be S. ulifolia is probably the nearest to the correct answer. I believe it is an aberrant form of that species. You will note that the main axis at the base of the inflorescence has been injured and this may be related to the irregularity in the inflorescence. Normally the heads are definitely secund. I have a specimen from Greene Co., Indiana which is a very close match for your specimen and I am quite certain that it is S. ulifolia.
 You could not run this specimen to S. ulifolia through any key but I believe that it is too aberrant to expect it to key out with ordinary keys.

I appreciate the privilege of working with this material and also the privilege of keeping the duplicate which you sent earlier. I am returning the material you sent on loan.
 Sincerely yours,

Ray C. Friesner

the specimen. 1947
 1. The variety is a part of the species of the *prostrata* in this
 species, *prostrata* with the name. *prostrata* in *prostrata*

12. After the egg cell is fertilized the embryo gives rise to a
 new sporophyte or young plant. The embryo sporophyte remains attached
 to the prothallium (gametophyte) for a while, but soon becomes inde-
 pendent in the soil and the sporophyte is attached to the prothallium
 while with prothallium showing the embryo sporophyte will attached
 later:

a. The primary root of the embryo sporophyte extending beyond
 the lower end of the prothallium.
 b. The primary leaf or branch. Note the prominent veins.
 c. The secondary region at the point of juncture of the primary
 root. This is the foot. Note its prominent
 position. 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Dear Dr. Cora: .MAMMISTING'S 5 25 10
 The specimens are the same as the ones you sent me. In preparing the detailed descriptions of the species of
 Solidago of West Virginia I find that I failed to get the
 following measurements of *S. harrisi*:
 1. Length of corolla lobes of the disc flowers
 2. Length of anthers of disc flowers
 3. Length of papillae bristles
 I wonder if you could spare a single head from one of your
 specimens of this species. Incidentally, this is the only
 species in your Solidago flora which I do not have in our
 herbarium and if you should get a chance in the future to
 collect a specimen for me, I would appreciate it greatly.

Sincerely yours,

Ray C. Friesner

RCF:eb

THE NEW YORK BOTANICAL GARDEN

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December 11, 1940

Dr. Ray C. Friesner
Butler University
Department of Botany
Indianapolis, Indiana

Dear Dr. Friesner:

Acknowledgement is made of the receipt of
your letter of December ninth.

Many thanks for the sample of bark of
Syringa vulgaris which you so kindly sent to Dr. Folkers
at Rahway. In a week or so I plan to attend our regular
meeting on insecticidal plants upthere and I shall make it
a point to ask them whether or not they need additional
material of lilac.

Sincerely yours,

B. A. Krukoff
B. A. Krukoff

Bak/Jd

Delavan, Wisconsin, Dec. 12, 1940

Dr. Ray C. Friesner,
Butler University,
Indianapolis, Indiana

Dear Dr. Friesner:

Thank you very much for yours 10th. I quite agree with you in your final conclusion in the matter that my material is nearer *S. deamii* than anything else, even though it may not fit that species in all particulars. I am sending you separately a sheet of #40034 which you may think more suggestive of *deamii* than my #43634. #40034 was growing on the wind-swept stony beaches under most discouraging conditions: tough going, as compared with #43634 which occupied a more sheltered position farther up the slope, and reflected it in its more luxuriant growth. I am including a sheet #43834 of *S. ohioensis* taken from the same spot as #40034; its starved, depauperate look as compared with the *ohioensis* you and I generally know, shows just what a hard battle it was having to make the grade. Thought you might like this additional sheet #40034 to file with #43634.

Fernald evidently did not connect my #43634 with his *deamii*. I sent the Gray Herb. material in the fall of 1934; Weatherby wrote Feb. 23, 1935, that Fernald did not know #43634 altho he thought he had himself collected something like it in northern Michigan. When Fernald later published *deamii* in 1936, he probably did not have my #43634 before him or he would have at least detected some resemblance.

I am taking the very great liberty of including 4 sheets in the *Euthamia* section. If you will kindly give me your identifications on them I will esteem it a very great favor, and it will help me a lot in getting straightened out on them.

Keep all the specimens, of course.

I notice Deam says in his Flora "This species (*S. racemosa* gillmanii) is highly variable in all parts and it is possible that the preceding species (*S. deamii*) should be included in it." With which conclusion, you and I are quite in agreement, I believe!

With very great thanks,

Sincerely yours,

S. C. Wadmond
S. C. Wadmond

EDWIN LINCOLN MOSELEY
PROFESSOR EMERITUS OF BIOLOGY
CURATOR OF UNIVERSITY MUSEUM
BOWLING GREEN, OHIO

Dec. 12, 1940

Ray C. Friesner, Butler Uni.

