



Hunt Institute for Botanical Documentation
5th Floor, Hunt Library
Carnegie Mellon University
4909 Frew Street
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

Usage guidelines

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

Statement on harmful and offensive content

The Hunt Institute Archives contains hundreds of thousands of pages of historical content, writing and images, created by thousands of individuals connected to the botanical sciences. Due to the wide range of time and social context in which these materials were created, some of the collections contain material that reflect outdated, biased, offensive and possibly violent views, opinions and actions. The Hunt Institute for Botanical Documentation does not endorse the views expressed in these materials, which are inconsistent with our dedication to creating an inclusive, accessible and anti-discriminatory research environment. Archival records are historical documents, and the Hunt Institute keeps such records unaltered to maintain their integrity and to foster accountability for the actions and views of the collections' creators.

Many of the historical collections in the Hunt Institute Archives contain personal correspondence, notes, recollections and opinions, which may contain language, ideas or stereotypes that are offensive or harmful to others. These collections are maintained as records of the individuals involved and do not reflect the views or values of the Hunt Institute for Botanical Documentation or those of Carnegie Mellon University.

About the Institute

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.

January 4, 1943

Mr. Charles H. Ek
1812 S. Purdue Street
Kokomo, Indiana

Dear Mr. Ek:

The boxes of specimens awaited me this morning upon return from vacation. Things are pretty well stacked up on my desk, so it will be a few days before I can get started on them. We certainly appreciate them greatly.

Your letter with data on sedges also awaited me this morning. I am very grateful to you for your work in determining them for us. I note the usual percentage of new county records. These will come in handy for the 1943 report which will probably be slim anyway--not if you can help it--I know. My present gasoline ration limits me to 8 gallons per week which leaves very little for field trips so I may be able to get more for the summer months.

It may be that the 'Service' will be of real benefit to Max. I hope so, for he deserves it.

As soon as I have gone through your latest shipment of plants, I will make up the county books for you and also send you a list of the species we have sent out in exchange from your material. I will also make up for you an "Exchange Guide" so you will know when to make up sets and when not. Your time and efforts will go farther, then.

Appreciating more than I can tell you the work you have done for us and wishing you a most profitable year in storing up treasure for yourself where moth and rust do not consume, I remain

Sincerely yours,

Ray C. Friesner

RCF:mb

Kokomo. Ind. - Jan'y 5, - 1843, ^{Stone EK}
1812 No - Purdue St. -

My dear Dr. Friesner.

Your very nice letter rec'd today. I
hasten to reply because of some errors I
made. - You will remember that I was
dubious - in letters - & vocally about Oxalis.
Our old conceptions of Phloxids had to be greatly
modified. - so that only the Flora key could be
used - or principally that. In some way, in
starting on Oxalis 1840 - & '41 - I got in some
~~way~~ ^{manner} same idea about Oxalis. - The key
words - "cymose + umbellat" - as applied to
Oxalis - were never plain, (to me) But the
old beans failed to click and register - for
if I had read more carefully - the rest of
key - about the pedicels - deflexa or not - &c. - & if
I had looked at Ill. in B-B. Gray - & description
I could not have fallen into such a
blunder - & acted so stupidly. In six yrs.
have not committed such a crime!

Yesterday I found 7 sheets among the
loose boxes - 4 were correct, - some form
of *O. europaea*; - These were tall, light green,

the pedicels not deflexed. - rather loosely
flowered. The other 3 were wrong - as I
had expected - labeled *O. europaea* + are
really *O. stricta* - the pedicels deflexed but
Capsules erect.

Usually I exhaust every manual + esp
literature I have - even though I'm sure
at the beginning - + often wait until several
colonies - sometimes a yr. or two - before de-
ciding. So it seems that those labeled *O.*
europaea. - plants darker green - low - only
10 - 25 cm. tall - more densely flowered, - leaves
smaller - more wifled - often running
up to stalks, pedicels reflexed - (or some reflexed) -----
these are *Oxalis stricta*. Of the 29 new co.
records in the 30 boxes - Oct 31 - 4 were *O. europaea*.
- i. e. - so labeled. - There may be *O. stricta*.
I hope you caught the error. - Deane will
have to revise his opinion of me - + you too. - :-
However it will take only a short time to go over
all of them + 1241 - two - from your herbarium
- all are together. - This may give 2 less records
(Brown-Mexico co.)

Your work is so exceedingly heavy - I regret
that such amateurish blunders occurred.

The old philosopher - Josh Billings
 once said that "Success don't
 consist in never makin mistakes -
 it ⁱⁿ (does) consist of not makin
 the same mistake twice (twice)"

My angle notes in sheets indicate that
 usually I make an exhaustive study -
 - but I was surely superficial in Alexis -
 - Maybe that was a remnant of poor
 old Dock Andrews... I surely hope
 that after I pass out, - the Revised Flora
 will not record as many guesses & errors
 did with him - at that. - I always have
 revered Andrews - Personally - he was a good
 scout - & always said I was one of his best
 students.

Have been going over those Bot. Studies
 of Butler - what I have - a dozen or more -
 - fallen studies - your tree studies, re - fruits
 a lot I can partly grasp - some I can't -
 - Also "Science" & Sci. Monthly - - what a
~~the~~ wealth of ideas - facts - & c. - those
 articles that are concrete & elementary

4.
Dr. Petzger sent me a copy of School
Science + Math. - with 2 of his
contributions. - I'll have to bombard
him with a Agrib. - (letter) -

Thank you very much
for your Letters. - Take your time. -
- as to me, - in regard to 6 boxes. -

Best Wishes -

Very Sincerely

Yours

Chas. M. El.

UNIVERSITY OF KENTUCKY



LEXINGTON

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF BOTANY

January 8, 1943.

Doctor Ray C. Friesner,
Department of Botany,
Butler University,
Indianapolis, Ind.,

My dear Doctor Friesner:

I have three students in Systematic Botany and I am going to use your two articles, one on ferns and the other on Solidago. Will you please send me three copies of each with bill for same?

Student enrolment is about half what it was the first quarter and I am going to have more time to devote to my work. We have about a 1000 sheets (mounted) to be inserted in herbarium and this is a big job in itself and will have a couple of good students to help.

There is absolutely no hurry for a return in the exchange and if it takes you several years to get them back it is OK with me. From now on most of the plants received will go into my own collection since the univ does not seem to care much about a collection.

Yours very sincerely,

Frank T. McFarland

Frank T. McFarland,
Professor of Botany and
Curator of the Herbarium.

19-0001 (STANDARD FORM NO. 64)

January 11, 1943

Mr. Charles M. Ek
1812 S. Tardum Street,
Kokomo, Indiana

Dear Mr. Ek:

Your letter of the 8th is at hand. I think that I caught all of the ones you refer to regarding *Oxalis*. I have not liked Dean's key quite so well as one I have constructed myself based upon his name changes. I have a concept of the difference between the stricta and the europaea group and spotted your errors as I went over the material.

I have gone through the sedges and correlated those you returned with what I had here. They made a nice bunch for exchange. I especially want to commend your foresight in keeping them in the same order as that used when I sent them.

The *Juncus canadensis* which was too immature I think is quite right so far as your determination is concerned. I found I had a dozen or more, some of which were much better than the one I sent to you. I kept one for the herbarium but discarded the others rather than send out when immature.

It may be some little time before I will get to the last shipment of plants for I have several collections of *Goldenrods* that have come in to be determined and some of the collectors are anxious to get their returns as soon as possible. Then, too, we are approaching the end of the semester when exams and now starting for the second semester prevents anything else for a while.

I appreciate greatly the fine work you are doing.

Sincerely yours,

Ray C. Friessner

SCF:mb

Mr. Charles C. Deam
Bluffton, Indiana

January 11, 1943

Mr. Ralph Kriebel
Soil Conservation Service
Lafayette, Indiana

Dear Mr. Kriebel:

I have been asked by Mrs. W. E. Sinclair, State Conservation
Chairman of the Garden Clubs of Indiana, to write an article
not to exceed 500 words on the subject "Areas in Indiana that
should be made plant sanctuaries".

I am writing to ask whether you would make a short list of areas
which you have run across and which might be so used. I realize
the danger of a thing like this from the standpoint of having it
overrun by certain types of botanically irresponsible individuals
and hence will need to handle the matter accordingly.

Sincerely yours,

Ray C. Priesnor

RCF:mb

at all times with the same and with the same (the same) ...
which will be published in his book and will be very well ...
after all the same

It will be very glad to see the same and will be glad to see ...
the same and will be glad to see the same ...
the same and will be glad to see the same ...

January 12, 1943

Dr. Frank T. McFarland
Department of Botany
University of Kentucky
Lexington, Kentucky

Dear Dr. McFarland:

Under separate cover I am glad to send you the papers mentioned
in your letter of the 8th. As an afterthought I am also sending
you four copies of the paper on Solidago in West Virginia. I
send these because this paper gives more details of description
for each species since I have found that these exact measurements,
made under the binocular microscope with a Bogen measuring
slide clipped on the stage, often help one to a decision when a
close-up would otherwise be the case.

There has been some nomenclatorial change since the keys came
out and I am, therefore, sending you a list of these changes so
each one can write them into his copy. In the case of new
species not included in the key, I have cited literature references.

I shall be sending you some ferns before long. I enclose an extra
label found in the plants you recently sent me.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 12, 1943

Mr. C. E. Ranes
Schoolcraft, Michigan

Dear Mr. Ranes:

I think it might be well if you would collect extensively within what may be the speciosa group because more detailed study may reveal that you have more than one taxonomic entity involved. I have given up trying to maintain speciosa var. angustata because it seems impossible to draw any clear lines of distinction. Your note on fragrance may help in separating them but we will need to find some correlated differences of a structural character because fragrance is too elusive to have good taxonomic value.

Your conclusion that no. 5442 is S. glaberrima may be correct. I shall go back over it again as soon as it comes through the counting process where it is now and so too difficult to locate at this moment.

I do not believe that Deam's difference regarding stolons of glaberrima and juncos will help to be certain. Both of them are stoloniferous and both commonly bear leafy sterile shoots. The width and shape of lower cauline and basal leaves are the only characters of real help. Typical glaberrima from farther west has such narrow leaves that there is little difficulty in being reasonably certain of determinations. I have been using the following differentiation:

Basal and lower cauline leaves linear-lanceolate to linear-oblan-
ceolate, 7-15 mm wide, definitely triple-nerved... S. glaberrima

Basal and lower cauline leaves elliptic-lanceolate to ovate-lanceo-
late, more than 15 mm wide, not or only obscurely triple-nerved...
...S. juncos

I have been so busy that I have not had a chance to return your other specimens but will do so soon. I felt that it was more important that you have my conclusions than the specimens.

Sincerely yours,

Ray C. Friesner

RCF:ub

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Federal Building
Lafayette, Indiana
January 16, 1943

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner,

I have your letter relative to a list of places which might be used as plant sanctuaries.

I know you fully realize the danger of listing such areas from the standpoint of unscrupulous collectors. I have always lamented that we do not have more museum pieces of floral communities that have a reasonably sure chance of not being much molested in the future.

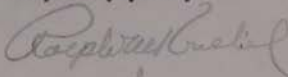
I am sure you can make an appeal for such a thing and name a baker's dozen places without my help. Nearly every county has spots which could very well be left alone. Among the places which I have often thought are the following:

1. McBride's Bluff (also of interest geologically) in Martin County.
2. Two dry prairie areas in Tippecanoe County. One on Big Wea Creek about four miles south of Lafayette and the other about three miles southwest of Romney in Jackson Township.
3. Marl Bogs about three miles northeast of Springport in Henry County.
4. Little Cypress Swamp in the Southwest corner of Knox county.
5. The Klein Woods three miles north of North Vernon.
6. A Swamp Cottonwood Swamp in Lawrence county six miles northwest of Bedford.

R.C.Friesner-page 2

The above are merely a few suggestions of spots I know and the like of which I'd like to see preserved. I do not know just what form such sanctuaries should take. Maybe each county should have one or more depending on the type of biota that may be present.

Very truly yours,



Ralph M. Kriebel

Royal Palm Park Lodge, Fla
Dear Freeman.

