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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.

TELEPHONE SEDGWICK 3-3200

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

January 2, 1942

Determinations up to 1942

Dear Sir:

I am enclosing herewith supplementary lists of determinations of my collections some of which are in your herbarium.

Very truly yours,

B. A. Krukoff

B. A. Krukoff

Bak/Jd
Encls.

from Krukoff 2-I-42.

December 1941

New York Botanical Garden

Supplementary Lists of Determinations of Collections

by B. A. Krukoff

Determinations as follows:

Acanthaceae	by	E. C. Leonard
Amaranthaceae	by	F. R. Fosberg
Annonaceae	by	R. E. Fries
Asteraceae	by	S. F. Blake
Campanulaceae	by	H. A. Gleason
Euphorbiaceae	by	L. Croizat
Leguminosae	by	E. P. Killip
Lobeliaceae	by	H. A. Gleason
Melastomaceae	by	H. A. Gleason
Menispermaceae	by	B. A. Krukoff and H. N. Moldenke
Passifloraceae	by	E. P. Killip
Strychnos	by	B. A. Krukoff and J. Monachino

from Krukoff 2-1-42

December 1941

Supplementary List of Determinations of Krukoff Collection

Fifth Distribution

7654 Strychnos javariensis Krukoff, distributed as Strychnos species #7
7655 Strychnos javariensis Krukoff, distributed as Strychnos species #7
7656 Strychnos javariensis Krukoff (TYPE COLL.), distributed as Strychnos species #7
7675 Strychnos javariensis Krukoff, distributed as Strychnos species #7
7788 Strychnos Jobertiana Baill., distributed as S. trichostyla
7790 Strychnos solimoesana Krukoff, distributed as Strychnos species #14
7798 Strychnos parviflora Spruce
7805 Strychnos javariensis Krukoff, distributed as Strychnos species #7
7821 Strychnos parviflora Spruce
7829 Strychnos Jobertiana Baillon, distributed as S. trichostyla
7863 Strychnos javariensis Krukoff, distributed as Strychnos species #7
7987 Strychnos amazonica Krukoff, distributed as Strychnos new species #37
8009 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8024 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8040 Strychnos longisepala Krukoff, distributed as S. cf. Poeppigii
8059 Miconia ternatifolia Triana
8148 Miconia aulocalyx Mart.
8425 Miconia ternatifolia Triana
8478 Strychnos longisepala Krukoff, distributed as S. cf. Poeppigii
8544 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8593 Strychnos longisepala Krukoff, distributed as S. cf. Poeppigii
8610 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8678 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8680 Strychnos Smithiana Krukoff (TYPE COLL.), distributed as Strychnos species #39
8805 Strychnos Jobertiana Baillon, distributed as S. trichostyla
8927 Strychnos Barnhartiana Krukoff, distributed as Strychnos species #38
8986 Ormosia santaremnensis Ducke (det. B.A.Krukoff)
9061 Strychnos amazonica Krukoff, distributed as Strychnos species #37
9063 Strychnos Jobertiana Baillon, distributed as S. trichostyla
9066 Strychnos solimoesana Krukoff (TYPE COLL.), distributed as Strychnos new species #14
9069 Strychnos amazonica Krukoff, distributed as Strychnos new species #37
9074 Strychnos Barnhartiana Krukoff, distributed as Strychnos species #38
9075 Strychnos Jobertiana Baillon, distributed as S. trichostyla
9084 Strychnos Barnhartiana Krukoff, distributed as Strychnos new species #38

from Krukoff 2-I-42

December 1941

Suppl. List Kruk. Colls./5th Distrib.

9085 Strychnos Smithiana Krukoff, distributed as Strychnos new species #39

9092 Strychnos Smithiana Krukoff, distributed as Strychnos new species #39

9093 Strychnos Barnhartiana Krukoff, (TYPE COLL.), distributed as Strychnos new species #38

9093a Strychnos Smithiana Krukoff, distributed as Strychnos new species #39

9103 Strychnos Barnhartiana Krukoff, distributed as Strychnos new species #38

9105 Strychnos solimoesana Krukoff, distributed as Strychnos new species #14

from Krukoff 2-I-42

December 1941

Supplementary List of Determinations of Krukoff Collection

Sixth Distribution - (##10001 - 11805)

10003 Chamaefistula Bangii Britton & Rose
10007 Pfaffia heloserices (Mart.) Moq.
10013 Chuquiraga cf. varians (Gardn.) Rusby
10015 Vernonia aff. myriocephala DC.
10038 Parosela pilocarpa Rusby
10068 Pfaffia grandiflora (Hook.) Fries
10085 Baccharis trinervis (Lam.) Pers. var. rhexioides (HBK.) Baker
10095 Justicia lineolata R. & P.
10097 Guatteria Buchtienii R. E. Fr.
10099 Vernonia jubifera Rusby
10101 Baccharis trinervis (Lam.) Pers. var. rhexioides (HBK.) Baker
10107 Acacia cf. Kuhlmanii Ducke (as to foliage)
10122 Rollinia vel Annona (sine floribus genus non determinabilis)
10131 Justicia lineolata R. & P.
10132 Oxandra Espintana (Spruce) Baill.
10136 Vernonia baccharidea HBK.
10145 Vernonia scorpioides (Lam.) Pers.
10146 Aphelandra rubra Leonard sp. nov.
10149 Oyedaea boliviana Britton
10159 Pfaffia grandiflora (Hook.) Fries
10162 Canavalia eurycarpa Piper, vel aff.
10163 Guatteria Buchtienii R. E. Fr. (?)
10184 Liabum hastifolium P. & E.
10202 Siphocampylus Orbignyanus A. DC.
10207 Mikania sp.
10224 Oxandra Espintana (Spruce) Baill. var. vel sp. nova
10226 Guatteria tomentosa Rusby
10234 Pseuderanthemum viscosum Leonard, sp. nov.
10254 Copaifera reticulata Ducke
10255 Hymenaea
10257 Tessaria integrifolia R. & P.
10260 Baccharis debilis Rusby
10266 Onoseris fraterna Blake (TYPE COLL.)
10281 Oxandra Espintana (Spruce) Baill. var. vel sp. nova
10302 Siphocampylus Orbignyanus A. DC.
10310 Eupatorium sp.
10316 Mikania dioscoreoides (Rusby) Robinson
10334 Jacobinia brevispica Leonard sp. nov. not Beloperone
10353 Eupatorium sp.
10357 Salmea scandens (L.) DC.
10367 Liabum giganteum Rusby
10385 Eupatorium jugipaniculatum Rusby
10398 Chamissoa macrocarpa HBK.
10400 Idiacanthus boliviensis Leonard sp. & gen. nov. not Pseuderanthemum
10404 Eupatorium jugipaniculatum Rusby
10408 Ormosia eneura Harms ?
10413 Piptocarpha sp.
10428 Vernonia fulta Griseb.

10459 Mikania dioscoreoides (Rusby) Robinson
10461 Bouchea fluminensis (Vell.) Moldenke
10471 Neurolaena lobata (L.) R. Br.
10474 Vernonia jubifera Rusby
10475 Vernonia megaphylla Hieron
10501 Siphocampylus Orbignyanus A. DC.
10502 Ruellia nobilis Leonard sp. nov.
10525 Bidens squarrosa HBK. (form)
10536 Stylosanthes scabra Vogel
10538 Ossaea ?
10543 Guatteria Buchtienii R. E. Fr. (?)
10556 Cremostosperma leiophyllum (Diels) R. E. Fr.
10566 Swartzia grocea (Vell.) Benth.
10583 Mikania cf. decora Poepp.
10616 Cf. Apurimacia Micheli (Rusby) Harms
10617 Strychnos brachiata Ruiz & Pav., not S. panamensis
10669 Ruizodendron ovale (Ruiz et Pav.) R. E. Fr.
10703 Baccharis dracunculifolia DC.
10715 Senecio sp.
10717 Baccharis genistelloides (Lam.) Pers.
10719 Pfaffia paniculata (Mart.) Kuntze
10749 Mikania williamsii Robinson
10764 Cissampelos fasciculata Benth.
10776 Piptocarpha sp.
10802 Abuta splendida Krukoff & Moldenke not A. Candollei
10815 Guatteria trichocolonia Diels
10831 Guatteria obliqua R. E. Fr. (?)
10834 Guatteria boliviana H. Winkl.
10856 Leandra hylophila Gleason
10864 Strychnos brachiata Ruiz & Pavon, not S. darienensis
10866 Abuta splendida Krukoff & Moldenke
10927 Abuta splendida Krukoff & Moldenke not A. Candollei
10961 Clidemia sessiliflora (Naud.) Cogn.
10965 Senecio psidiifolius Rusby
11010 Vernonia sp.
11027 Guatteria Buchtienii R. E. Fr.
11038 Piptocarpha lechleri (Sch. Bip.) Baker
11049 Ormosia sp. nov.?
11083 Abuta splendida Krukoff & Moldenke (TYPE COLL.), not A. Candollei
11086 Guatteria Buchtienii R. E. Fr.
11089 Guatteria boliviana H. Winkl.
11095 Guatteria Tessmannii R. E. Fr.
11108 Guatteria boliviana H. Winkl.
11131 Brachyotum ?
11137 Ossaea ?
11142 Cissampelos fasciculata Benth.
11153 Leandra aurea (Cham.) Cogn.
11150 Senecio sp.
11166 Siphocampylus oblongifolius Rusby
11170 Senecio psidiifolius Rusby
11171 Vernonia boliviana Britton
11188 Miconia mapirensis Gleason
11214 Guatteria sp.
11215 Miconia mapirensis Gleason (TYPE COLL.)

from Krukoff 2-I-42.