Dear Sir:- I have found
much of interest to me in
the Botanical Studies from
Vol. IV, which you kindly sent
me.

I had wondered about
the cause of asymmetrical
growth, and of course have
often noticed the greater
width of the rings in spurs
in the outer part of trees, especi-
ally trees like elm which produce
large spurs or prop roots. (over)

2

Your finding the four black
oaks to be of the same
age interested me. In some
instances I have found stumps
of white oaks not very far
apart, about three times
the age of your black oaks, but
apparently of the same
age.

yours truly,
E. L. Moseley.

forms in this case is a reflexed portion of the fruit containing, or
 bearing the sporophyte. The two sides of the fruit are separated by
 the median longitudinal suture with a list of the species with 7-10
 individuals and a list of those with true lateral. NEW YORK HERBARIUM
 FIVE TIMES.

3. The form of our form is a longitudinal suture and a reflexed
 of as a reflexed. The two sides of the fruit are separated by
 The two sides of the fruit are separated by the median longitudinal
 of a reflexed portion of the fruit containing, or bearing the sporophyte.
 opposite and 5 X smaller. Now
 4. The sporophyte. The sporophyte is a reflexed portion of the fruit
 most row of cells. Now in the sporophyte. Now in the sporophyte.
 5. Immediately opposite the sporophyte is a reflexed portion of the fruit
 with lateral walls. This is the sporophyte. Now in the sporophyte.
 is 1/2. Now is the sporophyte. Now in the sporophyte.
 6. The sporophyte. Now in the sporophyte. Now in the sporophyte.

December 13, 1940

4. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 opposite and 5 X smaller. Now
 5. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 most row of cells. Now in the sporophyte. Now in the sporophyte.
 6. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 with lateral walls. This is the sporophyte. Now in the sporophyte.
 is 1/2. Now is the sporophyte. Now in the sporophyte.
 7. The sporophyte. Now in the sporophyte. Now in the sporophyte.

Dr. Donovan B. Correll
 Botanical Museum
 Harvard University
 Cambridge, Massachusetts

Dear Dr. Correll:
 I am glad to send you under separate cover the back numbers
 of Volume 4 of our Botanical Studies. I have placed your
 name on our mailing list to receive these as they may appear.

I shall be glad to receive the specimens of Solidago and will
 do what I can toward determining them.
 Sincerely yours,
 Ray C. Friesner

4. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 opposite and 5 X smaller. Now
 5. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 most row of cells. Now in the sporophyte. Now in the sporophyte.
 6. The sporophyte. Now in the sporophyte. Now in the sporophyte.
 with lateral walls. This is the sporophyte. Now in the sporophyte.
 is 1/2. Now is the sporophyte. Now in the sporophyte.
 7. The sporophyte. Now in the sporophyte. Now in the sporophyte.

Foster, Warren Co., Ohio

Dec. 15, 1940.

Dr. Ray C. Friesner,
Botany Dept.,
Butler University,
Indianapolis, Ind.

Dear Dr. Friesner,

Last summer during my stay on Mount Shasta I collected a number of species of flowering plants. Of these I have a set of 69 duplicates with which I should like to initiate an exchange with you if you would like to get material from this area. Most of these species are listed in my Flora of Mount Shasta in a recent Am.Mid.Nat.

Very truly yours,

Wm. Bridge Cooke

Wm. Bridge Cooke

140

THE NEW YORK BOTANICAL GARDEN

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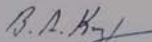
December 16, 1940

Dr. Ray C. Friesner
Butler University
Department of Botany
Indianapolis, Indiana

Dear Dr. Friesner:

Under a separate cover I am sending you
fruits of Guarea Bangii Rusby (Krukoff 11105). In
cleaning up one of my storage places we discovered that
we had neglected to distribute fruits together with sets
of botanical specimens.

Sincerely yours,



B. A. Krukoff

Bak/Jd

THE UNIVERSITY OF GEORGIA
DIVISION OF BIOLOGICAL SCIENCE
ATHENS, GEORGIA

BOTANY

December 17, 1940

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

I was pleased to receive the golden-rods which you identified for me. I was surprised to get them so soon and appreciate your prompt attention. I also appreciate having your Botanical Studies which I received under separate cover. I am much interested in your work, particularly since so much of it is in my own fields of taxonomy and ecology.

I am sorry not to be able to see you at Philadelphia but in as much as I will be at Bloomington for a few days, I may be able to make a trip up to Indianapolis. In the event I am able to do this, will attempt to contact you.