Jan. 18 1953

Your letter of Jan 11 has just been received. My legs went bad again & left Bluffton Jan 7 for this place, - 12 mi from a bus depot at Key Sta. I am here & am the only visitor. Dr. Frank Chapin ^{Smith's point} has been here all winter & will be back soon.

Well I must make this brief. I note your dilemma in naming explicit areas to conserve native flora. My suggestion is to "detour" in some manner.

Why not use our woodland classification law as the instrument to serve the purpose. I do not know ^{how} many acres or no of tracts classified but over 100,000 acres & over 1000 woodlands. Could you not divide our native plants into groups & give approximate areas each & then say in the area we have classified woods & parks. Personally I have little faith in "Park Area" protection etc. but popularly it "will take".

Our "dune flora", Dune state Park
Prairie area, "Jay's - Pulaski Game Preserve"
Our lake area, most vulnerable & poorest protected. The mesophytic forests of Jupiter Inland
Plain amply protected by hundreds of

classified words. The plants of the ^{from Sinclair} 27-VIII-42
"Hill country" amply protected both by
state forests & hundreds of private woods.
Flora of Lower Wabash Valley by
Honey Lake & hundreds of woods in
Perry, Gibson, Knox & Sullivan Cos.

This question of preservation being
good intentions but backed by
little horse sense. Like Mrs. Gorrell
of Hiramac who was visiting the
Dean Arboretum, when she saw a
Carya ovata, exclaimed "Oh that
beautiful magnolia!" my sister has one
out in California. OK we must be
kind & patient & I know I need not coach
you because you have both the
horse sense & diplomacy to get along
with anything.

Enough of this. Now I have a very
important matter to take up
with you. I will write you when I
can get some ink.

Well Friesner I do not know how
long I will be here, - at least for a month.
So far I just walk out in the park
& up & down the road.

3

This area is in the glades: the Paradise Key is the high land here. Yesterday (Sunday) Lady who runs the place & I gathered up some brush & were driving along road with the pick up truck to unload on a brush pile we saw a rattlesnake across the road but he pulled back. Native Lady said it was the longest she had ever seen & said it was 6-7 feet. I saw only the head end & I estimated length 5 ft. Later I saw a man who killed one the last week that was 6 feet. I got out of car but I could not find a stick so the snake leisurely crawled away. Today I cut a sapling & I have a pole 6 ft long stout enough to kill an alligator. By the way I saw an alligator 7 ft long in canal along road within 1/2 mi of here. It is a permanent home for them but man they are shy. I do want to get a rattlesnake myself although I hate the task.

I am naming all the trees, shrubs etc I meet & can name & I am trying to remember their names. So far I have 29

No Frisner. You will get a long confidential letter from me when I leave here on

4

from Sinclair
27-VIII-42

I plan to leave here for Dodge
& stop over to consult you

With very best wishes I am
Sincerely yours

Chas C. Deane
Bluffton, S.C.

Monday eve, but I can not get
this mailed before Wednesday

Ma 9311

I-28-43.

ELEANOR SCULL

Naples Florida

Dear Dr. Friedman:-
Because this typewriter has been out of order have delayed writing you:- Dr. from South Bend who was on the Bus that brought me down to Bradenton in Nov told me that various people were interested in the growing of tropical pharmaceutical plants in Sub-tropical Florida and asked me particularly about the Eastmans river region-wonder if you could learn from the Eli Lilly people just if it is worth while for me to look into it when I go down that way a little later-the climate is more equitable and there are many fertile bits up those rivers--
~~Was in Indiana from Sept to till the middle of Nov. and~~
as usual took a month or two to get myself in order again- There is a quantity of material from the S.W. part of Fla waiting at the Gainesville herbarium to be sent down to you was too ill on my way down to get it off to you- but sooner or later it will be coming along-
we have been having a marvelous winter so far and the mallard fishing has been something outstanding-100,000 lbs at one haul-hook and line fishing also good-
Am impatient to get down in the Islands but must first get things done to my boat- every one too busy to do anything so must do for myself

My regards to your staff and remember me to Mr Clute if you see him-

Very sincerely

Eleanor Scull M.D.
Eleanor Scull M.D.

Rn 7441

Stillingia root

Aloe promoting

Bamboo briar root

Saw Palmetto bark



January 26, 1943

Professor Kenneth C. Kellett
Barnantown High School
Box 360, Route 1
Duluth, Minnesota

Dear Mr. Kellett:

Your inquiry regarding materials for use in natural science classes is at hand. We are sympathetic toward your request and anxious to help but are doubtful whether the material we have will be of any real value to you. We have a considerable amount of dried unmounted plant specimens with labels bearing name, habitat and locality where collected. They have been prepared to be mounted on standard 10½ X 16½ herbarium sheets. We will be glad to send you some of these without cost to you, except postage, if you think you can profit any by them. In case you do not care for this material, please do not bother to answer this note.

Sincerely,

Ray C. Friesner

RCF:mb

January 29, 1945

Mrs. W. R. Sinclair
5797 Sunset Lane
Indianapolis, Indiana

Dear Mrs. Sinclair:

I am enclosing first copy for the article, "Areas in Indiana which should be plant sanctuaries", which you asked me to prepare for "Indiana Gardens". You will note that it exceeds, to some extent, the space limitations specified in your request. You are at liberty to cut it down as much as you may wish. Perhaps some of the preliminary description for the first place recommended could be eliminated. Also, you may prefer less details about the places with more of the areas mentioned in the last paragraph, developed.

I shall be glad to modify this in any way you may desire and assure you that it has been a pleasure to prepare this for you.

Sincerely,

Ray C. Friesner

RCF:mb

AREAS IN INDIANA WHICH SHOULD BE PLANT SANCTUARIES

by Ray C. Friesner

The subject of plant sanctuaries raises the question of why any area should be so preserved. It is beyond the scope of this brief article to discuss the reasons for such conservation. All of the areas listed below, or others like them, should be protected from future molestation either because of their unique combination of present flora or because they contain one or more species approaching extinction. These places should be treated by botanists and Nature lovers as holy ground; not as places to be visited by the mere curious and trampled into oblivion so far as the plant species are concerned nor used as promiscuous collecting grounds by the specimen collector. They should be thought of as Nature's own, where she can have at least a little place to continue for all time what man has so ruthlessly destroyed.

The first area I would suggest is one known as Pine Hills, in Montgomery county. Here, two streams, combining into one some little distance before entering Sugar creek, have cut deep entrenched meander gorges which in four different places so nearly unite as to form narrow "backbones", then swing away into wide loops thus giving plant habitats which include perpendicular canyon walls, steep slopes, gentle slopes, alluvial terraces, and flood plains besides the wooded plateaus of the undissected plain. Botanically the area is unique for the large number of relict colonies of northern species left isolated there as the main mass of vegetation moved northward following the glacier. Relict species include: white pine, hemlock, bush honeysuckle, yew, wrinkled-leaf dogwood, wintergreen and others.

A second area, equally unique, but with a southern flora, instead of the northern relict type of the preceding area, is the sandstone bluffs along White river above Shoals. On these bluffs are found such southern plants as: Farkleberry, known in only two other counties in the state; Smoothleaf Deerberry, characteristic of the southern Appalachians; Hairy Lipfern, known in only one other county; the little Resurrection Fern, so typical of the sandstone crevices, and found in only a few other places in the southern part of the state.

A third area, I recommend more for its trees than for any unusual herbs, though it contains an abundance of the common spring flowers, is the Berkeley woods about three miles west and one mile north of Warsaw. In this area is an immense bur oak, approximately 7 feet in diameter and with a clear trunk 81 feet to the first limb. The woods contains many other unusually large trees including cork elm, tulip poplar, linden, beech and maple.

A fourth suggestion is one which will at first appear quite unorthodox but would cost persuasion rather than money to maintain as a plant preserve. This is certain railroad rights-of-way. Nearly every railroad right-of-way north of a line drawn from Fort Wayne through Peru, Logansport and Lafayette to Attica abounds in numbers and kinds of rare or interesting species. In the area mentioned there would be little reason for complaint from the standpoint of "weeds" if none of these stretches were mowed or burned. The task in perserving such areas would be largely one of convincing the railroad officials of the educational and cultural value permitting the native plants to grow unmolested. Fortunately, in this area tree seedlings would cause only a minimum

of trouble in only local parts of the entire area. The western part of the region, i.e. from Lafayette westward and northward gives us a better picture of prairie species than any other area in the state. The rare species are too numerous to mention.

Other areas for which equally good pleas could be made are: Taswell Canyon in Crawford County, Pinhook bog in La Porte County, Black Rock and Kate's Pond in Warren County, Klein's woods in Jennings County, Little Cypress swamp in Knox County, Lake Cicott in Cass County, Atwood bog in Kosciusko County, Chainforn bog in Noble County, and Bacon's Swamp bog in Marion County.

January 31st

HOPEFIELD
5797 SUNSET LANE
INDIANAPOLIS, INDIANA

Dear Dr. Friesner —
Your article for "Indiana
Gardens" has arrived - and
I think it is excellent. I
do not think any of it
should be cut. but I
am sending it on to
Miss Hughes - to let her
decide about it.

I am truly grateful to
you and I know all
the readers of "Indiana

Gardens" will also appreciate
I.

I am very interested in the
places you mention and
hope someday the
Conservation Department
will take them over.

Cordially yours

Emily L. Sinclair
(Mrs W. R. Sinclair)

February 1, 1943

Mr. August J. Breitung
Tisdale, Saskatchewan

Dear Mr. Breitung:

Under separate cover I am returning the specimen of Solidago
callida which you enclosed with other specimens some time ago.
I have included three or four species of Solidago which had not
been included in previous sets sent. These are not as good
specimens as I should like but they are the best I have of
these species and I always feel that poor specimens are better
than none until better ones are available.

Would you like other species which do not duplicate those pre-
viously sent? If so, please let me know and I will run through
our duplicates from 1942 material and send you whatever we have
that has not previously been sent.

Sincerely yours,

Ray C. Priesner

RCF:mb

Gray Herbarium



Harvard University

M. L. FERNALD, Director
Fisher Prof. Nat. Hist. (Bot.)
CHARLES A. WEATHERBY, Research Associate
FRANCIS WELLES HUNNEWELL, Research Associate
LYMAN B. SMITH, Junior Curator
ERNST C. ABBE, Research Associate

RUTH D. SANDERSON, Librarian
MARJORIE W. STONE, Bibliographer
ROBERT C. FOSTER, Technical Assistant
BERNICE G. SCHUBERT, Technical Assistant
JAMES H. SOPER, Teaching Fellow
in charge of Laboratory

CAMBRIDGE, MASSACHUSETTS, U.S.A.

Feb. 1, 1943.

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

Dear Prof. Friesner:

It is unfortunately necessary to have the Treasurer's report of the Botanical Society of America audited before the postponed meeting which comes on Feb. 8th in Cambridge. I am therefore asking you, as Chairman, and Dr. Potzger to act as auditors, and am asking Dr. Weatherwax to take his books to Indianapolis in order that the auditors may go over the accounts.

I am sorry to make all this trouble for you, but it is necessary to have the report in next Monday.

Sincerely yours,

M. L. Fernald,
President, Bot. Soc. Amer.

MLF/FMG

February 3, 1943

Mr. Charles W. Ek
1812 Purdum Street
Kokomo, Indiana

Dear Mr. Ek:

I have completed checking in the plants which you sent during the Christmas vacation. The unknowns which you included were as follows:

- A. Aruncus dioicus. This was the large shrub-like herb with twice ternately compound leaves and a large panicle of inconspicuous flowers. Collected in Brown county.
- B. Houstonia purpurea. Opposite ovate to ovate-lanceolate leaves with a terminal cyme of small pinkish flowers. Brown county.
- C. Agrostis elliotiana.
- D. Canula origanoides. Brown county.
- E. Salix interior. Tipton county.
- F. Senecio aureus var. gracilis. This is a real find. Elkhart county.
- G. Tradescantia virginiana. Jennings county.
- H. Silene caroliniana. Elkhart county.