11221 Henriettella
11231 Cf. Stryphnodendron polyphyllum Mart.
11242 Cassia lucens Vogel
11256 Non Annonaceae as reported
11258 Rollinia boliviana n. sp.
11366 Chaptalia nutans (L.) Polak.
11374a Tibouchina granulosa (Desr.) Cogn.
11376 Miconia stellulata Gleason (TYPE COLL.)
11467 Brachyotum glabratum Gleason
11508 Miconia argyrophylla DC.
11520 Henriettella
11522 Mikania micrantha HBK.
11528 Hymenaea courbaril L.
11532 Annona montana Macf. (sensu lat.)
11537 Croton cajucara Benth.
11543 Rollinia exsucca (Dun.) A. DC.
11571 Dipteryx ?
11589 Tragia Lessertiana (Baill.) Muell. Arg.
11590 Guatteria Poppigiana Mart.
11592 Ephedranthus pisocarpus n. sp.
11597 Copaifera oblongifolia Mart.
11601 Ormosia paraensis Ducke ?
11607 Annona membranacea n. sp.
11612 Ormosia paraensis Ducke ?
11613 Hymenaea courbaril L. ?
11637 Henriettella
11638 Guatteria Poppigiana Mart.
11641 Duguetia echinophora R. E. Fr.
11652 Bauhinia viridiflora Ducke
11691 Caesalpinia
11711 Hymenaea parvifolia Huber
11733 Pterolepis glomerata (Rottb.) Miq.
11735 Peixanisia multijuga (A. Rich.) Britton & Rose
11736 Tococa guianensis Aubl.
11741 Passiflora auriculata HBK.
11748 Copaifera oblongifolia Mart.
11749 Croton matourensis Aubl.
11751 Clidemia
11753 Swartzia flemmingii Raddi
11755 Phyllanthus lathyroides HBK.
11758 Miconia
11761 Sebastiana corniculata (Vahl.) Muell. Arg.
11774 Leandra micropetala (Naud.) Cogn.
11775 Croton sp.
11780 Hepsera aquatica (Aubl.) Naud.

ELIZABETH HALFERT
815 TAYLOR AVENUE
DETROIT, MICH.

Jan 5 1942

Dear Ray:

I sent off some sun dews and pinguiculas which I thought might interest your students. I have had very good success keeping these in the laboratory in terraria on a window sill & have had them blossom. I found that they digested fruit flies, but I don't know as it is essential to their existance for the short time we keep them. I thought I had two species of Pinguicula.

We surely wished you & Glad had come down for the vacation and said how stupid not to have asked you

particularly - There had been no frost + of course there was quite a number of late + early blooms of Florida flowers - However I did no collecting, except for the ones I sent to you - To tell the truth I didn't do much - But I had a fine time doing that!

We were glad to have Gladys's letter and hope you got some rest for the reserve that one must call out long before the close of school -

With best wishes to you both,

Sincerely,

Libby -

TELEPHONE SEDGWICK 3-3200

THE NEW YORK BOTANICAL GARDEN
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TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

January 5, 1942

Dr. R. C. Friesner
Butler University
Indianapolis
Indiana

Dear Dr. Friesner:

In reply to your letter of Dec. 23rd, we are mailing to you today by Parcel post, 458 sheets of the Philip Johnson Collection from S. Dakota and Minnesota.

This makes our exchange record rather high to our credit, but please do not consider the indebtedness too seriously, since we know you will send out duplicates when available.

G. L. Wittrock

G. L. WITTROCK
Custodian of the Herbarium

GLW:MM
Enc.

January 7, 1942

Curator of the Herbarium
University of California
Berkeley, California

Dear Sir:

On exchange account I am today sending, via prepaid express, a package containing 164 herbarium specimens. At your convenience, I shall appreciate learning whether they have reached you in satisfactory condition.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 7, 1942

Dr. Lewis S. Rose
California Academy of Science
Golden Gate Park
San Francisco, California

Dear Dr. Rose:

On exchange account I am today sending, via prepaid express, a package containing 86 herbarium specimens. At your convenience, I shall appreciate learning whether they have reached you in satisfactory condition.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 7, 1942

Curator of the Gray Herbarium
Harvard University
Cambridge, Massachusetts

Dear Sir:

On exchange account I am today sending, via prepaid express, a package containing 137 herbarium specimens. At your convenience, I shall appreciate learning whether they have reached you in satisfactory condition.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 7, 1942

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

Dear Dr. Krukoff:

On exchange account I am today sending, via prepaid express, a package containing 73 herbarium specimens in triplicate. At your convenience, I shall appreciate learning whether they have reached you in satisfactory condition.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 7, 1942

Curator of the Herbarium
New York Botanical Garden
Bronx Park, Fordham Station
New York, New York

Dear Sir:

On exchange account I am today sending, via prepaid express, a package containing 85 herbarium specimens. At your convenience, I shall appreciate learning whether they have reached you in satisfactory condition.

Sincerely yours,

R. C. Friesner

RCF:mb

January 8, 1942

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

Dear Dr. Krukoff:

I am sending you via railway express a package containing roots of Fraxinus quadrangulata. In case you should find the quantity insufficient, we can supply you with more.

Sincerely yours,

Ray C. Friesner

RCF:mb

January 8, 1942

Miss Elizabeth Halfert
815 Taylor Avenue
Detroit, Michigan

Dear Miss Halfert:

Your package of plants came Tuesday. They were in fine condition and I immediately planted them in peaty sand in a large flower pot (12 inch) and placed them near our liverwort garden in which we keep the air saturated by a vegetable-counter spray.

It was certainly kind of you to go to the trouble of sending them to us. This is the first time I have ever seen the Pinguiculas. I hope we can find a time to botanize in Florida together. Perhaps the war will be over someday and things will be so we can get back to normal again.

Sincerely yours,

Ray C. Friesner

RCF:mb

TELEPHONE SEDGWICK 3-3200

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TREASURER
ARTHUR M. ANDERSON

January 12, 1942

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

Dear Dr. Friesner:

Acknowledgement is made of the receipt of your letter of January 8th, as well as a package containing roots of Fraxinus quadrangulata. Thank you for sending this material to us.

Very truly yours,

B. A. Krukoff

Bak/Jd

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF BOTANY
BERKELEY, CALIFORNIA

January 13, 1942

Dr. Ray C. Friesner

Department of Botany

Butler University

Indianapolis, Indiana

Dear Dr. Friesner

I am glad to acknowledge the safe arrival of 164 specimens, chiefly of Indiana plants, which have been credited to exchange with your institution.

The material is very attractive and well-prepared, and it is a pleasure to add it to our collections.

With very best wishes for the new year.

Sincerely

Lincoln Constance

Lincoln Constance
Assistant Curator, Herbarium

LC:pw

TELEPHONE SEDGWICK 3-3200

THE NEW YORK BOTANICAL GARDEN
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TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

January
13
1942

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

Dear Dr. Friesner:

This will acknowledge the receipt of one package containing the herbarium specimens in triplicate mentioned in your letter of January 7th. These have been sent to our mounting room and as soon as they are returned to my office I shall look them over.

Very truly yours,

B. A. Krukoff

B. A. Krukoff

Bak/Jd

TELEPHONE SEDGWICK 3-3200

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DIRECTOR
WILLIAM J. ROBBINS

TREASURER
ARTHUR M. ANDERSON

January 13, 1942

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

Dear Dr. Friesner:

We have received today in good condition the 85 sheets which you state in your letter of Jan. 7th, are being sent on a basis of exchange. We thank you very kindly for the interesting material.

Our exchange balance apparently does not agree. Dr. Gleason never takes this descrepency seriously, but for your information I am recording below our complete record with balance in our favor.

Undoubtedly there is a serious error, and I would appreciate it, if you would help me to correct the record.