Sincerely yours,

Wilbur H. Duncan

Wilbur H. Duncan, Instructor
Department of Botany

WHD:kra

West Virginia University
MORGANTOWN, W. VA.
COLLEGE OF ARTS AND SCIENCES

DEPARTMENT OF BOTANY AND ZOOLOGY

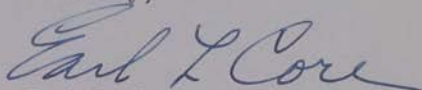
December 18, 1940

Dr. Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

I am sending you herewith a packet containing a few fragments which had broken off a sheet of Solidago Harrisii which you may retain for your collection. I hope you may be able to obtain from them the measurements you need, although they are not very good. I shall send you a better specimen as soon as I can get one.

Sincerely,



Earl L. Core
Curator of the Herbarium

ELC/eab

both sides agree upon examination of the spots. There will not be a
this means the spots in the proper place. DEAN & HENRI SHULTZ

4. Source of the spots showing the black spots of the
about 1900 (possibly 1901). This is shown as the
initial or reference spot. Compare with the reference spot as to
color, position with reference to veins etc. DEAN & HENRI SHULTZ

5. With the central spot and the contents of a vein and some in
order. Study under the high power and note:
a. How many cells do these spots have?
b. What color do they have?
c. How many cells are there in the wall? In the center wall of
uniform thickness throughout
d. Is there a thick to show spots?

6. How many cells are visible in each cell?
DEAN & HENRI SHULTZ
December 18, 1940

7. The reference spot to show the growing
condition. The reference spot is a red spot with a
after they have matured a red spot with a
from that reference spot will give the
each each cell of which bears a single spot
which the reference spot contains several
which has not yet matured into a single spot
which is a single spot with a single spot
which is a single spot with a single spot

Dear Dr. Cooke:
I have your letter regarding exchange of herbarium specimens
from the M. Shasta region. I shall be very glad to enter
into such an exchange relation with you. To that end I am
sending you a package containing 1200 specimens of plants
from Indiana and Maine. I shall be glad to consider my 1200
specimens as an even trade for your 60, in case that is agreeable
to you.

Specimens in attached herbarium leaf. How does the leaf
on the herbarium leaf? Does the information mean on the upper or lower
face? I have a leaf which especially notes the upper
character of the margin of the leaf in addition to the venation pattern.
Study a single character of leaf on the herbarium leaf under the
hand lens. Observe the venation, or low power of the compound microscope.
How many cells of vein each in one distast? There are they formed with
reference to leaf (distast)? Can you make out any of the contents of the
vein? Observe the venation side of the attached portion and note whether
there are any minute out of line-like structures on the venation side
of the leaf. DEAN & HENRI SHULTZ

8. Obtain a prepared and stained slide of a vertical section through
the attached portion of the leaf. Study with low power and note:
a. The position of the veins with reference to the distance of the
leaf.
b. Compare the attached and detached portions of the leaf with
reference to thickness (width in section) of leaf and size of cells.
c. Earlier lines - stained structures on the opposite side of the
leaf. These are the vascular. DEAN & HENRI SHULTZ

THE NUMBER AND POSITION OF THE VEINS AND TISSUE IN THE SECTION. Compare
to drawing 7 and show by a line (it may need to be drawn) the points of
meeting necessary to secure the section straight in paragraph 8.
DEAN & HENRI SHULTZ

9. Study a single character of leaf on the herbarium leaf under the
hand lens. Observe the venation, or low power of the compound microscope.
How many cells of vein each in one distast? There are they formed with
reference to leaf (distast)? Can you make out any of the contents of the
vein? Observe the venation side of the attached portion and note whether
there are any minute out of line-like structures on the venation side
of the leaf. DEAN & HENRI SHULTZ

10. Study a single character of leaf on the herbarium leaf under the
hand lens. Observe the venation, or low power of the compound microscope.
How many cells of vein each in one distast? There are they formed with
reference to leaf (distast)? Can you make out any of the contents of the
vein? Observe the venation side of the attached portion and note whether
there are any minute out of line-like structures on the venation side
of the leaf. DEAN & HENRI SHULTZ

These are the specimens of *Solidago nemoralis* (L.) Greene, which I have been studying. I have been studying them for some time and I have been very much interested in them. I have been studying them for some time and I have been very much interested in them. I have been studying them for some time and I have been very much interested in them.

The specimens are the only ones I have seen. They are very much like the ones I have seen. They are very much like the ones I have seen. They are very much like the ones I have seen. They are very much like the ones I have seen. They are very much like the ones I have seen.

December 19, 1940
Dear Mr. Wadmond:

I have been studying the specimens of *Solidago nemoralis* (L.) Greene, which I have been studying. I have been studying them for some time and I have been very much interested in them. I have been studying them for some time and I have been very much interested in them. I have been studying them for some time and I have been very much interested in them.