The specimen from Jennings county which tried to run to Erysimum were depauperate specimens of Brassica arvensis and B. campestris. Both species were in the lot.

The list of specimens added to our herbarium is too long to bother you with. They will all be listed in the county books which we are now preparing for you.

I am, however, enclosing a list of the species sent in exchange to other herbaria. You will see that this is a very impressive list and that your name will grace the herbarium of a number of outstanding and widely separated herbaria. I have not taken the time to alphabetize it.

After eliminating the species contained in the 1942 report your latest list of new county records amounted to 93. This does not count any of the sedges in the list you determined for me.

Perhaps a suggestion or two regarding preparing the specimens as you collect them in the field will not be misunderstood. I think that in some cases you have a tendency to crowd the specimen too much. Perhaps it would help if you would try to visualize how it is going to look on the final mounted sheet. After we get the county books to you and the exchange guide, so you can know just what and how many to collect, you can concentrate on quality rather than quantity. This should also make the burden of drying lighter.

You have certainly given Hercules a run for his money in your collecting and I hope you will ease up a little in the energy you are using. Conserve it so we can collect together again after the war is over.

Appreciating most gratefully your hard work for us,
I remain

Sincerely yours,

Ray C. Friesner

RCF:mb

Exchange Specimens

Collected by C. M. Ek

1942

The symbols following the species name stand for the herbaria to which the specimens were sent and are as follows:

C = Core, University of West Virginia
 Ca = University of California
 B = Bismarck, Arkansas A. & M. College
 Gr = Gray Herbarium
 K = Krukoff
 MI = University of Michigan
 N = New York Botanical Garden
 R = Rose, California Academy of Science
 S = Stratton, University of Oklahoma
 W = Washington State College, Pullman

Carex brevior: W-C-S-MI
 " virescens: R-W-N
 " Swanii: B
 " Mircutella: R-W-Ca-K-S-MI
 " prairea: R-W-Ca
 " lasiocarpa: W
 " leavenworthii: W-MI
 " molesta: R-W
 " bushii: R-R
 " alburina: W
 " sparganoides: S-MI-C
 " trichocarpa: R-R-W
 " rosea: W-MI-C-S-K
 " laxiflora: MI
 " festucacea: R-W
 " stipata: R-W-Ca-Gr-C
 " tenera: R-R
 " pennsylvanica: Gr-C-K-MI-W-Ca
 " frankii: W-C-Gr-W
 " muskingumensis: MI
 " gravida lunelliana: R-R-W-Ca-Gr-K-MI
 " granularis: B
 " lanuginosa: W-Ca
 " tribuloides: Gr-W-MI-B-D
 " lupulina: C
 " erisea: W
 " leptalea: W
 " viridula: W-C-S
 " orinita: R
 " gracilescens: R-R
 " bromoides: N
 " jamesei: K
 " hyalinolepis: W-S-MI-D
 " cristatella: W
 " squarrosa: W
 " grayii: W
 " debilis: R-W
 " intumescens: W

Carex lurida: S-K
 " *normalis*: W-Ca-C-S-K
 " *conjuneta*: S-D
 " *cephalophora*: S-D
 " *communis*: S-MI
 " *gracillima*: N
 " *digitalis*: N-R
 " *hirtifolia*: C-S
 " *davisii*: S
 " *shortiana*: D
 " *vulpinoides*: W-S
Aristolochia serpentaria: R
Nyssotis verna: Gr
Juncus dudleyi: Gr-W
Salvia reflexa: R-K-N-C-Ca-W-S-Gr-D-MI
Stachys palustris var. *homotrichia*: Gr
Scirpus lineatus: N
Coriopersum nitidum: N
Salsola pestifer: Gr
Juncus gerardi: R-K-N-C-Ca-Gr-W-S
Polygonum neglectum: W-C-S
Solanum dulcamara: N
Trifolium procumbens: Gr-C-W-S
Lysimachia ciliata: N
Aristida oligantha: Gr
Ampelamus albidus: N-R-Ca-W-K-C-Gr-S-MI
Hypericum ascyron: R-K-N-Gr-Ca-C-W-S-D
Cyperus strigosus: K
Penstemon calycosus: MI
Panicum polyanthes: Gr
Arabis dentata: N
Paspalum pubescens: MI
Plantago virginica: MI
Poa annua: N
Thaspium trifoliatum flavum: MI
Hypoxis hirsuta: S
Asclepias quadrifolia: W
Meconaris intermedia: N
Cerastium vulgatum hirsutum: R
Salvia lyrata: N-R
Viola striata: Gr
Schinocystis lobata: N
Scirpus cyperinus: N
Eragrostis ciliensis: Gr
Polygonum sagittatum: MI
Artemisia gnaphniodes: W-A-Ca-Gr-C
Mentha longifolia mollissima: R-W-Ca
Sporobolus clandestinus: N
Aster sagittaeifolius var. *urophyllus*: W-K
Trifolium arvense: N-R-W-Gr-C-S
Polygonum cooccineum: MI
Physocarpus opulifolius: C-S
Lappula echinata: MI-D
Glyceria striata: Gr-MI-D
Crataegus crus-galli: S-MI
~~XXXXXX~~
Cyperus strigosus: MI
Sisymbrium thalianum: Gr-C-MI-W-K

Physalis heterophylla: S-MI
Rhynchospora alba: N
Torfieldia glutinosa: N
Erigeron divaricatus: W-C-S-MI-D
Hordeum jubatum: MI-D
Polemonium reptans: MI
Saxifraga pennsylvanica: N-R
Acnida altissima: N-W
Luzula multiflora: R-S
Caltha palustris: MI-Gr
Rasturtium officinale: R
Tenidia integerrima: D
Viola pedata: W-Gr-C-S
Krigia virginica: MI
Phlox pilosa: N
Polygonum persicaria: MI
Eragrostis pectinacea: Gr
Passiflora incarnata: N-R-W-Ca-Gr-C
Lespedeza hirta: Gr-MI
Chenopodium ambrosioides: Ca-Gr-C-K-S-MI
Lilium michiganense: S
Sisymbrium officinale: W-Ca-N-R
Paronychia canadensis: C-K
Tephrosia virginica holosericea: MI
Sporobolus vaginiflorus: MI
Gulbostylis capillaris: W-S-MI
Hypericum punctatum: MI
Euphorbia supina: MI-D
Hypericum perforatum: MI-D
Viola caroliniana: N
Rumex acetosella: Ca-MI
Hieracium longipilum: W
Plantago indica: C-K-S
Lochea villosa: MI
Paspalum pubescens: K-Gr
Gerardia paupercula var. *borealis*: N-R-W
Ribes americanum: W-S
Lupinus perennis: Gr-MI-D
Arenaria serpyllifolia: MI-D
Vitis labrusca: S
Aegilops cylindrica: D-C-S-MI
Dactylis glomerata: MI
Agropyron smithii: C
Scutellaria leonardi: N-R-W-Ca
Anemone virginianum: W
Galium circaeans: MI
Hieracium canadense: N-W-Gr-R-C-S-D-MI
Morus alba tatarica: R
Trillium recurvatum: MI
Lespedeza intermedia: Gr-MI-D
Thaspium barbinode: Gr
Juncus macro: R
Potentilla arguta: N
Tenidia integerrima: MI
Alopecurus carolinianus: Gr-MI
Potentilla argentea: K
Amorpha canescens: MI
Spiraea alba: W
Aster amethystinus: W-C-S-MI

Pycnanthemum flexuosum: MI
Cryptantha canadensis: MI
Artemisia gnaphalodes: R-N
Physalis ambigua: D
Cenchrus pauciflorus: N-N-W-Ca-Gr-C-S-E
Mollugo verticillata: MI
Erodium gracilis: D
Callium verum: N-R-W-Ca-Gr-C-S-MI
Hedeoma pulegioides: MI
Elephilia hirsuta: MI-E
Polygonum persicaria: S
Lactuca canadensis var. *integrifolia*: R-N
Parietaria pennsylvanica: D
Cacalia atriplicifolia: R-N
Physalis heterophylla: R
Glycyrrhiza lepidota: R-N-E-Gr-C-W-Ca
Ambrosia coronopifolia: R-N-E
Ptelea trifoliata: W
Crataegus cras-galli: W-Ca-C
Mentha arvensis: D
Scutellaria galericulata: D
Crataegus punctata: W
Cerastium arvense: W
Anemone quinquefolia var. *interior*: N-R-W-Ca-Gr-K-S
Verbena bracteata: C-W
Bromus inermis: Gr
Chenopodium gigantospermum: R-W-N-Ca
Senecio plattensis: N-N
Delphinium ajacis: N
Cerastium vulgatum hirsutum: N
Lonicera canadensis: R-N-Ca-Gr
Cerastium vulgatum hirsutum glandulosum: N-W
Asparagus officinalis: N
Descurainia pinnata var. *brachycarpa*: R
Atriplex patula var. *littoralis*: N
Tetorium occidentale var. *boreale*: N
Cirratum arvense var. *nitidum*: W-C-S
Triosteum aurantiacum: N
Mentha longifolia mollissima: N
Achillea bracteata comosa: N
Crataegus mollis: W
Oxalis europaea cymosa: W-C-S
 " " *villigaulis*: W-C-MI
Cirsium undulatum: N
Panicum dichotomiflorum: Gr
Cerastium robertianum: R-N
Cacalia suaveolens: R-N-E-Gr-Ca-C-E-S
Plantago indica: R-N-Gr-E-Ca
Silphium perfoliatum: D
Scutellaria parvula: N
Chenopodium pratense: N-E
Lappula echinata: Gr-W-C-S
Marrubium vulgare: W
Thlaspi arvense: N
Stachys hispida: R-W-Gr-Ca-C-S-MI
Potentilla argentea: W
Salix interior: K
Glechoma hederacea: K

Antennaria fallax: N
Lamium amplexicaule: Gr
Menispermum canadense: Gr
Smilax herbacea var. *laeflorata*: N
Thaspium barbinode: N
Medicago lupulina: K
Rhus glabra: D
Penstemon hirsutus: N
Praxinus lanceolata: N
Tilia americana: N
Erigeron annuus: N
Physalis virginiana: N-R-W-Ca-Gr-C
Asclepias tuberosa: D
Scutellaria ovata: N
Paederia tenuiflora: N-R-W-Ca-Gr
Aster oblongifolius var. *angustatus*: N-R-W-Ca-Gr-K-C-Mi-D
Arabis pycnocarpa var. *adpressipila*: W
Ceanothus americanus: Gr
Collinsia verna: W-Ca
Poa chapmaniana: Mi-D
Horippa sessiliflora: Mi
Corispermum hyssopifolium: N-R-W-Ca-Gr-C-N-K-Mi-D
 plus 12 Reserve duplicates

February 5, 1943

President M. L. Fernald
Gray Herbarium
Harvard University
Cambridge, Massachusetts

Dear President Fernald:

Dr. J. E. Potzger and I, acting as auditing committee have audited the books of the treasurer, Dr. Paul Weatherwar. We have verified all debits against cancelled checks and all receipts against bank deposits and find the record both correct and well kept.

Sincerely yours,

Ray C. Friesner

HCF:mb

Kokomo, Indiana, Feb. 7, - 1943. ^{-from Elk}
1812 N. o. Purdue St. -

My Very Dear Dr. Friesner: -

I rec'd pictures several days ago. -
- also letter, with all those pages of records. -
Useless to say, I am very grateful to you for
all this hard, painstaking work. Three
from Brown Co. were new to me. Glad to
know the *Senecio aureus* var. *gracilis* was such
a good find - I remember exactly the spot - in
water - swamp - or bog - not very plentiful.
I forget if I had guessed at the *Silene*
caroliniana - just now don't recollect the
exact station - unless it was level open woods.
N.E. Denbigh. Label probably (maybe) says, -
By Deam - this may be new Ind. record.
- All your suggestions about collecting
specimens, are 90% correct. - I simply
don't practice what little I know. - Too big
a hurry, will try and heed these in 1943.
Quality - vs. Quantity. - except for Class
use. -
- That certainly is a great - fine - exchange
(over) -

List. - ten widely² scattered herbariums.
Presume Yunker sent you the Cuscuta -
- 3 sheets - There doesn't seem to be any
ethics these days; - At least I may not have
used the best. I had 15 boxes duplicated; -
2 sets - 11 and 4 bxs. Had originally
intended to send Dr. Juss. 11 bxs. - + Earlham 4 -
Never heard from either! Yunker had
sent me such an appreciative letter relative
to a few I had included with the Cuscuta -
that I - at once - decided to send him 2 or 3 bxs
- when I began labeling - I kept on using
his address until I had 7 of the heaviest!
to - " " He answered at once -
so did Dr. Greenman - Mr. Bot. Gardeny - to
whom I sent 4, - + each were to put them
in herbarium right away. - I reasoned
that if one didn't have time to write a postal
he couldn't very well use many specimens -
Don't know if you saw the rooms full of books -
specimens - &c. - at Notre Dame, to be put away.
Presume you get Sci. Monthly. - Got 9
issues ready to send back to Dean tomorrow.
You surely & probably find little time to for
outside reading.