Very truly yours,

G. L. WITTROCK
Custodian of the Herbarium

GLW:MM

Date	Lot.No.	Item	Rec'd.	Sent.	Balance
10/28/36		Small misc. coll.		4	4
/ /36		Algae sps. to C. M. Palmer		222	226
/ /36		Hepaticae sps. to C. M. Palmer		60	286
5/ 7/37		Monachino, N. Y. 118; Clokey, Cal. 22; Misc. 9.		149	435
2/29/40	1831	Plants from Ma. & Indiana.	61		374
1/ 5/42		193 Plants from C.Am.,U.S. & Costa Rica.		193	567
1/5/42		P. Johnson Coll. from Minn. & S. Dakota.		458	1,025
1/ 13/42		85 specimens from Butler Univ.	85		940

January 16, 1942

Dr. C. L. Wittrock
Custodian of the Herbarium
New York Botanical Garden
Bronx Park, Fordham Station
New York, New York

Dear Dr. Wittrock:

You are quite right when you say there is a serious discrepancy between your figures and mine. I think I can account for part of it. In the first place I did not have a record of the plants you sent to Mr. Palmer. The non-vascular herbarium here is quite separate from the vascular herbarium and I have not made any attempt to keep track of the former. This accounts for 286 specimens. The second error comes from the fact that you do not have recorded the plants I sent you prior to 1940 of which there were 523 specimens. A third difference lies in the fact that you do not list 255 specimens you sent me in June, 1936. As I figure it our trying to fit the two records together it should run something like this:

		Received	Sent	Balance
5-28-36	Indiana and Maine		241	241
6-3-36	Michigan Plants	255		-14
10-26-36	Small misc. coll.	4		-18
	Algae to Palmer	222		-240
	Hepatics to Palmer	60		-300
5-7-37	Monachino, N.Y. Clokey miscell.	149		-449
6-1-37	Maine and Indiana		225	-224
4-8-38	Maine and Indiana		57	-167
2-28-40	Maine and Indiana		61	-106
2-28-41	Maine and Indiana		117	11
1-5-42	Central Amer., etc.	193		-182
1-5-42	P. Johnson Coll.	458		-640
1-7-42	Indiana plants		85	-555

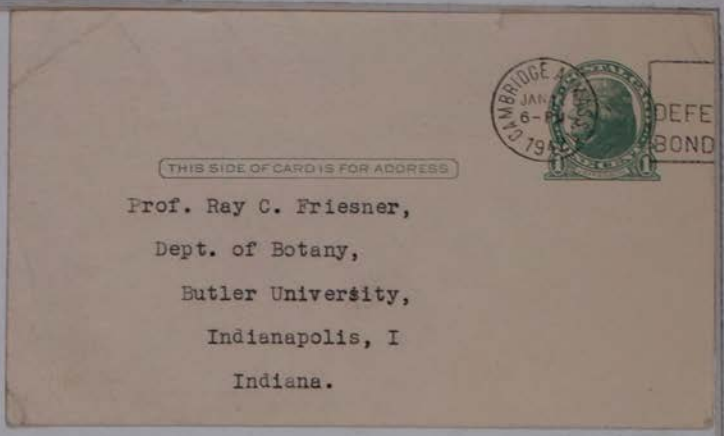
From this record I am still deeply in debt to you to the extent of 555 specimens. If the above is not agreeable to you, I shall do my best to meet whatever figures you may finally decide upon.

It is quite agreeable to us to keep all specimens in the same account and I have asked Dr. Palmer to keep me informed. He expects eventually to pay you back in algae. Thanking you for your kindness in informing me and assuring you of our sincere effort to keep up our end of the exchange, I remain

Sincerely yours,

May C. Friesner

MCF:mb



THIS SIDE OF CARD IS FOR ADDRESS

Prof. Ray C. Friesner,

Dept. of Botany,

Butler University,

Indianapolis, I

Indiana.

GRAY HERBARIUM OF HARVARD UNIVERSITY

CAMBRIDGE, MASS., January 17, 19 42.

Dear Prof. Friesner:

We have received the 137 specimens noted in your letter of January 7 and have accessioned them in continuation of exchange. They are good specimens from a region we still do not have too well represented and we are glad to have them.

Thanking you, I remain,
Sincerely yours,

Lyman B. Smith.

PS. We are sending you centuries 11 of the Plantae Lipsicatae Braianae in exchange. LBS.

TELEPHONE SEDGWICK 3-3200

THE NEW YORK BOTANICAL GARDEN
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TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

January 19, 1942

Dr. R. C. Friesner
Butler University
Indianapolis
Indiana

Dear Dr. Friesner:

I am more than pleased to receive your letter of January 16th, in which you give an analysis of our exchange records. There were indeed many discrepancies, many of wich I have located in my records and corrected. Dr. Gleason, however, suggests that I accept your figure of 555 as the amount you owe us, to start the exchange at that basis.

I hope this is satisfactory to you.

Very truly yours,

G. L. WITTROCK
Custodian of the Herbarium

GLW:MM

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

DEPARTMENT OF BOTANY AND ZOOLOGY

January 19, 1942

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

Dear Dr. Friesner:

What is the present status of Solidago rupestris Raf.? In Gray's Manual (p. 796), it is reported for "W. Va., Ky., and Ind.", but Deam excludes it, at least tentatively, from his "Flora of Indiana", and Lucy Braun, in her forthcoming paper on Solidago in Kentucky, does not mention it. There is a specimen in the herbarium of the New York Botanical Garden, collected by Mr. and Mrs. E. S. Steele, September 10, 1898, at Aurora, Preston Co., W. Va., labeled S. rupestris, and Millspaugh (p. 374) lists a specimen so labeled in the Gray Herbarium, collected by James at Kanawha Falls and Hawk's Nest, Fayette Co., W. Va.

Sincerely,

Earl L. Core

Earl L. Core
Curator of the Herbarium

ELC/eab

January 26, 1942

Dr. Earl L. Core
Curator of the Herbarium
West Virginia University
Morgantown, W. Va.

Dear Dr. Core:

There are no specimens in any of the Indiana herbaria bearing the label "S. rupestris". I seem to recall one or two in the University of Kentucky material that I went over but cannot find it listed in my list of their material. It is likely, if they have any such, that I determined them as S. canadensis and merely listed them as the latter species on my records. All of this still leaves your question unanswered and, while I am strongly of the opinion that S. rupestris should be reduced to a synonym of S. canadensis, I cannot be certain without studying the original material which was used by Rafinesque or at least the specimens so labelled and now extant.

I appreciate your information regarding the location of the specimens in the New York Botanical Garden and the Gray Herbarium and will make an effort to see them.

Sincerely yours,

Ray C. Friesner

January 26, 1942

Mr. Charles M. Ek
1612 Purdum Street
Kokomo, Indiana

Dear Mr. Ek:

I have completed the carload of specimens we brought from you about a month ago and am sending a final list of additions to the Butler herbarium from you for 1941.

In the above list was a very large number of specimens which I was able to use for exchange purposes and I am also sending you a list of these species and where they will be sent as soon as we can get the labels typed. From this impressive list you can see that your label will be present forever on many specimens in some of the important herbaria of the United States.

All except about 150 of those for Butler are already mounted and the remainder are in the "mill". You can pat yourself on the back and consider it a season most profitably spent.

The record for 1941 stands thus:

New County records for State	313
New County records for Butler	349
Total new records for Butler	662
Sent in exchange for which specimens will come to Butler	550
Total new specimens for Butler due to your work	1212

Sincerely,

Ray C. Friesner

RCF:mb
enc.

EK 26-I-42.