My work of which I spoke in my letter of yesterday flattened out like the distant hills do as one gets nearer and consequently I have found the time to go over the specimens of *Solidago* you sent a few days ago. There certainly can be no question about the specimens of *S. nemoralis* and I am very grateful to you for them. I am pleased to get the specimen of *S. ohioensis* especially because of the extreme it illustrates.

I report on the specimens of the *Euthamia* group as follows:
41938 *Solidago remota* (Greene) Bush. Specimen is typical except that leaves are usually ascending whereas these are spreading and reflexed. I have specimens collected from the same place as yours and some show the ascending character while others do not. Leaf margins are usually more noticeably scabrous than these.

21628 *Solidago graminifolia* var. *nuttallii* (Greene) Fern.

24253 *S. g.* var. *nuttallii*

14903 *S. graminifolia* (L.) Salisb.

This specimen has a slight leaning toward the var. *nuttallii*, but the pedicels are so little hirtellous and the leaves so nearly glabrous except for lower side of veins and the scabrous margins that I would put it with the species.

I appreciate very greatly the privilege of seeing and keeping these specimens.

Sincerely yours,

Ray C. Friesner

CLARK UNIVERSITY
WORCESTER, MASSACHUSETTS

DEPARTMENT OF BIOLOGY

December 23, 1940

Dr. Ray C. Friesner
Dept. of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

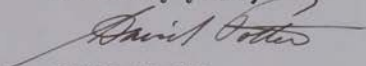
Pardon my delay inacknowledging the receipt of the package of 132 specimens which you recently sent to me.

I was very glad to receive the same, and find they do not duplicate my material.

I am preparing an exchange set for you and hope to mail them after the first of the year.

I plan now to be in Philadelphia for the science meetings and may possibly see you there. Thank you again and accept my best wishes for the coming new year.

Sincerely yours,



DAVID POTTER
PROFESSOR OF BIOLOGY
CLARK UNIVERSITY

DP:W

Delavan, Wisconsin, Dec. 24, 1940

Dr. Ray C. Friesner,
Butler University,
Indianapolis, Indiana

Dear Dr. Friesner,

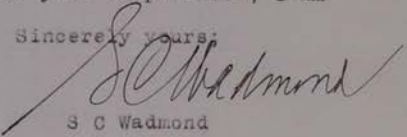
One begins to realize what a load our postal system is carrying at this time when it is noticed that your letter postmarked the 19th did not reach me until late yesterday afternoon, the 23rd!

Thank you very much for the identifications. I was pleased to discover that my interpretation of the Euthamia subsection agreed pretty closely with your determinations, which gave me much encouragement.

Sometime - on your Maine vacations or otherwise - if you should run upon a perfectly good specimen of Solidago uliginosa, I wish you would lay it by for me. I am well convinced that not a single sheet in my herb, so labeled, is correctly allocated. Is there not something in Wisconsin that I can get for you this coming season, in Solidagos or otherwise?

With my most cordial wishes for a happy and profitable New Year and deep appreciation of your helpfulness, I am

Sincerely yours;



S. C. Wadmond

MERCK & CO. INC.

RAHWAY, N. J.

RESEARCH LABORATORY

December 26, 1940

Professor Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Professor Friesner:

I wish to acknowledge the sample of
bark from lilac bushes which you sent to us.
Your cooperation in sending us this material is
greatly appreciated.

Very truly yours,



Karl Folkers

KF/NL

С. С. С. Р.

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Тел. 3-98-10

Botany Department,
Butler University
Indianapolis, Indiana
U S A

30/YII-40.

Gentlemen,

Appreciating very much our exchange relations we have been sending you regularly our publications, to our great regret we have not received any of yours for a considerable time.

Kindly let us know wheter you consider advisable to continue the exchange.

Yours very truly

Chief, Book Exchange Department

Indenberg /Loevenberg/

CHARLESTON MTS. FLORA

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Distributed by I. W. Clokey

***Thalictrum Fendleri* Engelm.**

Clark Canyon. Damp, gravelly soil by stream.
Yellow pine belt. Alt. 2600 m. July 12, 1936.

Coll.: I. W. Clokey (7087)

Hunt Institute for Botanical Documentation

"What I Think About Eugenics"

Henry H. Goddard, Psychologist,
Ohio State University.

"No one who looks about and sees the mass of incompetents living in poverty, disease, filth, and squalor, and who appreciates the fact that most of this is due to an inherited incapacity can fail to recognize that eugenics is the fundamental problem of the human race today. Many see this but have no courage to attack the problem, because it seems hopeless. All the more honor to those who are attacking it."