Got a bound copy of 1941 Smithsonian

Do Report in Jan. Always many fine articles and addresses: article P 343 - "Growth Hormones in Plants", that may interest you - Too hard for me. - Next article P. 401, "Useful Algae" 50 pages; ought to interest any botanists - particularly Dr. Palmer. - The species considered are from all over the earth and literature is world-wide. - Most (99%) was new to me. - + I dare say - Butlers botanists would find some new facts also. - If such was in a newspaper, I'd doubt some of it. - perhaps.

April 1942 - issue Sci. Monthly had one article - popular - "Nature of War and Myth of Science" - by Montagu - that I made resume other night - for future use. Past issue have had 3-4 articles "An Anthropologist in Russia" - "Hrdlicka" - all very enlightening. "Science" has a lot of fine stuff; - in past yrs. 2 articles on "Farming in Russia" - had. If I only had a memory. - Taking an entire evening to summarize an article is only way I can retain it. - - - - - per week!

If you want something intriguing, challenging, read Sci. Mon. Aug 1942, P. 175. - "The Phil. basis of Pediatrics", humorous - semi-scientific - - - - - P.D. = - - - - -

- from EK
7-12-43

4

Got Postal from Evans. - down in
Miss. - never heard of his Camp. But by
postal - but letter soon. Asadaps might
say "Party soon, America, all Camps"

About middle of Jan. got over allowance
from Wash. - now at Newark, N.J. \$47.00
a mo - 3 mo. - \$141.00 + Jan. check yesterday.
- 47.00 Do. Jim like the Irishman who fell
from 15 story bldg - Passing the 2nd story
window man heard him say "Jim Ot-
yet" But I ^{was} very close to concrete Mr. - see -
hot letter - copy - you sent me, was revealing.
- They're perfect snoopers - When they
wrote you - asking about me - in Mr. -
they were not in least interested in my
scientific attainments or my welfare -
just seeing how much money I was
making. - I'd already told them over & over
about you - Petyers - Dean - + what you had
done for me - in a general way. - that I made
B6C ^{at} N.Y. Bot. Soc. - spent most of it by expenses
I have a brain storm when I think
of them. I had the fun of telling them what
they were.

He had sort of a visit with you
this fine Sunday, P. M.

Been somewhat lazy since Dec. -
since specimens were finished.

Hope Brunkoff will have a lot of
species needed. I enjoy collecting,
drying, & boxing - sending away, every
allotment. Seems to add zest and vitality
to my own collecting, and gives excuse
for going to distant places. - If you have
any hand in it, hope you suggest a
nice list - found here and in bus
distance, as Hieracium Canadense - a
wonderful colony near Logansport. ---

Never have solved my bicycle problem
yet - But I will. - I must have one.
I can't get tires for old one. - Either have to
get new ~~tires~~ or 2 new separate front &
rear wheels for old frames. - I can now
finance it. - + glad I can
enclose a bill - which will pay
my part of picture expense.

Best wishes, And I'll see you
next summer, - somewhere, somehow,
in some way. - I must
Sincerely Yours
Chas. M. E. R.

OBERLIN COLLEGE

OBERLIN, OHIO

DEPARTMENT OF BOTANY

February 16, 1943.

Department of Botany,
Butler University,
Indianapolis, Ind.

Gentlemen:

Pursuant to my letter of last February 17th, I have to report that it was not possible to carry out the plan to distribute our collection of duplicate fungi, but we still intend sooner or later to do this.

Meantime, we have worked over quite a large gift collection of vascular plants and are now ready to distribute about 800 specimens of mounted material from Ohio, North Carolina, Florida, Europe, and other North American regions. Probably most of the material is from Florida, but there are a good many specimens collected by Paul Lomax in England during the Nineteenth Century. If it is convenient for you to receive a shipment at this time, we shall be glad to send some of these sheets on the exchange relationship between your Herbarium and ours. (We owe you some 275 specimens.)

Very truly yours,

Pearl M. Nelson

Pearl M. Nelson, Sec'y.

RECEIVED

RECEIVED

RECEIVED

RECEIVED

Dr. Eleanor Scull
Naples, Florida

Dear Dr. Scull:

I have talked with Mr. Seybert, Botanist at Eli Lilly's, and he does not know of anyone particularly interested in the cultivation of subtropical drug plants in Florida. He tells me that they receive only three plants from Florida, viz.: Stillingia roots, Bamboo orlar roots, and Saw Palmetto berries.

I hope this letter finds you in fit shape again, ready for hard work botanizing. We shall be glad to get the plants you have for us at Gainesville, when it is convenient for you to send them.

Sincerely yours,

Ray C. Friesner

RCF:mb



HUNTINGTON COLLEGE
HUNTINGTON, INDIANA

Fred A. Leew, A.M.
Department of Biology
Director of
Botanic Garden and Arboretum

February 18/1943

Dr. Ray Friesner
Butler University
Indianapolis, Ind.

Dear Dr. Friesner:

Your card of the 2^d is at hand. I received the pictures sometime ago and like them they will help me to remember our field trips. I have just checked for \$120 to pay for them. Thanks for your trouble.

After getting out my garden report I began to mount and file the plant collections of last summer mostly from my Little Wabash River Valley Survey.

I have upwards of 200 species from ^{each of} three sections of this valley. It will soon be time to give the garden attention. I am teaching full time this all with my civic and church duties keeps me busy, yes I have some farm interests also.

Dr. Yenchin is to give our garden day address this year. It will be Saturday May 1st if you can.

Yours very truly
Fred A. Leew

February 18, 1943

Miss Pearl M. Nelson, Secretary
Department of Botany
Oberlin College
Oberlin, Ohio

Dear Miss Nelson:

In reply to your communication of February 18, I may say that we will be glad to receive any specimens which you may choose to send. All of the geographical areas mentioned are only poorly represented in our herbarium so that there is little chance for much duplication between what you send and what we already have.

Sincerely yours,

Ray C. Friesner

RCP:mb

OBERLIN COLLEGE

OBERLIN, OHIO

DEPARTMENT OF BOTANY

March 16, 1943

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

Dear Prof. Friesner:

In accordance with your letter of February 18, we are today sending you by railway express 300 herbarium specimens to apply on our exchange. All but 34 of these are mounted. This shipment is about 25 sheets in excess of the number necessary to balance the current exchange, which we are happy to maintain.

Sincerely yours,

Pearl M. Nelson

Pearl M. Nelson, Sec.

March 20, 1943

Miss Pearl M. Nelson, Secretary
Department of Botany
Oberlin College
Oberlin, Ohio

Dear Miss Nelson:

We appreciate greatly the herbarium specimens referred to in your letter of the 18th. As I interpret your letter you are interested in continuing this exchange. In that case I shall run through our material and pick out as many species as we have which do not duplicate those previously sent and then I shall also be on the alert for additional non-duplicating species as I collect during the coming seasons.

I am glad to continue the exchange.

Sincerely yours,

Ray C. Friesner

RCF:mb

Kokomo, Indiana, Mich. 31-1993.
1812 N. - Purdum St.

My dear Dr. Friesner: -

Rec'd your two Sist Books days or
so ago. - Thanks for these books. No hurry
about others. - Its bad they are so ex-
pensive to send. - May be express would be
better. - Paid all for one time. It is quite
a formidable List that Butler - you - have
sent to other Herbariums. - and happy that
I have had a somewhat important part in
this distribution. - My thanks have been
expressed ~~in~~ many ~~ways~~ times.

Note that you are swamped with
class work. - So will try to be brief.
I was not surprised. - Edwards (Munroe)
told me at meeting - he & ~~his~~ faculty were
jammed - rooms full - classes over crowded.
And then Science has told how in
many colleges where Chem, Physics - &
Phys. were called away - others - like you -
who had had these at one time - were
"brushing up" - reviewing - and were hand-
ling extra classes. - tho not in their line.
With all this - & much more - it is evident

that Educating - College - --- are on the decline,
I presume that mob of sailors - or others,
similar - are taking some sort of College work.
- Doubtless you find some poorly prepared.
I see DePauw took on a mob long ago.
I think note some also. - Probably brief
Courses - short cuts - & jobs in the Army.

For over a week I had a dry harsh
cough. - I feel weak - & burn yet. - but
better. - First cough for over 20 yrs. I don't
know what I'll be able to do this year. I
love plans but I'll have to be better than
at present. I am dizzy. deadish. - I listened
to Radio last Sunday - 4-5 hrs. - more than
I did 2-3 mo. last summer. eyes have been
poor - so listen to radio more than usual. - But
I get about as much - or more - just resting in
a rocker - dreaming. talking to my self - reflecting. -
The Radio is next to nothing. - & nothing itself.
The fine music. - mostly gone. - the fine sermons
- all gone. & soon.

Max EK has been at Camp Edwards, MASS,
since March. - expecting to go across any time.
Never got a furlough. Atter did. This can
mean only one thing: - that Max EK and I will
never meet again. - He writes fine letters.

3
despoiling the keenest ~~and~~ analysis of
army affairs. Letters are censored now-
- fast trip; - 2 passages cut out of one letter
by some tin - hat bastard, as if The
Chicago Tribune, The Hearst & Herald Press,
the anti-labor columnists - &c. &c. don't tell more
every day & do more to slow the war production
- than a million soldiers could do, - even abroad.
It means 2 yrs. or more abroad - somewhere.
There's too much optimism. - It has only
begun - will go on until, in 1945. - & be quick,
if there is any thing decisive even then.
It will all depend upon Russia, - who
will beat us & Berlin, - Eng. is wholly
dependent upon U.S.A.

I've been alone 2 weeks; - Mrs in Lafayette
2 more weeks; - new grandson there -
I'll try to carry on in field best I can.
Doubtless, - as dear days, - you will be
almost out of the game 1943 - & suggests that
I keep moving! - & you say - "talk it easy"
I'll do both; - I'll hustle every day possible.
- & may end in doing far less than I want to.
My will is great - but the body poor. - I
think it is my circulation - & that everything
in vitality.

4.
I'll be glad when New Co. Records are ready. & I get them all checked in. Then I can go after certain species that for some reason, have not been recorded.

Should have brought this to a close on first page.

I hope that you can get to Kokomo at least once in 1943. Possibly your busy class. work will continue all summer. - Hope we may get out some - in nearby Counties. - as we did 1942. - I had planned last week, ^{May} in Lafayette - but doubt it now. - in four & Elkhart Co. - sure, first week & so. June. - 3 days at least.

Best wishes to Dr. Potyger. - Rec'd 5 page letter from Dr. Dean - Feb. 27. - & have never ans. - it. - Terrible - -

Best wishes to all. -

Very Sincerely Yours.

Chas. H. Ek.

Rec'd letter from Evans ^{May 1943}

Thurs. Noon! - 4-1-'83
Dear Prof. Friesner!

Rec'd your nice letter today. Had a
postal from Dean - dated March 26 -
saying not to send ~~me~~^{him} Vol. 15 - N. A.
Flora - as he had found Index - - -
I plan to write to Dr. Dean tonight -
to let him know I like you! - I have little
to say - your letter today confirmed
my suspicions that the old Dock
(R.C.F.) and any other Dr. - would be re-
quired to teach unfamiliar subject.