Ek - Additions to Butler Herbarium

2201 Polygonum buxiforme Lagrange
325 Carex lurida Steuben
Carex rostrata Steuben
Carex brevior Wabash
~~Carex eristatella Ilami~~
129-166 Panicum clandestinum Fulton
12-341 Eragrostis frankii Pulaski
~~Ranunculus repens var. villosus Cass~~
66 Triglochin maritima Kosciusko
Carex normalis Kosciusko
5-1 Equisetum laevigatum Howard
3345 Crataegus pedicellata Howard
2223 Chenopodium berlandieri ssp. Zschackei (Whitley
Carex viridula Elkhart
Carex conjuncta Grant
936- Juncus macer Grant
~~Carex albursina Grant~~
~~Hispecurus aequalis Grant~~
5274 Viola eriocarpa f. leiocarpa Howard
~~Eleocharis olivacea Starke~~
~~Carex lurida (Reptd. 1940 rept)~~
Carex buxbaumii Kosciusko
~~Carex stricta Kosciusko~~

Juncus canadensis Fulton
Scirpus acutus Whitley
Scirpus cyperinus Jasper
Eleocharis obtusa Jasper
Juncus acuminatus Jasper
Aristida intermedia Jasper
Solanum carolinense Noble
Alisma subcordatum Lagrange
Cynoglossum officinale Noble
Silphium perfoliatum Huntington
Pentstemon digitalis Grant
Carex lurida Tippecanoe
Populus alba Howard
Potamogeton crispus Howard
Tanacetum vulgare f. crispum Howard
Acalypha rhomboidea Fulton
Scirpus cyperinus Fulton
Polygonum sagittatum Noble
Eleocharis rostellata Noble
Cacalia atriplicifolia Lagrange
Linaria vulgaris Howard
Physalis ambigua Lagrange
Helianthemum bicknellii Elkhart
Eragrostis ciliaensis Lagrange
Oenothera rhombipetala Elkhart
Carex grayii Lagrange
Nepeta cataria Noble
Spiraea alba Huntington
Carex vulpinoidea Wabash
Penthorum sedoides Steuben
Hackelia virginiana Lagrange
Polanisia graveolens Howard

Hamamelis virginiana Tippecanoe
Cirsium altissimum Tippecanoe
Hedeoma pulegioides Tippecanoe
Aster drummondii Tippecanoe
Amaranthus graecizans Tippecanoe
Humulus americana Tippecanoe
Panicum capillare Tippecanoe
Triodia flava Tippecanoe
Muhlenbergia sobolifera Tippecanoe
Prunella vulgaris Tippecanoe
Houstonia angustifolia Tippecanoe
Desmodium dillenii Tippecanoe
Linum sulcatum Tippecanoe
Ambrosia elatior Tippecanoe
Onosmodium hispidissimum Tippecanoe
Desmodium paniculatum Tippecanoe
Polygonum punctatum Tippecanoe
Solidago latifolia Tippecanoe
Melica nitens Tippecanoe
Sporobolus clandestinus Tippecanoe
Panicum agrostoides Pulaski
Dryopteris thelypteris var. pubescens Pulaski
Solanum dulcamara Whitley
Chaenorrhinum minus Howard
Epilobium coloratum Cass
Juncus torreyi Fulton
Cicuta bulbifera Whitley
Polygonum coccineum Jasper
Ludwigia polycarpa Jasper
Panicum spretum Jasper
Grossularia cynosbati Kosciusko
Mentha arvensis Noble
Bromus latiglumis Kosciuko
Juncus torreyi Huntington
Cladium mariscoides Starke
Erigeron ramosus Tippecanoe
Cornus asperifolia Tippecanoe
Anacharis canadensis Howard
Crataegus punctata Kosciusko
Polygonum coccineum Howard
Gnaphalium obtusifolium Fulton
Cladium mariscoides Fulton
Agrimonia pubescens Kosciusko
Eleocharis violacea Kosciusko
Pontederia cordata Steuben
Smilacina racemosa Lagrange
Parthenocissus vitacea Lagrange
Desmodium illinoiense Lagrange
Desmodium sessilifolium Elkhart
Stachys occidentale var. boreale Kosciusko
Helianthus giganteus Lagrange
Rhus radicans Whitley
Carex comosa Whitley
Veronica arvensis Wabash
Carex lupulina Lagrange
Polygonum erectum Howard
Scirpus atrovirens Lagrange

Date	1	2	3	4	5
11/29	slightly brown	slightly brown	slightly brown	normal white	normal white
12/29	no change	"	beginning to curdle	"	"
13/1	slight cloudy ppt	"	curdled	beginning to shake lactic acid	more lactic acid than 4

Scirpus americanus Steuben
Carex comosa Steuben
Taraxacum palustre var. vulgare Howard
Potentilla simplex Grant
Lepidium campestre Howard
Juncus macer Miami
Carex sparganioides Miami
Carex cephalophora Elkhart
Aristida purpurascens Elkhart
Carex vulpinoidea Elkhart
Mollugo verticillata Tippecanoe
Echinochloa crusgalli Tippecanoe
Dasistoma macrophylla Tippecanoe
Solidago caesia Tippecanoe
Agastache nepetoides Tippecanoe
Desmodium bracteosum var. longifolium
Carex crinita Lagrange (Tippecanoe
Carex vulpinoidea Lagrange
Medicago sativa Lagrange
Eleocharis calva Lagrange
Medicago lupulina Tippecanoe
Panicum scribnerianum Tippecanoe
Asparagus officinalis Tippecanoe
Dryopteris thelypteris var. pubescens
Verbena hastata Clinton (Lagrange
Ambrosia elatior Kosciusko
Cirsium vulgare Kosciusko
Spilobium coloratum Kosciusko
Cassia marilandica Kosciusko
Melilotus alba Tippecanoe
Anthemis cotula Tippecanoe
Dioscorea villosa Tippecanoe
Rhamnus lanceolata Tippecanoe
Polygonum convolvulus Tippecanoe
Cirsium hillii Tippecanoe
Matricaria matricarioides Tippecanoe
Anemone virginiana Tippecanoe
Hypericum virginicum var. fraseri
Acnida altissima Kosciusko (Kosciusko
Rudbeckia hirta Howard
Carex lasiocarpa Steuben
Carex vesicaria Steuben
Festuca elatior Grant
Viola palmata Grant
Stachys hispida Howard
Brassica kabor var. pinnatifida Howard
Geum laciniatum var. trichocarpum
Solanum carolinense Steuben (Steuben
Prunella vulgaris lanceolata Steuben
Cicuta maculata Carroll
Campanula americana Carroll
Polygonum virginianum Carroll
Bromus latiglumis Carroll
Carex rosea Miami
Carex laxiflora Miami
Geum vernum Miami
Apocynum androsaemifolium Fulton
Carex comosa Fulton

Nasturtium officinale Lagrange
Panicum implicatum Steuben
Erigeron annuus Grant
Carex lupulina Fulton
Carex normalis Miami
Carex cephalophora Miami
Cornus obliqua Fulton
Hymnospora glomerata var. minor Elkhart
Eupatorium purpureum Elkhart
Aster shortii Tippecanoe
Oxalis europea var. bushii Tippecanoe
Asphicarpa bracteata var. comosa Tippecanoe
Euphorbia dentata Tippecanoe
Hydrangea arborescens Tippecanoe
Chelone obliqua var. speciosa Tippecanoe
Eleocharis melanocarpa Jasper
Helianthemum bicknellii Jasper
Eragrostis spectabilis Jasper
Rubus flagellaris Steuben
Dactylis glomerata Tippecanoe
Plantago lanceolata Tippecanoe
Erigeron annuus Tippecanoe
Galium concinnum Clinton
Alisma subcordata Clinton
Polygonum lapathifolium Clinton
Carex rosea Grant
Carex convoluta Grant
Carex hirtifolia Grant
Bromus purgans Grant
Carex normalis Grant
Carex shortiana Grant
Carex sparganioides Grant
Carex cephalophora Grant
Carex squarrosa Grant
Malva neglecta Tippecanoe
Smilax herbacea var. lasioneura Tippecanoe
Belamcanda chinensis Tippecanoe
Scirpus atrovirens Wabash
Sium suave Whitley
Prunella vulgaris var. lanceolata Wabash
Dentaria laciniata Grant
Carex blanda Grant
Carex stipata Grant
Carex jamesii Grant
Carex grayii Grant
Carex stipata Grant
Agrimonia gryposepala Elkhart
Vernonia altissima Elkhart
Cyperus filiculmis var. macilentus Elkhart
Carex communis Howard
Rorippa sylvestris Howard
Rudbeckia triloba Carroll
Carex sparganioides Cass
Glecoma hederacea Cass
Carex grisea Miami
Luzula multiflora Fulton
Carex comosa Fulton
Equisetum fluviatile Fulton