Sir Horace Plunkett,
Plunkett House, Dublin.

"I fully admit that there is no more fundamental contribution to our civilization than that which the American Eugenics Society is so influentially and ably promoting."

Dr. R. J. Sprague,
Dean, Rollins College.

"Eugenics is the only promising program in sight for eliminating the weak chromosomes and combining the strong ones for the development of mankind."

"The comprehension and reasonable adoption of it by the masses of the people will lead to improvement of human qualities and the increase of human happiness in a natural and permanent way."

Dr. Walter D. Scott,
President of Northwestern University.

"In order that human sympathy may promote human welfare it must be directed by an increasing consideration for the science of eugenics."

Chas. Harvey Rowell, editor,
Berkeley, California.

"The only asset of mankind is man. If we are to continue to breed men worse, there is no hope of making humanity better."

Dr. Carl E. Seashore, Dean,
Graduate College, State University of Iowa.

"It is my opinion that eugenics as a subject is being absorbed by the various biological sciences. Much of the impetus for this came from the Eugenics Society. The logical sequence to eugenics is eubionics and if we keep those two concepts alive in the minds of scientific and social workers, eubionics will permeate the social sciences as eugenics now permeates the genetic sciences."

Dr. A. Franklin Shull,
University of Michigan.

"A eugenics program based on sound biological principles can be made of vital concern to all humanity."

Dr. George E. Searley,
President of Birmingham-Southern College.

"The study of eugenics opens up greater possibilities for the development and improvement of the human race."

Rev. George Stewart,
New York City.

"All modern methods for the conservation and protection of human life are defeating themselves unless through eugenics the human race can shut off the increasing stream of the unfit and the incompetent."

Bishop Walter T. Sumner, Episcopal Church,
Portland, Oregon.

"Science, with its marvelous contributions to our sum total of knowledge, has yet to meet the challenge to give us what the world needs more than all other facts combined, how we can improve our most precious asset—human life. Why will not scientists, in their commendable zeal for discovery, turn their faces toward the study of how we can insure to the world that a larger percentage of humankind shall be well born, with a good fighting chance for physical and moral supremacy so far as discoverable facts and safeguards will enable us? No problem is more worthy of our time and attention."

Prof. E. M. East, Geneticist,
Biology Institution, Harvard University.

"The increase and the diffusion of knowledge concerning the role of heredity in determining human characteristics are among the most important duties of scientific men. Sociology cannot progress without the genetic point of view. It seems a sad commentary on humanity that genetic discoveries should be used solely for the improvement of domestic animals and cultivated plants instead of for the improvement of the human race."

Prof. L. M. Terman,
Stanford University.

"It is more important for man to acquire control over his biological evolution than to capture the energy of the atom,—and it will probably be far easier. The ordinary social and political issues which engross mankind are of trivial importance in comparison with the issues which relate to eugenics."

Mr. A. E. Wiggens, Author,
New York City.

"I don't believe that any civilization can survive unless it provides for and encourages the birth of three or four children per family among those stocks that are above the average in intelligence, health, and character. This in a nutshell is the program of positive eugenics and without a eugenic policy as big and insistent as its social, economic and political policies as a civilization can permanently endure."

Dr. George B. Cotten,
President of Colgate University.

"Personally I am very much interested in the subject of eugenics, because I believe it is the most important subject we have before us at the present time. All our other subjects must inevitably depend upon it for we cannot advance unless we have the right kind of stock to advance them."

Dr. W. E. Castle,
Harvard University.

"Eugenics is, like freedom, an ideal which in the abstract everyone must applaud, but which in the concrete is difficult of realization except in a qualified form. Just as political freedom, where it has been most fully realized, has been attained by a long series of struggles and experiments, most of them failures, so eugenics, if in a measure it is to succeed, is likely to do so only by the slow method of trial and error."

"Few are those who will say that freedom, because difficult of attainment, should not be striven after; and racial improvement, though not at once or fully to be realized, is unendingly to be sought. An eternal vigilance is the price of liberty, so eugenic measures in every generation will be the price of improvement in the next."

Dr. Francis Clark Wood,
University Hospital, Philadelphia, Pa.

"From a medical point of view, eugenics is becoming more and more of a necessity. The bringing into the world of feeble-minded children who should never have been born, and the subsequent treatment of them throughout their useless, and in many cases harmful lives, is one of the biggest and most unpleasant burdens we have to carry."

Prof. Francis B. Sumner,
University of California.

"That the regulation of the quantity and quality of our future population is mankind's greatest problem in applied science is a proposition too nearly self-evident to demand serious discussion. Whatever we may think of their programs of action or of the probability of their ultimate success, the eugenics and birth control organizations are certainly grappling with the most fundamental issues which civilization faces."