For what does² army - Navy care
about Botany. However a lot of
your work - I ought to appeal to them.
- biology - heredity.

Take it from me! - I wouldn't
worry about it. - i.e. the technical
part. - If you can create a per-
manent interest in only a few -
- so that when - & if they return they will
be real MEV. & not brutes as they are
taught to be in the army (Max etc.) Your
efforts will not have been wasted.
However I'll be thinking of you & JEP.
Sincerely - Chuck.

THE NEW YORK BOTANICAL GARDEN

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

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DE F. BALDWIN
JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

April 7, 1943

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

Dear Dr. Friesner:

Herewith please find a list (in duplicate) of plants that we should like to have from your area this year. Please indicate on one copy of the list those plants, if any, that you are in a position to send us samples of, and return it to me so that we may plan accordingly.

We have been working under considerable pressure in our work on antimalarials, repellents and insecticides lately, and on top of that I was recently called on to do some work in Central America, where I spent approximately 2 months.

Uptodate I have been unable to distribute specimens from South America; however, I am keeping in mind the fact that I still owe you 27 specimens.

Under a separate cover I am sending you a new reprint on Erythrina Alkaloids which may be of some interest to you. Before long I hope to be able to send you a reprint of our first serial paper on insecticides. So far we have tested over 600 plants in connection with this project, and have succeeded in finding at least several plants with fairly good insecticidal action.

Very truly yours,

B. A. K.
B. A. Krukoff

Bak/Jd
Enclosures

Enclosure

April 7, 1943.

PLANTS OF INDIANA

1. Cuscuta sp. (Convolvulaceae)
Sample of entire plant - 1 lb. or more.
2. Menispermum canadense (Menispermaceae)
Sample of berries - 1/2 lb. or more.
A few leaves as a voucher for identification.
3. Hypericum perforatum (Guttiferae)
Sample of flowering tops - 1/2 lb. or more.
4. Laporta canadensis (Urticaceae)
Sample of roots - 1/2 lb.
Sample of portion of plant with leaves - 1/2 lb.
5. Medicago sativa (Leguminosae)
Sample of entire plant or upper portion of plant
with leaves - 1/2 lb. or more.
6. Chamaecrista fasciculata (Leguminosae)
Sample of plant in fruit - 1/2 lb. or more.
7. Abutilon Theophrasti (Malvaceae)
Sample of entire plant - 1/2 lb. or more.
8. Osmunda claytoniana (Fern)
Sample of entire plant - 1/2 lb. or more.
9. Sabbatia angularis (Gentianaceae)
Sample of entire plants with roots - 1/2 lb. or more.
10. Gentiana sp. (Gentianaceae)
Sample of entire plant with roots - 1/2 lb. or more.



THIS SIDE OF CARD IS FOR ADDRESS

Doctor Griener + Patzger
Butler University
Botany Dept.
Indianapolis, IND.

Fri. Noon - 4-9-43.
My dear Mrs. - Just a
line to say that what
I've expected for 2-3
weeks has happened.
Max is now at sea
for unknown destination.
Postd - boat card came
today. - Gone perhaps
10 days. I - we - lost. See.
Max Sept. 5. - Refused a
furlough. This can
mean only one fact: - that
Max and I - we - will
never meet again, ~~to~~
despite this ^{fact} news. - I shall
carry on to the limit of
my mental & physical
strength. - Sincerely C.W.

April 12, 1943

Dr. B. A. Kruckoff
New York Botanical Garden
Bronx Park, Fordham Station
New York, New York

Dear Dr. Kruckoff:

Your list of plants came today. All of the species occur within a 50-mile radius of Indianapolis in quantities sufficient to secure the amounts stated on your sheet. I shall do my best to pick them up for you. The only difficulty is the limitation imposed by gas rationing and I shall do my best to make my allowance do the work. The Sabatia occurs in quantity only in a small area 30 miles southwest of Indianapolis; the Cassia fasciculata occurs in great abundance but the nearest I know is about 50 miles south; and Gentiana andrewsii is the nearest of this genus (about 40 miles southwest). The others are available within 15 miles of my home.

I have a set of herbarium specimens ready to send to you as soon as I can get time to package them. They are in triplicate, as usual, except for one or two species. In case you do not care for them, please let me know. If it is all right for me to send them, do not bother to answer. I am not worrying about what you may owe me. I'm glad to receive whatever you are able to send but I'm not worried about exactly equal exchange, so long as I can do my part.

Sincerely yours,

Ray C. Friesner

cc

cc

cc

cc

cc

Ray C. Friesner

cc

RCP:mb

cc

cc

cc

cc

cc

cc

4-2-43 14-72 8' 70

cc

cc

cc

cc

cc

cc

THE NEW YORK BOTANICAL GARDEN

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

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DEF. BALDWIN
JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

April 15, 1943

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

Dear Dr. Friesner:

Acknowledgement is made of the receipt of your letter of April 12th. We shall await the samples of the ten plants listed on the enclosure sent to you with our letter of April 7th with interest.

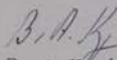
I would be glad to have your herbarium specimens, on the basis of 3 to 1, in exchange for specimens of South American plants.

Under a separate cover, I am sending you today one package with 119 specimens of South American plants, and 7 duplicates of photos, which are sent to you free of charge.

According to your figures, the previous balance was 27 specimens in your favor. Therefore, the present balance is 92 specimens in my favor.

For samples of each species that you may send us for chemical testing this summer, we would be pleased to send you 7 South American specimens in exchange.

Very truly yours,


E. A. Kruckhoff

Bak/Jd

RECEIVED APR 23 1943

April 22, 1943

Dr. E. A. Kruckoff
New York Botanical Garden
Bronx Park, Fordham Station
New York, New York

Dear Dr. Kruckoff:

Your package of herbarium specimens reached me in excellent condition a few days ago. You have miscalculated slightly in figuring the account. In determining the condition of our account the species (3 specimens each) I send to you are multiplied by 3 and those you send to me are multiplied by 4. This leaves me, at present, owing you 128 species rather than 92 as stated in your letter.

I shall be sending you the herbarium specimens within the next few days and the material for testing as it becomes available.

Sincerely yours,

Ray C. Friesner

RCF:mb

HEATH C. FRIESNER

April 24, 1943

Dr. B. A. Krukoff
New York Botanical Garden
Bronx Park, Fordham Station
New York, New York

Dear Dr. Krukoff:

I am sending you via parcels post three packages totalling 186 species in triplicate. Among them are two or three species not in triplicate and which have not been counted. All of these specimens except the grasses and sedges have been poisoned by dipping in an alcoholic solution of mercuric chloride.

Sincerely yours,

HEATH C. FRIESNER

Ray C. Friesner

RCF:mb

HEATH C. FRIESNER

NOTES

A great many methods have been devised for the study of combining of chromosomes by the same technique. Most of the present techniques are well-known or from some-

April 26, 1945

a reference to obtain in certain technology and has used Curator of the Herbarium New York Botanical Garden Bronx Park, Fordham Station New York, New York

The Committee on the Standardization of

On exchange account I am today sending you a package containing 300 herbarium specimens. This shipment leaves me indebted to you to the extent of 470 specimens which I hope to be able to send you as rapidly as collection may permit. The gasoline rationing has imposed a very real handicap to collecting but I shall continue to the fullest opportunity and hope someday to have my debt to you repaid.

All of these specimens except the grasses and sedges have been poisoned by immersion in an alcoholic solution of mercuric chloride.

Sincerely yours,

Ray C. Friesner

METHODS

A great many methods have been devised for the study or counting of chromosomes by the smear technique. Most of the present techniques use aceto-carmin or iron aceto-carmin staining for the smears, but this author found a reference to orcein in Stain Technology and has used this stain exclusively in her slide preparations. The technique used was that of LaCour's (24).

The Committee on the Standardization of Biological Stains has been attempting synthetic orcein preparation and has been trying various preparations of orcein which is not yet standardized. The synthetic orceins sent to this author for trial proved inadequate for it was not differential enough to stain chromosomes in contrast to cytoplasm. A sample of pure lichen, the lichen from which orcein is made, was tried and this also failed to give as satisfactory results as the orcein obtained from the Microtechnique shop in Indianapolis, Indiana. It is evident to the Committee on the Standardization of Biological Stains that a great deal is left to be discovered about orcein, its preparation and its action in staining. Since most of the supply of that stain came from Europe, it is necessary to find a suitable substitute or a method of synthetic manufacture here in United States. These efforts have so far been unsuccessful as analytical chemists have not yet determined the elements proportionated in the organic molecule which makes orcein a stain.

April 29, 1943

Curator,
Gray Herbarium
Harvard University
Cambridge, Massachusetts

Dear Sir:

On exchange account I am sending you via parcels post two packages containing a total of 373 herbarium specimens. Except for the grasses and sedges, these have been dipped into an alcoholic-glycerine solution of mercuric chloride.

Sincerely yours,

Ray C. Friesner

RCP:mb

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

April 29, 1943.

Ray C. Friesner,
Butler University,
Indianapolis, Ind.

Dear Dr. Friesner:

Acknowledgement is made of receipt of your letter of April 24th. The three packages with 186 specimens in triplicate reached us safely. The balance of exchange is therefore 64 specimens in your favor. *Many thanks for sending*

specimens to us

Very truly yours,

B. A. K.

B. A. Koukoff

Bak/ml



THIS SIDE OF CARD IS FOR ADDRESS

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

GRAY HERBARIUM OF HARVARD UNIVERSITY

CAMBRIDGE, MASS., May 3, 1943.

Dear Dr. Friesner:

The specimens noted in your letter of April 29 have arrived in good condition and have been accessioned in continuation of exchange. We make the count 381 sheets. Thank you for this material which will be helpfull in showing distribution. In a few weeks we hope to be sending out exchange material ourselves.

Sincerely yours,

Lyman B. Smith.

Lyman B. Smith.

of your, enclosed, and so on, (25) and
 the first of the year is the first of the year
 of the year is the first of the year

May 5, 1943

Dear Mr. Ek:

I am sending you today, via prepaid express a package containing the remainder of the county books. Fortunately, the spring has been so backward that you have probably not been put out much by our tardiness in getting them to you. In case they do not reach you in a reasonable time, let me know.

Our first collecting trip on which we can all get together will be the first Saturday in ~~May~~ June. If you can make your plans accordingly we will let you know where the trip will be and where we will meet you. Our work now is so heavy that we have not had time to give much thought to just where we might go that will be within the limits of our gas rations and at the same time give us a good place and an opportunity for all of us to be together. If you have any suggestions, we will be glad to have them.

I will not know until after I get my next ration book how far and how often we can go. I hope it will be at least every other Saturday.

We have just finished sending out the exchanges and, thanks to your hard work, last summer was one of the best we have had for several years from the standpoint of number of specimens we are able to send that did not duplicate previous sendings.

I hope you will not feel that I have been unsympathetic in not answering you last communication sooner. It is merely because we have been so swamped with our extra war classes.

Looking forward to the first Saturday in June, I remain

Sincerely yours,

Lore (22), working on the Chenopodiaceae, says 9 is the basic chromosome number and is distinctive. Verduin who states that 5 is the basic chromosome number.

May 2, 1962

Dear Mr. Lore:

I am sending you today, via prepaid express a package containing the remainder of the county books. Fortunately, the spring has been so backward that you have probably not been out much by our fairness in getting them to you. In case they do not reach you in a reasonable time, let me know.

Our first collecting trip on which we can all get together will be the first Saturday in May. If you can make your plans accordingly we will let you know where the trip will be and what we will want you. Our work now is so heavy that we have not had time to give much thought to just where we might go that will be within the limits of our resources and at the same time give us a good place and opportunity for all of us to be together. If you have any suggestions, we will be glad to have them.

I will not know until after I get my next section book how far and how often we can go. I hope it will be at least every other Saturday.

We have just finished sending out the exchanges and thanks to your hard work, last summer was one of the best we have had for several years from the standpoint of number of specimens we are able to send that did not duplicate previous sendings.

I hope you will not feel that I have been unappreciative in not answering you last communication sooner. It is merely because we have been so swamped with our extra work.