The gametes in Spirogyra are not ciliated but they are ciliated in Vaucheria

B

Fimbristylis autumnalis var. mucronulata
Lechea villosa Cass (Cass (you called it Helianthemum?))
Lithospermum arvense Howard
Carex interior Howard
Aster pilosus Tippecanoe
Physalis ambigua Starke
Aristida intermedia Starke
Juncus greenei Starke
Euphorbia supina Starke
Eupatorium altissimum Starke
Polygonum punctatum Pulaski
Agrimonia parviflora Pulaski
Rhyncospora glomerata var. minor Jasper
Panicum spretum Pulaski
Andropogon furcatus Elkhart
Monarda fistulosa var. mollis Elkhart
Cyperus strigosus Pulaski
Scirpus cyperinus Pulaski
Rhyncospora glomerata minor Pulaski
Convolvulus sepium Tipton
Malva neglecta Tipton
Andropogon scoparius Tipton
Linaria vulgaris Tipton
Carex viridula f. intermedia Lagrange
Scirpus americanus Lagrange
Fimbristylis autumnalis var. mucronulata
Juncus greenei Jasper (Jasper
Eleocharis quadrangulata var. crassior
Rhus glabra Cass (Kosciusko
Chenopodium gigantospermum Starke
Sonchus arvensis Clinton
Lobelia siphilitica Clinton
Carex vulpinoidea Elkhart
Panicum implicatum Kosciusko
Lithospermum canescens Tippecanoe
Equisetum prealtum Howard
Parietaria pennsylvanica Tippecanoe
Dipsacus sylvestris Howard (You will have to be good now, or we will tell your wife on you)
Rhus glabra Tippecanoe
Aricaeea atrorubens Grant
Polenisia graveolens Tippecanoe
Eragrostis cilianensis Tippecanoe
Panicum dichotomiflorum Tippecanoe
Oxybaphus nyctagineus Tippecanoe
Physalis subglabrata Tippecanoe
Campanula americana Howard
Crataegus succulenta Howard
Crataegus prona ? Howard
Polygonum lapathifolium Lagrange
Zigadenus glaucus Lagrange
Menyanthes trifoliata var. minor Elkhart
Asclepias verticillata Starke
Artemisia caudata Starke
Setaria lutescens Wabash
Carex frankii Wabash
Mentha arvensis Pulaski
Lycopus uniflorus Pulaski
Polygonum punctatum Jasper
Digitaria sanguinalis Tippecanoe
Eleusine indica Tippecanoe
Plantago rugellii var. asperula Howard
Silphium integrifolium Pulaski
Smilacina racemosa Clinton
Carex incomperta Kosciusko
Eleocharis calva Kosciusko
Juncus dudleyi Kosciusko
Carex subcreeta Kosciusko
Carex aparganioides Kosciusko
Euphorbia supina Cass
Sorghastrum nutans Cass
Helianthemum bicknellii Lagrange
Stellaria media Cass
Veronica arvensis Cass
Bromus secalinus Cass
Valerianella intermedia Cass
Carex conjuncta Cass
Cyperus strigosus Kosciusko
Cladium mariscoides Lagrange
Juncus canadensis Kosciusko
Juncus brachycephalus Kosciusko
Eleocharis quadrangulata Kosciusko
Lycopus rubellus Howard
Eleocharis obtusa Howard
Scutellaria lateriflora Starke
Lactuca floridana Howard
Carex lupulina Grant
Carex grisea Grant
Carex riparia var. lacustris Steuben
Carex scoparia Elkhart
Scirpus lineatus Wabash
Smilax hispida Wabash
Thaspium barbinode Wabash
Cicuta bulbifera Elkhart
Carex granularis Miami
Carex hirtifolia Miami
Althea rosea Howard
Carex shortiana Wabash
Carex vulpinoidea Miami
Cicuta maculata Miami
Setaria lutescens Miami
Xanthium italicum Miami
Kochia scoparia Howard (escape)
Panicum capillare Clinton
Euphorbia maculata Clinton
Teucrium canadense Clinton
Eragrostis hypnoides Clinton
Monarda fistulosa var. mollis Howard
Polygonum punctatum Whitley
Carex grayii Miami
Tofieldia glutinosa Kosciusko
Cyperus strigosus Huntington
Polygonum pennsylvanicum laevigatum (pallescens Kosciusko

IV. Vaucheria is a plant that grows in fresh or stagnant water. It looks like a mass of branched long filaments. The body or filament consists of a long branched tube which has no cross walls except those which have gametes produced in within the cells contain many nuclei. The plant feels harsh to the touch

V. The oil bodies serve as a food reserve of the spore. If the season has been too wet or too dry the plant falls back on the oil bodies for food. The oil bodies are a product of photosynthesis. Under the microscopes the oil bodies were round in shape.
The chloroplast were shiny irregular bodies rather large in size.

VI Oil serves as a means for radiant energy. The oils impart the odors to fruits and flowers and other parts of the plant. Oil is the product of photosynthesis

VII. The gametes in the spirogyra. The gamete in the Vaucheria are heterogametes, in spirogyra the female and male gametes are in separate filaments and in Vaucheria the two gametes are in the same filament.

Cladium mariscoides Whitley
Malus coronaria Whitley
Physalis ambigua Miami
Fimbristylis autumnalis mucronata Starke
Amphicarpa bracteata Miami
Saponaria officinalis Miami
Ceanothus americanus Tippecanoe
Heliopsis helianthoides Miami
Polygonum scandens Tippecanoe
Eupatorium rugosum Fulton
Carex vulpinoidea Steuben
Polygonum punctatum Kosciusko
Lycopus uniflorus Howard
Carex tribuloides Elkhart
Carex lurida Elkhart

Amaranthus blitoides Tippecanoe
Physalis ambigua Tippecanoe
Ipomoea hederacea Tippecanoe
Bromus purgans Tippecanoe
Geum canadense Tippecanoe
Festuca octoflora Tippecanoe
Lespedeza capitata Tippecanoe
Epilobium coloratum Tippecanoe
Cornus racemosa Tippecanoe
Acalypha rhomboidea Tippecanoe
Lychnis alba Lagrange
Muhlenbergia foliosa Lagrange
Sporobolus vaginaeflorus Clinton
Eragrostis pectinacea Clinton

Ek Plants Sent in Exchange

Symbols:

R - Rose - California Academy of Science Herbarium
N - Herbarium of New York Botanical Garden
K - Krukoff (specimens sent in triplicate)
Ca - University of California
Gr - Gray Herbarium

Cirsium arvense var. mite R-K-N-Ca-Gr
Spiraea alba Gr
Ostrya virginiana f. glandulosa Gr
Carex rostrata N
Panicum clandestinum N
Ranunculus repens var. villosus R-K-N-Ca
Carex viridula N (-Gr
Panicum spretum R-K-N-Ca-Gr
Scirpus acutus R
Dryopteris thelypteris pubescens Gr
Houstonia angustifolia N
Carex conjuncta R-N
Convolvulus arvensis N
Carex grisea Ca
Carex shortiana K-Gr
Juncus macer N
Cyperus rivularis K
Muhlenbergia foliosa K
Viburnum trilobum N
Carex muskingumensis R-N-K-Gr-Ca
Lythrum salicaria N
Carex communis R-N-K-Ca-Gr-
Chenopodium botrys Gr
Sorghastrum nutans Gr
Diarrhenia americana N
Asclepias incarnata Gr
Galium pilosum N
Ponthorum sedioides Gr

Lobelia kalmii Gr
Clematis virginiana Gr
Polygonum buxiforme R-N
Carex brevior N-Gr
Eragrostis frankii R-K
Carex normalis N-R
Aster umbellatus Gr
Eleocharis obtusa R-Gr
Juncus canadensis N
Solidago latifolia Gr
Muhlenbergia sobolifera N
Juncus dudleyi R
Sorghastrum nutans R
Carex hirtifolia R-N
Plantago aristata Gr
Sporobolus vaginaeflorus Gr
Eragrostis hypnoides Ca
Acnida altissima N
Vicia villosa Gr
Carex crus-corvi R-N-K-Ca-Gr
Carex tribuloides K
Carex pennsylvanica R-N
Liatris scariosa Gr
Ptelea trifoliata N
Agrimonia parviflora N
Lespedeza violacea N
Cyperus filiculmis macilentus Gr
Amaranthus blitoides N

Siphonales

A General Characteristics

B Typical Example - Vaucheria

F/ Characteristics of Vaucheria

F/ Reproduction

a Sexual

1. b) Asexual

1. Vaucheria	Oedogonium
Found in fresh and stagnant water	Found in fresh water wells, streams
No holdfasts	Has holdfasts
Vaucheria branches	Does not branch each cell function as one nucleus
Multi-nuclear	
has no starch	starch-pyrenoids

not complete

II Vaucheria and Oedogonium both possess gametangium. They both have asexual and sexual reproduction. Fertilize egg by releasing sperm from antheridia so as to enter oogonium. both green algae heterogametes

III "Upon germination the zygote produces a new filament directly. Reduction division has not yet been observed."