Dr. Friesner,

At the time Mr. Esterline, Chairman of the Speakers Committee for the Indiana Nurserymen's Assn., spoke to me about addressing the State meeting, inquiring about my fee, I informed him that there would be no charge, and if he at any time had any plants which he cared to give to Butler University Botanical I would be much pleased. He seemed to appreciate my attitude in the matter and assured me that he would donate some plants to the Botanical Garden, and suggested that I send him a want list. This was done some time ago.

I now wish to inform you that nine plants of much value were delivered to the Botanical Garden last Saturday. These made a valuable contribution to the Garden for of course we did not have on hand a specimen of any of these.

Other nurseries have promised to donate plants and these will be secured as soon as I can make arrangements.

I would suggest that a letter of appreciation be sent to Mr. M. B. Esterline, General Manager, Eagle Creek Nursery Co., Inc., New Augusta, Indiana.

Sincerely,


Scott McCoy

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The Elders

1940	1941	1942
Feb., May, Aug., Nov.	Mch., June, Sept., Dec.	Jan., Apr., July, Oct.
R. V. Warren	/ C. C. Kerlin	W. H. Miller
/ Fred Meinzer	J. C. Wright	H. C. Balcom
/ J. Paul Jones	/ C. E. Denny	/ A. C. Hostedler

The Deacons

1940	1941	1942
Riley Purvis	Clyde Mays	Chester Imbler
/ Harry Kern	/ D. L. Crume	L. T. Boyd
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Custodian Harley Altom

Trustees

Dr. E. R. Clarke	L. T. Boyd	/ D. L. Crume
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Enter into His gates with thanksgiving
And into His courts with praise. Ps. 100:4

Main St. Christian Church Kokomo, Indiana

/ JOHN M. HORNE
Pastor



MRS. MARGARET McCOOL
Choir Director

/ AGNES LEE SMITH
Organist

/ MRS. LALLA LAYMON
Orchestra

Let your light so shine that men may see your good works
and glorify your Father who is in heaven. Matt. 5:16

SUNDAY MORNING, MAY 26th, 1940

10:40 A. M.

"BUTLER DAY"

Prelude—Andante Hollins

Hymn 195—Stand Up for Jesus

Lord's Prayer and Response

Responsive Reading of Scripture—Selection 12

Morning Prayer The Pastor

Hymn by the Congregation 16

Recognition Service for High School Graduates

Anthem—The Lord is My Light H. W. Parker

Sermon—Pres. D. S. Robinson, Butler University

Invitation 407

Communion 272 all verses

Offertory—Legend Crawford
Violin Solo, Mrs. Layman

Benediction—Benedictus—

Postlude—Spring Song Hollins

ANNOUNCEMENTS

President Daniel Sommers Robinson, of Butler University is our guest preacher today. The Main St. Christian Church gives cordial welcome to our distinguished guest. The Butler Alumni of our church and of the community join in the hearty greeting. This church has been blessed during the past fifty years and more by the membership of Butler Alumni.

Butler University is one of the largest educational institutions among the Disciples of Christ. We all take pride in the recent growth of this University on Fairview Campus in North Indianapolis. The next new building, to be added to the already beautiful group, will be the new Chapel of the College of Religion. Funds are now in hand for its erection.

THE BUTLER COLLEGE CHOIR

Under the direction of Mr. Lautner the Butler College Choir will present a full program in our church auditorium tonight at 7:30. We count ourselves very fortunate in having this unusual musical organization. This Choir has made many appearances, far and near, and always pleases its audiences. It is composed of 80 young people whose voice training is being directed by the Music Department of the University. We anticipate a delightful evening of sacred music. The program will be especially attractive and interesting to our young people. A cordial invitation is given to everybody to join in the welcome that we may give to our College Choir.

HIGH SCHOOL GRADUATES

We offer our congratulations and our word of recognition to the High School Graduates today. Our blessing and best wishes to all the graduates: John William Devore, Janet Nelson, Maxine Klingerman, Goldie Khrin, Dorothea Phillips, Betty Lou Woolridge, Anabelle Alexander, Betty Reagan, Thelma Wallace, John Workman, Ronald Branch, Max Allison, Robert Hines, Norman Newlon, Jack Eads, Robert Roach, Robert Martin, Charles Mumaw and Philip Meinzer.

CHILDREN'S DAY

Next Sunday, June 2nd, is Children's Day. Our children will give a program during the school hour. We have a goal of \$150.00 apportioned among the classes and departments. Let no one fail to make the assignment.