Looking forward to the first Saturday in June, I remain

Sincerely yours,

Lamm (28), working on *Solanum*, crossed a tetraploid *S. tuberosum* with a pentaploid *S. curtilobum* which yielded viable seeds but had to be grafted *S. tuberosum* on tomato to produce fertile seeds in reciprocal crosses. Hybrids of *S. tuberosum* X *S. curtilobum* are individuals which range from tetraploid to pentaploid, having $2n = 48-50$ chromosomes inclusive.

McClure

Cucurbitaceae.

Whitaker (39) has made a study of the cultivated members of the Cucurbitaceae. His results agree with previous published records -- the series formed is 7, 11, 13, 20 and 24, which is certainly a not a haploid

series. The changes in the numbers are not due to crosses either, because Whitaker found the hybrids to be a mixture of aneuploids. It would appear that these genera-long series are the exception of the series and are not the rule. The present numbers are not the result of mutations, but the present numbers are the result of aneuploidy.

Dee, Dr. Whitaker:

Compositae.

Whitaker (40) has made a study of the

large family and many of the genera

have been studied, but little is known of the vegetable genera. Six is the lowest number given in table II, but it may represent tetraploidy from 3, since 9 is also present which would be a hexaploid of 3.

Sabcock (3) lists 16 as the primitive number for *Lactuca*. Some species of *Lactuca* retain 16 as the haploid number (8), but most of them have $n = 8$, with 7, 8 or 9 occurring, too. Whitaker (40) says the *Lactuca* species are in 3 groups according to their

May 6, 1943

Curator of Phanerogams
University Herbarium
University of Michigan
Ann Arbor, Michigan

Dear Sir:

I am sending you, via parcels post, a package containing 148 herbarium specimens. These are in exchange for your "Contributions of the University of Michigan Herbarium". The number of specimens at this time is small due to the fact that the exchange relationship was not established until after the close of the 1942 collecting season.

I am keeping a record of the species being sent from time to time and will not duplicate previous sendings. Limitations on the use of my car will keep the number of species I can send lower than would otherwise be, but I shall continue to send all the nonduplicating specimens I can.

Sincerely yours,

Very truly yours,
May C. Prissner
The University of Michigan Herbarium
Ann Arbor, Michigan
Enclosed for you are 148 specimens of plants from the University of Michigan Herbarium. These are in exchange for your "Contributions of the University of Michigan Herbarium". The number of specimens at this time is small due to the fact that the exchange relationship was not established until after the close of the 1942 collecting season. I am keeping a record of the species being sent from time to time and will not duplicate previous sendings. Limitations on the use of my car will keep the number of species I can send lower than would otherwise be, but I shall continue to send all the nonduplicating specimens I can.

May 6, 1943

Dr. Oliver A. Farwell
Box 265
Lake Minden, Michigan

Dear Dr. Farwell:

On repeated occasions I have run across references to *Holidae* bigolor varieties *ovalis*, *paniculata*, and *apathulata* Farwell but have not been able to locate the original descriptions for them. I shall appreciate it greatly if you will cite the reference or references on the enclosed card and return it to me.

Sincerely yours,

Ray C. Friesner

NCF:mb

chromosome numbers and arrangement during meiosis. What Babcock says may be true in *Crepis* may also be true of other genera of this family (3). He says, "Primitive species have more numerous chromosomes with median constrictions, with the chromosomes of a set nearly equal in size and that along with advancing evolution subterminal constrictions are developed and the chromosomes of a set become fewer in number and more unequal in size".

1931/32

1931 Q' 13042

1931 Q' 13042

On the embryo only one larva is so far
 as known to be from any type of reference of reference
 the only one described for this type of reference
abundant in the embryo and also in the adult to occur
 between the embryo and the adult, and
 on reference of reference of reference of reference

1931 Q' 13042

1931 Q' 13042
 Box 888
 Dr. Charles V. R. R. R.

1931 Q' 13042

twelve sheets are in 2 blocks numbered 20 and 21
A. B. C. of 2 sheets each. The first (20) with the
referred sheets (21) are each of which have 12 = 8' after
reference. Both sheets of twelve sheets in 20 and
reference (21) there is in the reference sheets for
the reference sheet each of 2 sheets of 2'
and 12 and reference sheets of 2' after 2 in
reference. The 12 and reference sheets of 2' after 2 in

May 6, 1943

Dr. Carl L. Core,
Curator of the Herbarium
West Virginia University
Morgantown, West Virginia

Dear Dr. Core:

On exchange account I am today sending you via parcels
post a package containing 149 herbarium specimens. With the
exception of the grasses and sedges all of these specimens
have been dipped into an alcoholic glycerine solution of mercuric chloride.

I hope you may find this material useful in your
herbarium.

Sincerely yours,

May C. Friesner

RCF:mb

Lama (25), working on *Solanum*, crossed a tetraploid *S. tuberosum* with a pentaploid *S. curtilobum* which yielded viable seeds but had to be grafted *S. tuberosum* on tomato to produce fertile seeds in reciprocal crosses. Hybrids of *S. tuberosum* X *S. curtilobum* are individuals which range from tetraploid to pentaploid, having $2n = 48-59$ chromosomes inclusive.

Cucurbitaceae.

Whitaker (39) has made a study of the cultivated members of the Cucurbitaceae. His results agree with previous published records -- the series formed is 7, 11, 12, 20 and 24, which is certainly not a haploid series. The changes in the numbers are not due to crossing either, because Whitaker found the hybrids sterile. It would appear that these genera long ago made mutations to the present numbers and have become well established in their aneuploidy.

Post. 24. 1940:

Compositae.

Wild is a large family and many of the genera have been studied, but little is known of the vegetable genera. Six is the lowest number given in table II, but it may represent tetraploidy from 3, since 9 is also present which would be a hexaploid of 3.

Babcock (3) lists 16 as the primitive number for *Lactuca*. Some species of *Lactuca* retain 16 as the haploid number (8), but most of them have $n = 9$, with 7, 8 or 5 occurring, too. Whitaker (40) says the *Lactuca* species are in 3 groups according to their

THE STATE COLLEGE OF WASHINGTON
PULLMAN, WASHINGTON

COLLEGE OF SCIENCES AND ARTS
DEPARTMENT OF BOTANY

May 8, 1943

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

Dear Dr. Friesner:

Thank you for the package of 200 interesting and well-prepared herbarium specimens recently sent us in continuation of exchange. These make a valued addition to our herbarium.

We shall perhaps make no general distribution this year. We have great quantities of duplicate specimens, but have little time and little help to type labels for, identify, and distribute the specimens. We shall keep you in mind, however, and when we do send out exchange, you may be assured that we will send you some more northwestern plants.

With best regards, I remain,

Very truly yours,

Marion Ownbey

Marion Ownbey
Assistant Professor of Botany
and Curator of the Herbarium

Kokomo, Indiana May 9 - 1943 ^{from EK}
1812 North Purdum St.

My dear Doctor Friesner!

Your very good Letter - and
package of County Records - came
same day - Glad - Happy - elated - to get
Letter - and Books -

A glance at Records - especially Clinton
and Carroll Counties. reveal that much
remains to be done. - As was said
two thousand years ago! - The Harvest is
great and the laborers are few - all too
few. - Your letter gives me new and
renewed hope. - For Dr. Deam presumed
that you may not be able to ^{do} any Field work
at all - I replied that 1943-'44 would not.
hurt you Boys much - but that with
EK - it was now or never - And in 1943 -
what I will do - is very problematical -
eyes - pep - vitality - not good as 1942 - yes
I look back - I really did well -
remember the many long days - & hrs.
And - though - a day now & then seemed
(over)

barren, the Co. ² records stacked up
very nicely - the species not rare - but
records that helped a lot.

I've planned to go to Burlington, but cold
rain - & home tasks has prevented. - New
rear tire on bike went sizz - my pump
went hoey - a new pump is no good. - &
now Monday got to make 3rd trip to town &
exchange pump. - But weather - wind - has
been bad. - The walks - 3-4 mi. - are ex-
haustive - a bad ~~index~~ index. - But I've
experienced this previously - & come out of it.
- I can only HOPE I'll do a fair summer's
collecting. - But I'm getting a poor start.

May 4th left M. S. A. about 10.1 - Fiss &
brief V-mail May 6. - He's in N. Africa
"somewhere" - I've been writing 3 letters a
week - filling in with clippings - &c. - At
my age - 70 - & declining health. - I do not
expect to see May 4th again. - Listened
to Radio - perhaps 4 hrs. today. - Much fit
good - No one expects war to end before
1945 - 1946 - ... And a lot can happen
to either of us - (May or me) It's a 50-50.
A few successes - fine in Tunisia - our
political blunders - numerous. - But
this is ~~not~~ far afield of Botany.
Hunt Institute for Botanical Documentation

Just got letter from Dr. B. A. Kruckhoff -
He wants 11 species - I'll enumerate -
& comment very briefly:

1. *Frasera Carolinensis* - Collected 1 specimen 1942 - was (1935) a good colony - W. B. A. vandals destroyed it. Very ? 1943
2. *Chenopodium Pulvaria* - Don't know it
3. *Mercurialis annua* - " " "
4. *Fumaria officinalis* - " " "
5. *Urisagema droseratum* Rare - I collected it in Shent woods - 5 mi E. (our experiment) yrs. ago - None was there 1941 - Found some 4-5 yrs ago - 5-6 mi S. - very doubtful
6. *Pricklypear grandifolia* - occurs here in a few low woods - I may get a lb. of rhizomes by going 2-3 places -
7. *Hemulus Americanus* - Abundant R. R.'s
8. *Bicuculla cucullaria* - OK - "
9. *Erythronium albidum* - Scarce - Plenty of yellow.. but " rare -
10. *Saururus cernuus* - Abundant. - - -
11. *Floerkea proserpinacoides* - Found it plentiful in 2 woods - 4-5-6 yrs. ago. It has a habit of being scarce, then abundant.

4
Thought maybe - we - could keep these in mind - & perhaps run across 1-2 of the rare ones.

As to places to go - you know so much more than I. - Lost yr. my first day with you was June 20 - Brown Co. - & lost day - Aug 22 - Hamilton Co. - The next Sat. - Aug 29 - I was to come again to Noblesville & you planned to go E. + N.E. & get into Madison Co. - You cancelled that day - & I do not know if you ever got into Madison Co. - later - So that my only suggestion - may be of no value at this date.

Got Complete Timetable week ago ~~and~~
+ 1st bus leaves early - 6:00 A.M. + goes thru all the little towns - (Tipton - & to Noblesville (2-3-4 mi E. of R. 31.) gets to " 7:25 A.M. - to Carmel 7:41 P.M. and "three Mora" (!) at 7:56 wherever Mora is! - This is a local bus - nice + early - a little bumpy - & many stops - but never crowded as are the main bus straight to Indianapolis. Returning leaves Noblesville 4:22 + 6:22 P.M. - Good hrs.

From EK
9-V-43
First bus out on direct line - R. 31 - is
8:15 Kokomo Westfield 9:15 Carmel 9:25
Returning " 9:15 9:05
6:21 6:15

Sat. bus on this line were crowded 1942 -
+ this yr. - Ugent days are very ..

I'll not go any farther now. -
It's 4 weeks away. and will wait
until you get more information.

If you go South - or directly east or
west - that may change above.

Hope you are doing well with
your new classes.

Brief letter ~~from~~ from Dr. Deam -
last week. - He was not very well.

Best Wishes to you - Mrs.
Friesner - Doctor Potzger. - -

Sincerely Yours

Chas. M. EK.

Letter from Evans week ago - He's in
University - Ala. - busy - busy - classes -
History - algebra - etc. - Not impressed with
biology - Botany Dept - For below Butler standards
Hunt Institute for Botanical Documentation

P.S. - Looks for books. - - -
Anything locally that you need
wish or can use at any time,
tell me. Sincerely,

Chas.

Oklahoma
Agricultural and Mechanical College
DEPARTMENT OF BOTANY AND PLANT PATHOLOGY
STILLWATER

May 11, 1943

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

Dear Dr. Friesner:

This is to acknowledge the receipt of the Herbarium specimens which you recently sent to me. I am certainly glad to receive such a fine lot of beautiful specimens that have been so well prepared.