Quercus macrocarpa R-M
Rhynchospora capillacea M-K
Rhynchospora glomerata var. minor M
Juncus canadensis Ca
Eleocharis olivacea R
Carex sparganioides Ca-K
Carex shortiana M
Carex crinita M
Erysimum asperum M
Panicum implicatum M-Ca
Carex grisea Gr
Eleocharis melanocarpa R-M-K
Lechea leggettii var. moniliformis Gr
Senecio obovatus Gr
Cardamine bulbosa Gr
Carex laxiflora K-Gr-Ca
Senecio aureus Gr
Carex lupliformis R-M-K-Ca-Gr
Euphorbia supina K-Ca-Gr
Baptisia tinctoria var. crebra M
Solidago remota Gr
Cinna arundinacea M
Panicum agrostoides M-R
Pycnanthemum virginianum R
Juncus interior R-M-K-Ca-Gr
Carex laxiflora M-Gr
Carex conjuncta K-Gr-Ca
Rorippa sylvestris M
Rumex acetosella K
Carex cephalophora Ca
Smilacina racemosa Ca
Carex grisea M-R
Silene antirrhina Ca
Luzula multiflora M
Galium verum K
Geum canadense Gr
Cryptotaenia canadensis Gr
Onosmodium hispidissimum R-M-Ca
Hydrocotyle umbellata M
Rudbeckia hirta Gr
Glyceria canadensis Gr
Carex cephalophora M
Carex shortiana R
Houstonia longifolia R-M
Stachys hispida K
Oxalis europaea f. villicaulis R-K-M-Ca
Desmodium acuminatum Gr
Coreopsis tripteris Gr
Ceanothus americanus Gr
Carex cephalophora R
Triodia flava Gr
Hypericum adpressum Gr
Carex viridula M-K
Potentilla fruticosa Gr
Malva neglecta M
Solidago ohioensis Gr
Carex normalis Gr
Carex squarrosa R

Gar

Acalypha rhomboidea Gr
Eleocharis equisetoides Gr
Juncus greenei M
Isanthus brachiatus R
Carex viridula f. intermedia Gr
Carex jamesei Ca
Carex squarrosa M
Evonymus atropurpureus Ca
Acerates viridiflora M
Carex cristatella M
Bimbristylis autumnalis var. mucronulata
Carex lupulina K-Gr-Ca (R-M-K-Ca-Gr
Capsella bursa-pastoris Gr
Acer saccharum Gr
Smilax herbacea lasioneura R
Arenaria serpylifolia Gr
Carex leptalea R-K-M
Eupatorium altissimum Ca-Gr
Grindelia squarrosa Gr
Sorghastrum nutans M
Helianthus maximiliani M
Carex suberecta M-M-K
Agrimonia parviflora M
Carex brevior K
Ribes americana M
Carex cephalophora K
Iodanthus pinnatifidus Gr
Carex albursina R-M-K-Ca-Gr
Carex sparganioides M-R
Carex rosea Ca
Sphenopholis pallens M
Carex jamesei M
Carex leavenworthii R-M-K-Ca-Gr
Carex comosa K-Gr
Geum laciniatum Gr
Gentiana quinquefolia occidentalis R
Crataegus rugosa K
Belamcanda chinensis R-M-Ca-Gr
Lespedeza virginica R
Carex lasiocarpa R-M
Carex blanda R
Hordeum jubatum Gr
Panicum huachucae Gr
Poa trivialis Gr
Mentha crispa R-M
Anemone cylindrica Gr
Lythrum alatum Gr
Trifolium procumbens M-K
Desmodium acuminatum R
Polygonum neglectum Ca
Scleria pauciflora caroliniana M-R
Aster amethystinus R-K-M-Ca-Gr
Cyperus rivularis Gr
Polygonum neglectum K
Polygonum buxiforme Ca
Muhlenbergia foliosa Gr
Poa sylvestris Gr
Conioselinum chinense M-R

X Rhodophyceae

H. General Characteristics

A small plant containing red pigment. The definite alternation of generation characterizes the Red Algae.

D. Polysiphonia

Polysiphonia was the genus of Red Algae observed. The plant studied possessed fourteen pericinal siphons surrounding a large central siphon. There are no horizontal connections between the tubes as seen by me, but lateral ones could be distinguished

C. Reproduction: Polysiphonia shows clearly alternation of generation. In this process the spores of the spore bearing plant give rise to male and female plants. The male and female gametes in turn fuse and give rise to the zygote from which the spore bearing plant grows, thus finishing the cycle.

1) Asexual - a part of the central siphon will become enlarged and produce within itself a tetrad of spores. Only three were visible at the time because we could see only one side These cells are surrounded by the pericinal siphons (See Drawing 1). These spores germinate, break through the wall and eventually settle down and give

Carex blanda K
Calapogon pulchellus M
Carex hystricina R
Paronychia canadensis M
Panicum flexile Gr
Solidago ulmifolia Gr
Spiraea tomentosa Gr
Betula pumila R-K-Ca-Gr
Digitaria filiformis R-K
Rudbeckia palustris M-R
Cercis canadensis Gr
Rosa suffulta M-R
Echium vulgare R-M
Nasturtium officinale M
Cynoglossum officinale R
Carex lupulina M
Heracleum lanatum R
Polygala polygama Gr
Linania vulgaris Ca
Mollugo verticillata Gr
Hieracium gronovii M
Fraxinus quadrangulata R-K
Ranunculus pennsylvanica Gr
Viburnum affine M
Crataegus rugosa M
Carex vulpinoidea Gr
Solidago graminifolia var. nuttallii Gr
Gaylussacia baccata Gr
Thalictrum dasycarpum Ca
Silene antirrhina M
Rhus typhina R
Carex brevior R
Salix interior R
Cornus asperifolia R
Euphorbia supina M
Anacharis canadensis R-M
Allium cernuum M
Tofieldia glutinosa R
Euphorbia marginata R
Juncus canadensis R
Cladium mariscoides R-Ca-Gr
Chenopodium standleyanum R
Viola eriocarpa f. leiocarpa R-M
Carex lurida M-Gr
Lactuca scariola R
Teucrium canadense var. virginicum M
Rhus glabra R-M
Viburnum lentago R-M-Gr
Sonchus arvensis R
Scirpus validus M
Physalis heterophylla R
Carex hyalinolepis R-K-M-Gr-Ca
Panicum scribnerianum K-Ca-Gr
Crataegus punctata R-M-Gr
Carex frankii R-M
Sporobolus vaginaeflorus K
Polygonum coccineum K
Pedicularis lanceolata M
Quercus leana K

Triplasis purpurascens M
Boehmeria cylindrica var. drummondiana Ca
Juncus dudleyi R-M
Erigeron divaricatus Gr
Cassia hebecarpa Gr
Lycopus uniflorus Gr
Aronia prunifolia M
Aristida intermedia R-M-K-Ca-Gr
Panicum verrucosum M
Polygonum erectum R-M-K-Ca-Gr
Cornus obliqua Gr
Eleocharis obtusa K
Hypericum prolificum M-Gr
Scutellaria galericulata Gr
Carex tribuloides Ca
Circaea latifolia Gr
Chenopodium ambrosioides R-M
Megalodonta beckii Gr
Veronicastrum virginicum Gr
Physalis ambigua K-Gr
Swertia (Frasera) caroliniensis R
Salix bebbiana Gr
Ribrippa islandica var. microcarpa Gr
Carex comosa R-M-Ca
Anemone canadensis M
Medicago lupulina Gr
Carex lupulina R
Marrubium vulgare R-M
Aegilops cylindrica R-K-M-Ca-Gr
Poa compressa Gr
Achillea millifolium Gr
Convolvulus arvensis R
Apernolepis inermis R-K-M-Ca-Gr
Penstemon hirsutus Gr
Populus alba R-M
Potamogeton crispus R-M-K
Potamogeton foliosus R-M-Ca
Potamogeton foliosus var. macellus R-M-Ca
Polygonum coccineum Gr
Lobelia siphilitica Gr
Digitaria ischaemum Gr
Alopecurus aequalis K-Gr
Eleocharis olivacea M
Setaria viridis Gr
Ambrosia trifida R
Amaranthus graecizans R
Triplasis purpurascens Ca
Boehmeria cylindrica var. drummondiana Gr
Potamogeton americanus R
Sparganium eurycarpum R-M
Cercis canadensis M-Ca
Danthonia spicata Gr
Crataegus rugosa R
Arrhenatherum elatius Gr-K
Cinna arundinacea Ca
Scirpus cyperinus M-Ca
Parnassia glauca M
Scleria verticillata M

rise to male and female plants.

2) Lepal: The male plant develops a branch at the end of which is found the antheridium containing many sperms. (See drawing 5) The fertile cell of the female ~~cell~~ plant produces a carpogonial branch that is tipped with a carpogonium and a trichogyne. The trichogyne has adhesive quality and holds the sperms after they have broken through the antheridium wall. The sperm and the nucleus of the carpogonium fuse then a canal forms between the carpogonium and the fertile cell through which the zygote moves into the cell (none of these steps were observed in the lab.) The cystocarp then forms as a protection for the spores that develop.

D. Economic Importance:

The gelidium of the Red Algae is the source of most of our supply of agar-agar which is a gelatinous substance used as a medium for cultures. It has no food value and is used as a base for cheap candy, in textile making and base for soup in China. There is only one factory in U.S. which supplies agar - It is in San Diego. Necessary to use lyes to obtain the plant. This makes it an expensive business.

C-

January 28, 1942

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

Dear Dr. Core:

Your letter regarding the proposed plan of making sets of herbarium specimens of state flowers is at hand. I think the idea is a novel one and I am very glad to be permitted to cooperate in the plan. I am extremely sorry that we should have the Zinnia for our state flower but I cannot do anything about it except to accept it and do my best to get good specimens well prepared. In such a case, where a cultivated plant is a state flower, I suppose any variety will be satisfactory.