BUILDER'S CLASS

The date of June 4th has been set for the 2 plays which will be given by 2 casts made up from the membership of the Builder's Class.

did not go at night

My Dear Doctors! -

In P. O. - Been to
Library - Permit me to
put on paper - a feeble

attempt to again. - Thank
you - for this rare opportunity -
and all former tips - favors -
- eds. - rides - letters, literature -
- too numerous to mention -
Sincerely Chas. M.

CHARLES M. EK.
1812 N. PURDUM STREET.
KOKOMO, INDIANA.

My Dear Dr. Friesner: -

I was in considerable of a "sweat" concerning getting over to Muncie. Dean had told me on Oct. 15, to write to Lafayette. I wrote to Dr. Cummins who took me to White & Pulaski Co. July 30 - a splendid fellow. But he was not planning to attend. and referred me to A. T. Guard - (on the program) - unknown to me.

When I first read your fine offer of Oct. 28, I didn't see how I could let you drive over 120 miles, just for me. Then when Dr. Dean sent me the program (to be returned) + I saw you + Mrs. Friesner on for two parts - + realizing that it would mean no less than $2\frac{1}{2}$ hrs. of your

valuable time² + energy - - - I
finally chose to let Prof. Guord drive
5-7 miles farther + pick me up. I
had one letter to him telling him
to reach me - Sts. - railroads, etc.
It was Max who suggested that
Purdue drive 10-15 mi. - further
rather than you - 120-125 miles.
+ that I meet them on S. W.
Corner of Square. -

The Purdue car has to return
another ~~another~~ route - So
I shall be glad to go back with
you across to Road 31 - w. sawyer⁴
+ get a Bus. - - unless you
too are planning other routes.

I surely hope you are chosen
Sat. to edit the New Co. Records -
v. l. if you want the Herculean job -
+ have the time - I have 156 such records,
a lot - fully $\frac{1}{2}$, which you have duplicated.
A number of others are in my 1938-39

collections. I³ have omitted the ^{from EK} (n.d.)
doubtful species or some where specimens
were poor. - &c. - & all have been checked
with Deane's. For example - I found
around Lafayette, May 17-18-1940. What
D.D. calls *Sophia incisa* - & or *S. inter-*
media. The Flora has put all the
variations into the old Tansy Must-
ard, now called *Oreocarya*
brachycarpa, - tho it is different
from T. Mustard I've seen here; - it is
glandular - pubescent - the pods &
pedicels more erect. Page 509. Deane
has it from Tipton Co. - says a ²/₃
feress he's seen this glandular form.
To me, - this is the most valuable
feature of Deane's Flora - the grouping
of the variations and intermediate
forms and disregarding the various
varietal forms.

Think I'll bring along some
surplus specimens of *Aegilops glandica*.

and some other "Species new to Ind." -
including *Spermolepis patens* + *Aster*
anethystinus. - 1940 finds

Dr. Deam in his brief letter of
Nov. 7. - says he has a room for me
at Delaware Hotel - Some rooming
house at $\frac{1}{2}$ the "price" would serve
as well.

Trust weather is clear. - As
I am scribbling - Mon. P.M. it is
getting colder fast.

Have all of Dr. Patzger's packages
ready next time you are here - & have
room - quite a nice collection - many
duplicates - all designed for Class Use
and not for specimens - many too
long - & often tangled - but fitted for
Class use at. - so I judge. There's
plenty in many cases - & then some.

Rec'd 2 nice letters from Dr. Krukoff.
In all have sent them 3 times, Solanum,
one *Physalis* - & one lilac bark. - The last

from EK
(n.d.)

time I gathered them (Nov. 3-4) 2 by
boxes Horse Nettle berries - all degrees
of ripeness - Gross wt. - 20½ lbs. They
are getting good results from it - but few
from ground-cherry - Also, ^{recd} 2 small
packages of Publications. - On this basis
there's some S. A. specimens coming to
you. - I got a big Kief gathering &
sending these. Told them about Datura^a.
Stomachum - but to-date no further
wants. - The Dr. does want me to help
help in 1941 - with toxic plants of Ind.
These toxic plants - I'll need to discuss
or rather learn about - what species -
etc. - from you. - Plenty of time for
1940 is ended. - a very sad fact. -
Every time I was out in field
Oct. - Nov. - I bid farewell to
the green in the trees - weeds - plants
The year 1940 was as good to me
as 1939 or better. - considering that

6.
wonderful 2 days in the South
Counties - + I think 1 extra day with.
After this week, I'll begin on
the Summer collections - mainly on
the new species - 100 here & in N. +
50 in Harrison - Crawford Co. - These latter
I'll just study as to manuals - the others
I plan to describe as I've done with
all my past collections.