You mentioned in your letter that part of these specimens were dipped in an alcoholic-glycerine solution of mercuric chloride. I am anxious to know what your formula for this solution is, and something as to the results which you ^{have} obtained by using it.

A few years back we used an alcoholic solution of mercuric chloride, but this did not seem to bring very good results. The museum pests seemed to eat the treated specimens just the same as the untreated ones; therefore, I shall be glad to know whether you have a solution that really is effective.

Again thanking you, I am,

Very sincerely yours,

Robert Stratton

Robert Stratton
Associate Professor

RS-neo

OBERLIN COLLEGE

OBERLIN, OHIO

DEPARTMENT OF BOTANY

May 13, 1943

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

Dear Professor Friesner:

We are sending you a package of 119 of our Ohio duplicates in completion of our exchange account. Our records indicate that we owed you 75 sheets. This shipment would seem to leave the account 44 sheets in our favor.

We are not overly proud of these plants. They are rather old, as the labels show, and the color is not good because nearly all of them have been poisoned with mercuric chloride against insect damage. If they seem to you less than satisfactory, please figure the exchange as seems to you fair and let us know. I may add that there are other duplicates of this same series that we would be glad to send you as soon as we can get to it, if you would care for them.

Sincerely yours,

George T. Jones

George T. Jones

/n

May 13, 1943
from Jones

Butler University

Ohio Duplicates sent from Oberlin in Spring, 1943

Agrostis palustris	Fraxinus americana
Cenchrus pauciflorus	Fraxinus lanceolata
Cinna arundinacea	
Echinochloa crusgalli	Apocynum cannabinum
Elymus hirsutiglumis	
Eragrostis caroliniana	Asclepias incarnata
Homalocenchrus virginica	
Hystrix patula	Convolvulus arvensis
Poa annua	Cuscuta gronovii
Erythronium americanum	Mertensia virginica
Maianthemum canadense	
Smilacina trifolia	Verbena hastata
Hicoria glabra	Collinsonia canadensis
Hicoria ovata	Hedeoma pulegioides
	Leonurus Cardiaea
Asarum canadense	Lycopus americanus
	Lycopus rubellus
Polygonum aviculare	Lycopus virginicus
Polygonum hydropiper	Monarda fistulosa
Polygonum hydropiperoides	Monarda mollis
	Mentha citrata
Claytonia virginiana	Mentha piperita
	Mentha spicata
Anemone virginiana	Scutellaria lateriflora
Anemonella thalictroides	Teucrium canadense
Clematis virginiana	
Hepatica acutiloba	Physalis heterophylla ambigua
Ranunculus recurvatus	Solanum carolinense
	Solanum Dulcamara
Sanguinaria canadense	Solanum nigrum
Dicentra canadensis	Pentstemon hirsutus
	Scrophularia marilandica
Mitella diphylla	Veronica scutellata
Crataegus coccinea	Conopholis americana
	Epifagus virginiana
Osmorhiza Claytoni	
Pastinaca sativa	Catalpa bignonioides
Sanicula canadensis	Catalpa speciosa
Sanicula gregaria	
Sanicula trifoliata	Cephalanthus occidentalis
Sium cicutaefolium	Galium Aparine
Thaspium aureum	Galium Claytoni
	Viburnum acerifolium
Cornus florida	Viburnum dentatum
Nyssa sylvatica	
Steironema ciliatum	Dipsacus sylvestris
	Echinocystis lobata

Lobelia cardinalis
Lobelia inflata

Achillea millefolium
Ambrosia artemisiifolia
Antennaria neglecta
Antennaria neodioica
Antennaria parlini
Antennaria plantaginifolia
Anthemis Cotula
Arctium Lappa
Arctium minus
Aster cordifolius
Aster divaricatus
Aster ericoides
Aster laevis
Aster macrophyllus
Aster novae-angliae
Aster paniculatus
Aster paniculatus acutidens
Aster prenanthoides
Aster sagittifolius
Aster Shortii
Aster tradescanti
Bidens bipinnata
Bidens frondosa
Bidens laevis
Chrysanthemum Leucanthemum
Cirsium lanceolatum
Erechtites hieracifolia
Erigeron annuus
Erigeron ramosus
Eupatorium perfoliatum
Eupatorium urticaefolium
Gnaphalium polycephalum
Gnaphalium uliginisum
Helenium autumnale
Rudbeckia hirta
Rudbeckia laciniata
Solidago caesia
Solidago canadensis
Solidago latifolia
Solidago nemoralis

Dallas, Texas
May 13, 1943

Prof. Ray C. Friesner
Butler University
Indianapolis, Ind.

Dear Prof. Friesner:

Your letter of May 6 has been forwarded to me.

Dr. Lundell is in Government Service, working at the present time in Mexico. Due to mailing difficulties letters are not being forwarded to him.

The package of specimens referred to in your letter will be put in storage until the war is over. My husband expects to return to his duties at the University of Michigan and exchanges will be carried on as before.

Duplicates on exchange may be sent at your convenience or if you prefer to wait until Dr. Lundell returns, then he will handle the matter.

Thanking you, I am
Very truly yours
Mrs. C. B. Lundell

address:
3308 Daniels
Dallas, Texas

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF BOTANY
BERKELEY, CALIFORNIA

May 14, 1943

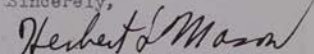
Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

The 191 specimens mentioned in your letter of May 6 have been received in good condition and credited to your exchange account.

We are glad to have the fine representation of sedges included in the shipment.

Sincerely,


Herbert L. Mason
Curator of the Herbarium

HLM:ac

May 16, 1943

May 16, 1943

Dr. Robert Stratton
Department of Botany
Oklahoma A. & M. College
Stillwater, Oklahoma

Dear Dr. Stratton:

The formula for the herbarium-dipping material we have been using is:

95% alcohol..... 1 gal.
glycerine..... 90 cc
mercuric chloride..... 90 grams

We have been dipping all our material, except grasses, sedges and certain ferns, for the past four or five years and I have not seen any specimens that have been dipped that have been attacked by any pest. Of course, I have not checked the entire herbarium but I have noted especially the Cruciferae and Compositae which are unusually badly attacked, as a rule, and have found untreated specimens in the same folder with treated ones with only the former attacked.

It is likely that an alcoholic solution without the glycerine is not so effective as the alcoholic-glycerine solution since the glycerine tends to help the mercuric chloride to adhere to the specimen. I hope this will prove effective for you.

Sincerely yours,

Ray C. Friesner

LETTER 1000
 1-1000 1000 1000

Number of days	at least 10 days	at least 10 days	at least 10 days
22-73	22-73	22-73	May 18, 1943
Dr. George T. Jones			
Oberlin College			
Oberlin, Ohio			
Dear Dr. Jones:			
Your package of herbarium specimens came today. We are glad to get them because we have only a poor representation of Ohio species in our herbarium. The quality of these specimens is entirely satisfactory, as a matter of fact, much better than many we receive from other exchanges.			
My record somehow doesn't seem to agree with yours. According to my record I owed you 25 plants after your shipment of March 16. This now leaves me 144 specimens in debt to you. I have a small number from last year's collection sorted out for you but since they are so few, will hold them until after the present collecting season is over.			
I shall be glad to have you send me other duplicates of the same set from which the present shipment came in case you care to do so.			
			Sincerely yours,
			Ray C. Friesner

1000-1000 1000-1000 1000-1000 1000-1000
 RCF:mb
 1000-1000 1000-1000 1000-1000 1000-1000
 1000-1000 1000-1000 1000-1000 1000-1000
 1000-1000 1000-1000 1000-1000 1000-1000
 1000-1000 1000-1000 1000-1000 1000-1000
 1000-1000 1000-1000 1000-1000 1000-1000

West Virginia University
COLLEGE OF ARTS AND SCIENCES
MORGANTOWN

DEPARTMENT OF BOTANY AND ZOOLOGY

May 21, 1943

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

Dear Dr. Friesner:

The package of specimens arrived several days ago and, as usual, proved to be in excellent conditions and very valuable additions to our herbarium. Thank you very much for sending them.

Sincerely,

Earl L. Core

Earl L. Core
Curator of the Herbarium

ELC/eab

Kokomo, Indiana, May 22, 1943
1812 W. Purdue St.

My dear Doctor Friesner!

While scribbling to Dr. Patzsch
may be an item or two wait because
of place - none of prime importance.
The chances ^{are} that the first Saturday bus
will be over-crowded - the local (bumpy)
bus thru Tipton & Noble is my best
guess for Saturday. I gave you schedule - &
can tell you again if necessary - This, in case
you come North - I am leaning all to you
- only I prefer to leave Sat. morning every
occasion possible - rather than Fri. P.M.
I don't know whether it would be
possible - or practical - some time - to meet
you in Soloyette. Anderson ^{neither} or some such
point. -- We can talk & work that out.
When I see you - Only a suggestion -
If I can't pep up some more, - I'll not
be worth my salt - let alone bread &
bears - (No meat 1943!) [of course, I have
ration cards.]

It's interesting to run thru the County
Books - & see the species I collected 1942

I noted at once² in the Harvard Co. Lists
the omission of *Aureum quinquefolia*
and *Rumex crispus*. - I remember very
distinctly collecting each of these, - several
sheets; I probably they are on the New Co.
Records. Also I note that you do not
have either of the *Dicentra*s. - I got these
in Sherk Woods Mon.⁵⁻² where I planned
to go for 2 weeks for Krukoff.

A lot of my Letter Time is consumed
writing to Max EK. - 5 times in past week.
- filling in with clippings. Only 2 short
letters. - in all not 1 page like this. - since Mch. 30.
Left N.S. Apr. 1. - Last note recd May 6, written Apr 15.

Same day I rec'd package from Evans -
of Dr. Harpers reprints. - got letter from Dean.
Saying he had letter from Dr. Harper. - 65 yr.
old bachelor - engaged to 50+ yr. old woman -
He asks whom shall I - we - pity - one or
both. That's for Dr. P. - to answer. - - - -

My reply would be an unequivocal NO. - - -
- Remain a bachelor - - which is only opinion
and not science. - + ; worthless. - -

If you + Dr. Potyger have time - you can
trade letters. - Presume you hear from
Miss Evans. - + others.

With Best Wishes,
Very Sincerely Yours, C. M. EK

Scanned

Kokomo, Indiana, May 30, 1943.
1812 North Purdue St.

My dear Dr. Friesner:
I must be brief. - Am tired
& sleepy. - 10 P.M.

Wheeled May 24 to Shunk's woods -
- 7 mi. - & got *Florkea proserpinacoides*.
- very abundant - covering the ground
in a pastured woods, South. - but none
in Shunk's virgin woods! also got
Sicentra there. Was in all the
violent rain storm - soaked - - -

On Wed. - May 6. - went to Lafayette.
Met Kriebel at noon - & spent afternoon
4 mi. S.W. Lafayette. - Then out all
day Thurs. - 6-7 hrs. - S.W. & Friday
A.M. out N. of Soldier's Home -

My objective was *Spergularia*
rubra - which I found on Post-Oak
Hill June 9-42 - but failed to find 1943
But came hill got a *Phlox* which

resembles *P. subulata* - but isn't it -
 - its glandular - pubescent. - Does it fit
 answer to *P. bifida* - Fits *P. hlx Kelseyi* -
 in Britton - Brown - But I'm not
 satisfied yet. - Will have to go over
 every manual - with specimen in hand.
 Found new to me. - & to Kriebel too. -
 - *Ellesia myctelea* - just S. J. ~~sp~~
Spermelopsis inermis station. Wabash R.R.
 Kriebel happened to be working on
 farms in that region. - He was
 going to Richmond, - so autoed me to
 my door.

I used your Tippecanoe List All.
 At that. I made 3 big stacks of sheets. -
 Will not a considerable number of
 New Co. records for Butler.

Kriebel is a Great Fellow. in
 many ways. - He took me out &
 picked me up.