Sincerely yours,

Ray C. Friesner

RCF:mb

Bacteria - Schizomycetes

1. Called Schizomycetes because of reproduction by fissions.
2. Move in zig-zag movement.
3. Bacillus form.
4. I also observed spherical or coccus, spiral or spirillum and filamentous.
7. Spirillum undulum is a large spiral form which has the shape of a snake with protoplasm and vacuoles. Staphylococcus - round bodies and very small looked like a bunch of grapes.
8. Staphlococcus aureus bacteria is any of the various species of Micrococcus in which the cocci form clusters, hence any micro-organism of this type. They are the ordinary causal agents in localized abscesses, in pustules, boils, etc.

Streptococcus is a genus of non-motile parasites. Gram-positive of family coccaceae dividing in only one plane, occur in pairs or chains, but not in packets, and which do not form zooglial masses nor ferment inulin. Rarely have capsules. Several species are virulently pathogenic.

9. Rod shaped - two or three times longer than wide.
10. The spores were about one-half full of cytoplasm: negative cells nearly full.

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

January 29-1942

Dear Dr. Friesner: -

Your fine letter and long lists of my specimens recd yesterday - And Many Thanks. I hope you had the help of your N.Y.A. staff in typing and compiling this or these Lists. - It was most thoughtful of you to do all this, and very pleasing and complimentary to me. My feeble efforts are getting results - At that I did try hard, - putting all my energy into our trips - also local trips.

1941, I think, will be my best year. 1942 does not look so promising - from my own health viewpoint. - and from your side. -- Tire rationing + may be gas too, - may hinder. Also your School. Was down to Purdue Jan. 12-13-14. Their new semester was started with a 3rd semester next summer. - If you have to do a Real semester in June & Aug. - 3 mo. - I am

fearing it will greatly curtail our N. Ind. trips. The Commandments are about all in the waste basket anyway so why not cast aside the one about Keeping the Sabbath Holy - and Come N. on Sundays instead of Sat. We can study the Footprints of the Creator in the sand dunes; Nature, Beauty, Truth and Goodness in the Plant world everywhere; We can teach, preach and listen to the voice of Nature. - We spent 3 Sundays - N. Ind. 1941. - to me 3 very profitable Sabbaths - & to you too I feel sure. - - - Gosh! - I'm preaching! This - I do feel sure - friends as you and I are for the wild. - that you will make every effort & strain every muscle to make these trips possible - and that you will sacrifice for me again as you have in the past. - For it is now or never with me. - But I am very patient - considerate, tolerant, humble - thankful for the Past - and infinitely

from Ek 29-I-42

grateful for all your kindness. If the Fates so decree that these trips are impossible, then I bow to the inevitable and will work intensely the local regions. I can do some work in Tipton Co. - a lot in Clinton & Carroll, a little in Cass & Miami - I could work between Peru & Wabash - the R. R. &c. &c. - also around Elwood which I've never worked. These would mean a lot of new Co. records but few new species.

Had I been aware that you were so nearly caught up I would have sent the rest of the specimens. I finished them Jan. 3 - there are 4 boxes - including one containing the new Co. Records. There would have been a few more to distribute to the 5 herbariums. If you are not coming up soon - may I send them to you? - I will gladly send them, so we can start 1942 with clear decks. -

After cancelling duplicates - all I have of - I found 81 New Co records after Nov. 1 - and among all the 4 previous lists - 1937-1940

got 58 more as total of 139 New Co. Records as a starter for 1962 - possibly a few are already reported that escaped me - but you will detect them, if any. I'll arrange and send them soon.

Heard from Dr. Svenson today - Got my check - a week or so ago - $30.00 for 250 specimens - tho I sent about 500 in all, or a little more - all duplicates of Butler specimens. Sent De Pauw about as many - a lot of them common local ones - but all new Co. records for them. I am certainly grateful to Dr. Svenson - who wouldn't accept them until he could get some funds. - Got me some new glasses yesterday - some vitamins, etc.

Wrote to Gov. Schricker 10 days ago - & said reply Tues. In it I referred to you & Dr. Potzger & Dr. Deam. - If you ever get any inquiry, - well - just put my case a little strong - I am deserving and do need $ to carry on this scientific work. Am facing a tooth or teeth - (18) problem - which would take $75.00 if I "jerk 'em out." If I go where I want to locally - & use bus to Peru - Elwood, - etc etc.

A. E. JOHNSON, PRES. & TREAS.

D. J. FITZGERALD, VICE PRES. & SALES DIRECTOR

5

From EK
29-I-42

FREE SEWING MACHINE CO.

MANUFACTURERS OF

HIGH GRADE SEWING MACHINES

ROCKFORD, ILL.

5.

that will cost a few $.

Have scribbled several articles since Jany 3 - Reading all my eyes will permit. Last letter from Dean Jan 3 - Not going very well - He is the Grand Ole Man — to all of us. - We idolize him as he does you, many times he has said to me -- My... ... Gosh! ... that man Hickson - ... You can't beat him ... He will work himself to death. - - -

So very fine that there is such a bond of between each & all of us - & that includes, of course, - Dr. Botzer - The Big Three! - (Friday noon)

The Mrs. went to Lafayette Tuesday. & just now rec'd letter that Lois is in bed - with [illegible] that Lil be alone

— may be a week yet. —

Sorry I didn't reply to you at once. — on account of the 4 boxes yet here. — If you have not yet sent your specimens away I can box up these 4 boxes & have them to you in 1-2 days. They should be in your hands anyway — Think I'll do that. I have the boxes. —

Pardon this long scribble, — A waste of your time. —

I am Very Sincerely.
Always with Best Wishes
to You and Yours. —
Chas. M. — Ek.

February 2, 1942

Dr. Lyman B. Smith
Gray Herbarium
Harvard University
Cambridge, Mass.

Dear Dr. Smith:

I have just gone over the herbarium specimens recently received in exchange from you as Century 11 and find one specimens without a label. I shall try to describe it and perhaps you can send label from this information. If not, I shall be glad to send the specimens. The specimens look as if it should be a Potentilla. It has very large radicale leaves which are deeply reniform-ovate or orbicular ovate with margin shallowly rounded-lobed and minutely serrate-dentate. The petioles of basal leaves are coarsely villous. Cauline leaves are sessile and rather coarsely serrate. The stem is coarsely villous and flowers are yellow and definitely of the rose family. Inflorescence is very strikingly cymose. This is such a good specimen that I would like very much to have it as a part of our herbarium As a matter of fact, nearly all of the specimens are of very high quality.

Sincerely yours,

Ray C. Friesner

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.

February 4, 1942.

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

Dear Prof. Friesner:

It is obvious from your clear description that the missing label is for Geum radiatum and I enclose one herewith. As the set is serially numbered, the number 1057 is a further check.

I am glad to hear that you found the set of good quality as it is largely my concern to assemble the exsiccatae series.

Sincerely yours,

Lyman B. Smith

LBS.

February 5, 1942

Dr. Lewis S. Rose
2165 Jackson Street
San Francisco, California

Dear Dr. Rose:

Your shipment of herbarium specimens reached me today in excellent condition. You may be interested to know if you haven't kept particular account, that, counting this shipment as 100 specimens, you have sent us 1334 specimens during our exchange relations. I have sent you 1099 which leaves me indebted to you to the extent of 235. I appreciate greatly your generous spirit and shall continue to be on the lookout for additional species. During the past season we have added Mr. Charles M. Mc to our collecting staff and he is specially interested in sedges. As a result of his collecting, I have a number of additional species, principally sedges, to send you after we get the labels typed. In case the number is not worth it, I shall hold them until the 1942 season is over.

Sincerely yours,

Ray C. Friesner

RCF:mb

Tisdale, Sask.
Feb. 6, 1942.

Dear Friend Ray C. Friesner:—

I am herewith sending you a sheet of all my 1941 Goldenrod collections 31 sheets. If you have time please check them for determination or make a list of what I sent you with their correct determinations and send me a copy.

My records show that you sent me a parcel of 248 plants last spring and a copy of your "Goldenrods of N.E. United States and Canada" which I value at $2.00 or 20 sheets, that makes a total of 268. Enclosed are 31 sheets so I still have to send 237 sheets which I will send in a month or so. They are not all determined yet.

I hope the parcel arrives in good condition and that the plants are interesting.