I trust you are pleased
with the arrangements and
glad you'll ^{get} 2-3 more hrs. rest -
sleep. I can come back part of the
way with you - if convenient.

With Best Wishes for the
Week-end - and for the Future.

Sincerely, Yours
Charles M. Ek

Sunday Night:-

Dr. Friesner and Dr. Potyger:-

My Very Dear Friends! —

Lost of a Composite Letter.

I have never said a thing in any letter to one that the other could not have said. I came back Sat. P.M. with a feeling of great satisfaction. A profitable meeting in every respect. What a fine lot of scientific Friends I have! Truly — Life with me began at 60 — (not 40 as a popular book said). Dean, Purdue — Butler: — Its not many old paupers that can Pau handle three institutions, all in 2 days! I hope and know that all of these that have contributed so much to my comfort and Happiness have realized the truth of that beautiful Text: — "It

is more Blessed² to Give than to
Receive

And, lest I forget - it works both
ways. - The only way I can give is
by services, - by all I have, - specimens
and the information that goes with them.
You can not realize what a joy it has
been to collect these that you took Sat.

Objective — By-Product —

~~For~~ If my object was gross-sedge, but
there was always by-products. However
I stressed these. - And I learned too. -
I think I have labeled all the above correctly.
I went over (I think) all the Coriaces.
With the big 2-vol. Mackenzie. However,
as in the past, - I welcome corrections. This
applies, too, to the 3 boxes New Co. Records.
Now out any poor specimens as the Portulaca.

These specimens ^(the 1st box) were not collected as
specimens but for class use. - Hence in most
cases they are too long - are tangled - too mature

or immature. ³ They are in large quantities in many species - so that little Core need be used in saving. Sorry I did not collect *Sorghastrum* & the *Andropogons* - and *Sporobolus aspera* - I planned to - - - - but didn't! also *Muhlenbergia umbrosa* (old name) There were 2-3-4 ~~Corex~~ *Corex* I could not get - too far away - my trustless glands are no longer equal to a 15-15 mile trip.

The last semester when you have classes in grasses, etc. - you will not want for materials - Students need not be careful as in mounted specimens. -

There has been no attempt whatever not even any idea of returning to you what you have done for me. Repeat that Text again... That certainly was a pleasure to give Drs. Neethomas, Kriebel, & the Earlham Prof. - those species new to Ind. So sorry I didn't know about it before I had gone thru for C. records. - There's 1944. - Do I hope.

When I got home Sat. - among my

mail was a 2-page letter from Dr.
Krukoff - & - See - - Pst - Siberia -
a check for \$10.00 - This check virtually
belongs to you - I was doing some work
you had no time for - - so you could
get your S. trips done sooner - - Well
it's a triangle - N.Y. - Friesner - & K.
Krukoff giving you specimens - you
helping me in xyz ways - me collecting 5
times for N.Y. The good Dr. wants some
apples - *Malus pomifera* - Hedge-apples -
Too late Sat. - So today started out west -
- wheeled 8-9 miles - All were either cut
off or trimmed but luckily I located 1
big tree - 2-3 bushels - but he wants a
ton - a ton - 2000 lbs. - - - I'll never
get that much in 1940. - I know of some
N. - N.E. - N.W. - 3-8 mi. away - (3-5 yrs. ago) + I'll
see him. - He mentioned mentioned about
my expenses - a previous letter and I told
him plainly that I could accept nothing.
Said Dr. Falker was glad I sent an apple
freight (20's lbs. approx) - They seem to be getting
good results. - The Physalis yielded them little.

So I'll be busy for this week - I
 hope Dr. Kruckhoff + Co - continue to
 give you some S.A. specimens. - He
 said most of their plants for experiment
 come from S.A. - &c. - but they wanted
 to try Ind. plants - & that - 1941
 would depend upon me for some
 with toxic properties - with your
 help - (if I'm here) I trust to be of
 service to them - with no \$
 consideration in view - I
 hope these interests will keep me
 alive.

I hope Dr. Gotzger (Dr. Friesner^{to})
 have good between the lines. -

That is - - - - - Next summer
 may be - - we can go South
 again. - or better or as good -
 to Lake - Porter Co - or Steuben Co.
 Co - + take 2 dogs - or 1 night

away - That would be grand -
glorious - Then I'll be a bum
again - a hobo - permitting you
to pay for gasoline - - -

Again Thanks -

Best Wishes. - - -

Cheerio -

Sincerely Yours

C. M. McK.

N.A.R. No Answer Required,
except postal when you plan to come
N. again - - - C.M.

Ralph M. Kuehler
Bedford, Ind

To -

Roy C. Friesner
Butler University
Indianapolis
Indiana