I have the Bus tables for all Ind.
 I'll give you times as I've worked

I think function 25-31
no direct west light
about 3-4 miles -

Tho I was in field
5 days last week I
don't feel much more
exhausted than when
at home during rainy
2- weeks. Yours
C. H. C.

them out. - Local - Leaves Kokomo
6 A.M. - gets to Tipton - 6:43 - Goes down
R. 31 about 5 miles only.

The Times Bus leaves Kokomo 6:50 AM
and gets to Tipton 7:30. It would
come to Junction 31 + 28 - about
7:25 - This is my best guess.

The big Thru Bus to Judip's
leaves Kokomo 8:15 + would get to
Junction 31 - 28 about 8:45 A.M.
On Sat. A.M. this would be jammed.
+ 8:45 would be late.

I'm going to town Mon. - and
will go to Bus Station + see if I can
+ will finish this then.

Mon. P.M. at P.C.

Best bus - I think is 6:50 A.M.
I'll get off at Junction 28 + 31
about 7:25 - 7:30 A.M. That will
give us a big day.

See you 7:30 A.M. - 28 + 31.
Best Wishes

C.M. Eke.



THIS SIDE OF CARD IS FOR ADDRESS

Dr R. C. Friesner,
Dept of Botany Butler University,
Indianapolis 7, Ind.

June 4-43.

Dear Mr. Friesner,
Charlie had a light
stroke at five o'clock
this morning, says
he cant go with you
Sat, says Please
tell Potzger,
Yours sincerely
Mrs. Eck.

June 6/43.

Dr. P. A. Presner of J. E. Potzger -
Kind Friends -

Mr. Ek has Ek wants me to tell you he was stricken with paralysis on June 4, 3 1/2 P. M. his right side being entirely gone. He doubts if he will ever be able to botanize and collect any more. He says this ought to have happened last Jan. when he had time. He is very sorry he couldn't go with you yesterday, our season has just started. He had planned to go a good many places. He knows everything, but doesn't talk very well, we have great difficulty in understanding him, and he says he can't think very good. He had just started in botany, had worked it 10 years and thought he had about 2 years more. He says there is no use to use to tell any more, you know the rest. He is receiving good care and we hope he will be much better soon. You don't know how much I have appreciated both of you. A week yet ought to tell the story, he says, he don't want to be a care on others, his wife has been very good to him.

Mrs. Ora Chasin for
Chas. M. Ek.

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)

NEW YORK, N. Y. (#58)

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DE F. BALDWIN
JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

June 12, 1943

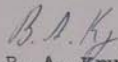
Dr. Ray C. Friesner
Department of Botany
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Enclosed please find a list of 18 plants which I am sending you in duplicate. On one copy please indicate those plants that you can send us samples of and return it to me so that I may plan accordingly.

I had hoped to receive these plants from our mutual friend, Mr. Ek, but I hear that because of his ill health it is not likely that he will be able to collect this year.

Very truly yours,



B. A. Krukoff

/JD
Enc.

Enclosure

June 12, 1943.

PLANTS OF INDIANA

1. Fraseria carolinensis (Gentianaceae)
Entire plants with roots - 1/2 lb. or more.
Roots - 1/4 lb. or more.
2. Arisaema dracontium (Araceae)
Sample of entire plant - 1 lb. or more.
- X 3. Humulus americanus (Urticaceae)
Stems with leaves and flowers - 1 lb. or more.
- X 4. Saururus cernuus (Saururaceae)
Entire plant - 1 lb. or more.
5. ~~Entire plant~~
- X 5. Sisymbrium officinalis (Cruciferae)
Entire plant - 1 lb. or more.
- X 6. Verbascum blattaria (Scrophulariaceae)
Flowering tops (ship fresh) - 1/2 lb. or more.
7. Xanthium canadense or
Xanthium sp. (Compositae)
Upper parts with leaves - 1 lb. or more.
Seedlings - 1/4 lb. or more.
8. Digitaria sanguinalis (Gramineae)
Entire plant with roots - 1/2 lb. or more.
- X 9. Ambrosia trifida (Compositae)
Entire plant or upper part with leaves - 1 lb. or more.
Tops with inflorescences - 1/4 lb. or more.
10. Utricularia purpurca (Utricular.)
Entire plant - 1/2 lb. or more.
- X 11. Bidens frondosa (Compositae)
Entire plant or tops - 1 lb. or more.
Flowerheads - 1/4 lb. or more.

- X 12. Pastinaca sativa (Umbelliferae)
Roots - 1 lb. or more.
Fruits - if available.
Few leaves as voucher for identification.
13. Staphylea trifoliata (Staphyleaceae)
Seeds - small sample
Branchlets with leaves - 1/2 lb. or more.
Roots - 1/2 lb. or more.
14. Robinia pseudoacacia (Leguminosae)
Roots - 1 lb. or more.
Bark - 1 lb. or more.
Branchlets with leaves - 1 lb.
- X 15. Leonurus cardiaca (Labiatae)
Entire plant - 2 lbs.
16. Passiflora incarnata (Passifloraceae)
Roots - 1 lb. or more.
Tops with leaves - 1 lb. or more.
- X 17. Rudbeckia hirta (Compositae)
Tops with flowers - 1 lb. or more.
- X 18. Typha latifolia or T. angustifolia (Typhaceae)
Entire plants or leaves - 1 lb. or more.
Underground parts - 1/2 lb. or more.

June 13-43.

R. E. Friesner and J. E. Potzger.

It is an awful thing to lie here and be able to write to you, I can't talk very well, I can't write at all, it is now ten days since it happened, I can't see any improvement at all, your words have meant a great deal to me, I have saved all your letters, and cards and tied them up in a big bundle, the same with Kleans letters, but I don't know what will become of them, I am being well taken care of, but there is nothing much one can do in a case like this, I can't be with you this month, I am sorry I couldn't go with you June 5; I wanted to see about the Railroads around Elwood and Anderson, and show you where I got that cacalia west of Hobbs 1 mile, there were many things I wanted to talk to you about, I am glad Keller has a good job, for he is a fine fellow, I think constantly of all the fine trips we had together, and I feel like they are all gone now, I wish I could take them all over again, both of you come up some time, when not too busy and get a lot of my books,

when you can look over them and
take what you want, there may be a
few worth while you can tell at once,
and all that you want you can have,
all I want to keep is my Botany, you can
have Rocky Mountain Flora, I could say
many thing more but cant now,
I shall alitays Remember You two
and Dean, Kriebel also is a fine
fellow, if you go on any trips you
might tell me on a card, if you find
any thing new or regular tell me about
it, I had planed to get many new
odds and ends of co records,

with Verry best wishes for
your School, I am Sincerely yours,
Mrs Eick.

P.S. if you believe in prayer
Please say one for Charlie will you,



THIS SIDE OF CARD IS FOR ADDRESS

Drs. R. C. Priesner & J. E. Potzger
Botany Dept.
Butler University
Indianapolis 7
Ind.

June 14/43

Dear Friends-

I forgot to tell you yesterday about Dean. They celebrated their 60th anniversary yesterday. Dr. Cleland is in the hospital with appendicitis. The last week or two Indiana Un. has been taking all of his specimens by the thousands. He says he hates to part with them, they took his mind back all over the state where ever he had been, over 40 years. They are taking his botany library too. He is giving some books to his grand son. Chas. M. Ek.
Written by Mrs. Chism

Fort Saskatchewan, Alberta
June 16, 1943

Dear Dr. Friemer,

Thank you very much for the
copies I received today from you of your publication
of the two hybrid *Solidago* that you have
named and described. I am very glad indeed to
have them, and will study them further as leisure
permits. I plan to watch out this summer for
any further colonies of *S. leiophylla* that may
exist in this area.

I have had borrowed from Prof. Fraser two
copies of your "The Genus *Solidago* in North-western U.S.A." and
would very much like to own a copy myself.
If you expect to have a revised edition published
in the not-too-distant future I would prefer
to wait for that. If not I would much
appreciate a copy of the original publication,
if convenient.

With best regards,

Yours sincerely,

G. H. Turner

P.S. In looking over my herbarium specimens labelled
Solidago gigantea leiophylla I find I have 2 collections,
2715 collected in poplar woods, near the River bank on
July 24, 1941, which is identical in every way with my
3285. The 2 locations are $\frac{3}{4}$ of a mile apart, I have and
926 collected on a "low, brushy place on roadside Fort
Sask." which differs out in having a short, dense $\diamond$ -shaped

inflorance so often ^{seen in R. leptota} elongate. So it would seem
this form may be commoner than I had
supposed. I failed to note exactly the locale
of 916, so do not know how far it was from
that of the other 2 colonies.

If I find further stands of the plant this
year I will send you specimens.

G. H. T.

June 24, 1943

Dear Dr. Krukoff:

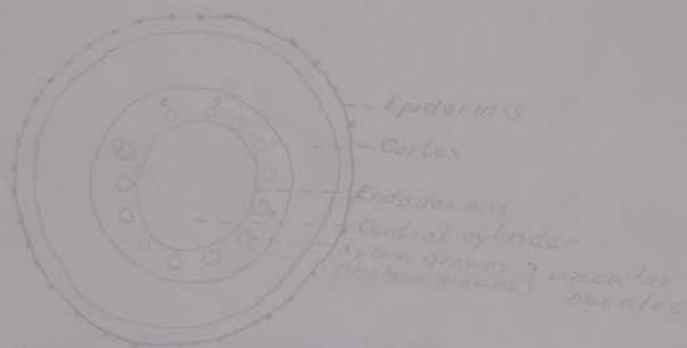
After considerable delay I am re-turning your list of needs with those checked which I shall be able to secure in our region. I am sorry for the delay. We are so overloaded with teaching in trying to carry on our regular load plus the most unreasonable army teaching load anyone could imagine that we are nearly prostrate.

I shall do my best to get out enough to secure this material for you and will send it as rapidly as it is ready without waiting to secure all of it.

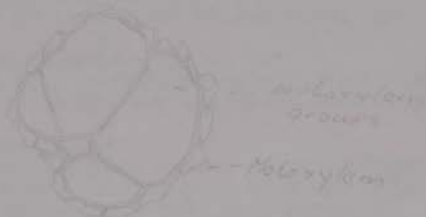
I called upon Mr. Ek last Saturday and found him totally incapacitated for the remainder of this year. He suffered a stroke of paralysis which has left his right side helpless. We have hopes that he may recover in time sufficiently to get out again, but I feel certain that it will require considerable time.

Sincerely yours

Angiosperms



14 Cross section of root in outline



15 Cells of root.

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)
NEW YORK, N. Y. (#58)

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DEB. BALDWIN
JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

June 28, 1943

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

Dear Dr. Friesner:

Many thanks for your letter of June 24th and the enclosed list. You may be assured that when the plants are received they will be given our careful attention.

If you should come across any members of Gentianaceae please collect samples for us (entire plants with roots - 1/2 lb. or more). As you know, during the Civil War Sabbatias were used as a substitute for quinine. We recently obtained some mildly promising results with certain members of this group.

Very truly yours,

B. A. K.
B. A. Krukoff

/JD



THIS SIDE OF CARD IS FOR ADDRESS

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

GRAY HERBARIUM OF HARVARD UNIVERSITY

38,
CAMBRIDGE, MASS., June 28, 1943.

Dear Prof. Friesner: —

In continuation of exchange we
are sending you Cent. 13 of the *Plantae Exsiccatae*
Grayanae.

Sincerely yours,

Lyman B. Smith.

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)
NEW YORK, N. Y. #58

PRESIDENT
JOSEPH R. SWAN

VICE-PRESIDENTS
HENRY DEF. BALDWIN
JOHN L. MERRILL

DIRECTOR
WILLIAM J. ROBBINS

TREASURER
ARTHUR M. ANDERSON

June 29, 1943

Dear Dr. Friesner:

Under a separate cover I am sending
you a reprint of a paper entitled:
"WOOD STRUCTURE OF RYANIA" by Dr. M. W.
Bannan.

Our chemists have isolated certain
active principles with interesting
properties from members of this group of
plants, and a taxonomic revision of the
genus is now in preparation.

I trust that the paper will be of in-
terest to you.

Very truly yours,

B A Krukoff
B. A. Krukoff

/JD