I must now close with best regards

Yours Very Truly

August J. Breitung

THE STATE COLLEGE OF WASHINGTON
PULLMAN, WASHINGTON

COLLEGE OF SCIENCES AND ARTS
DEPARTMENT OF BOTANY

February 11, 1942

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

Dear Dr. Friesner:

We have tentatively set aside a set of three hundred seventy-three (373) herbarium specimens mostly from Rogers' Columbia River Survey for continuation of our exchange with your herbarium. In view of the fact that this exchange has been inactive for several years, however, I thought it advisable to write to you in advance of shipment. If you desire to reestablish this exchange on an active basis, kindly let us know, and we will make shipment at once.

Very truly yours,

Marion Ownbey

Marion Ownbey
Curator of the Herbarium

TELEPHONE SEDGWICK 3-3200

THE NEW YORK BOTANICAL GARDEN
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DIRECTOR
WILLIAM J. ROBBINS

February 12, 1942

Dr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Dr. Friesner:

Under separate cover I am sending you one package containing ninety-six (96) specimens largely of Brazil and some from Surinam. I hope you will find these interesting.

Very truly yours,

B. A. Krukoff

Bak/Jd

From Hanes

Schoolcraft, Mich.,
Feb. 15, 1942.

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

Dear Mr. Friesner:-

How and for how much can I secure ~~one~~ a copy of your "Monograph on Solidago"?

Mr. Deam and I have had considerable correspondence in regard to plants of our respective areas. I happened to mention that we had Solidago erecta, according to specimens revewed by Dr. Blake. He questioned it some because we are out of the range. Looking over another specimen that Blake had received and placed as S. speciosa I find the two suspiciously alike. I should like to send you next summer or autumn specimens of our so-called S. erecta and also S. remota, and S. media.

Deam appears to make S. speciosa and S. rigidiuscula synonymous. The plant that we have called S. speciosa var angustata (S. rigidiuscula) differs much from the one we consider S. speciosa. Our S. speciosa var angustata is quite early and is markedly odorous at blossoming time, when in seed, and for several seasons when it is a herbarium specimen. Deam states the only plant with marked odor that he knows in the Solidago group is S. odora. That has the leaves odorous as I understand it. At two

separate stations in Kalamazoo County where we find what we class as S. speciosa var. angustata we find these odorous plants, but in the one station they appear smaller and almost one month earlier than in the other.

Would you like some of our species next fall? If the war does not prevent or other act of the Satan we might send you something interesting.

Sincerely yours

C. R. Hanes.

Sunday P.M. - 2/15 from Elk '42.
2 P.M. Central Ind. Bunk Time.

Dear Dr. Friesner!

Am sending you the new List of 1942 New Co. Records -

Been busy as my eyes & nerves will permit - Obviously the old "bean" can't put out the work it used to - But I'm not sitting in the old arm chair gazing out the window - if so - I'm watching a bird - [My old friend, a Cardinal is right now flitting from ~~tree~~ tree & weed - & now is in my brush-pile] - or thinking about some N. Ind. trips - reconstructing them - or all of them - planning for 1942 - or trying to think out some theory of origin of life - the earth - nebulae - stars! - as lectured in that fine magazine "Science" & Scientific Monthly - given & loaned by Dr. Degen.

In the March 1942 Scientific Monthly on Page 236 - is reviewed a book, "The New Systematics", - edited by Julian Huxley, which seems to be a great book. - Was wondering if Butler had it. - or You - (any)

Now don't for Gosh-sake - buy it - if You don't have it. - Your $$ are too scarce - & it may not be worth the enormous price - $6 or - & to me may be worthless. - In past years, - I've spent a fortune [a fortune to me in 1942!] on books which I never looked at. - If you have it - I'd like to see it - but no hurry - I'll see if local library can get it at State Library at Indpls.

Will close. - In latest issue of "School and Society" Sat P.M. in Library read where Ind. Univ - (old I. U.) - Bloomington - had divided year so that a student could graduate in 2 2/3 yrs! - Why not reduce it to one year? For all that the Kokomo High School is doing - they could condense it to one year. - No joking - But more of H.S. ignorance & stupidity when in math. - Trust 2 packages got there - Okay. - Thanks. Yours - (Mr. EK.

from EK 15-II-42

New County Records for 1942.

1. Selaginella apoda Fulton Co. (& Fremont)
2. Equisetum laevigatum Howard Co.
3. " Fossange Co.
4. " fluviatile Elkhart Co.
5. Triglochin maritima Kosciusko Co.
~~6. Agrostis hyemal~~
6. Poa paterisis Miami Co.
7. Eragrostis Frankii Pulaski Co.
8. Agrostis hyemalis Steuben Co.
9. Muhlenbergia mexicana f. commutata Miami Co.
10. " foliosa Tipton Co.
11. Sporobolus neglectus Whitley Co.
12. Aristida longespica Fulton Co.
13. Leptoloma cognatum Fulton Co.
14. Panicum dichotomum Fulton Co.
15. " clandestinum Fulton Co.
16. " meriodionale Steuben Co.
17. Cenchrus pauciflorus Elkhart.
18. Cyperus Schweinitzii Howard Co.
19. Eriophphosum viridi carinatum Fulton Co.
20. Rhynchospora Capillacea Fulton Co.

from EK 15-II-42

21. Carex conjuncta Grant co.
22 " Bebbii Elkhart co.
23 " normalis Kosciusko co
24 " " Wabash Co.
25 " brevior Wabash co
26 " " Miami Co.
27 " molesta Tippecanoe co
28 " Cristatella Miami Co.
29 " tribuloides Pulaski Co.
30 " " Steuben co.
31 " brevis Kosciusko co.
32 " albursina Grant Co.
33 " Crawei Kosciusko co.
34 " amphibola Kosciusko Co.
35 " prasina Cass co.
36 " viridula Elkhart co.
37 " laxiflora Wabash co.
38 " Buxbaumii Kosciusko co.
39 " stricta Kosciusko co.
40 " Emoryi Howard Co.
41 " substricta Elkhart co.
42 " rostrata Steuben co.
43 " livida Howard Co.

from Ek 15-II-42

44. Carex lurida Lapaige co
45 Lemna minor Howard co.
46 Juncus macer Wabash co.
47 " " Grant co.
48 " acuminatus Tipton co
49 [erro - don't know why I left this line] (Ems.)
50 Ornithogalum umbellatum Howard.
51. " Miami co.
52. Salix petiolaris Howard co
53 " humilis " co.
54 " nigra " co
55 " amygdaloides Howard co.
56 Medeola Virginica Howard co.
57. Rumex Acetosella Miami co.
58 Polygonum exsertum Howard co.
59. " neglectum Grant co.
60 " lapathifolium Fulton co.
61 " hydropiperoides Fulton co
62 " virginianum Miami co.
63. Chenopodium Botrys Tipton co
64 " Berlandieri Whitley co.

from Ek 15-II-42

65 ~~Ats~~ Atriplex patula var. hastata Tippecanoe.
66. Froelichia floridana Clinton co.
67. Amsranthus retroflexus Grant co.
68. " graecizans. Grant co.
69. Cerastium arvense Howard co.
70. " vulgatum var. hirsutum Wabash
71. Ranunculus acris Cass co.
72 Erucastrum gallicum Grant co.
73. " " Miami co.
74. Lepidium virginicum Miami co.
75 Rorippa palustris var. hispida Elkhart co.
76. Ribes odoratum Howard co.
77. Malus coronoria var. dasycalyx Howard co.
78 Crataegus punctata Miami co.
79 " " Grant co.
80 " crus galli Howard co.
81 " mollis Howard co.
82. Rubus flagellaris Harrison co.
83. " alleghenicnsis Miami co.
84 Agrimonia pubescens Miami co.
85. Rosa Carolina Wabash co.
86 Silanthus altissima Howard co.
87. Euphorbia supina Miami co.
88. Malva neglecta Miami co.

from Tk 15-II-42

89. Hibiscus militoris Miami Co.
90. Hypericum Canadense Steuben Co.
91. " adpressum Tippecanoe Co.
92. Viola Kitaibeliana var. Rafinesquii Cass Co.
93. " eriocarpa f. leiocarpa Howard Co.
94. Oenothera pycnocarpa Miami Co.
95 Daucus Carota Miami Co.
96 " Clinton Co.
97. Nyssa sylvatica Grant Co.
98 Drosera Caroliniana Howard Co.
99. Asclepias Sullivantii Miami Co.
100 Cuscuta cephalanthi Howard Co.
101. Convolvulus sepium Logansport
102. Ipomoea hederacea Miami Co.
101. Verbena hastata Miami Co.
102. " Urticaefolia var. leiocarpa Miami
103. Agastache nepetoides Howard Co.
104 Marrubium vulgare Miami Co.
105 Lamium amplexicaule Tippecanoe Co.
106. Monarda clinopodia Howard Co.
107 " punctata Howard Co.
108 Mentha longifolia var. undulata Miami Co.

from Ek 15-9-42

109. Physalis heterophylla Pulaski Co.
110 Verbascum Blattaria Miami Co.
111. Gerardia pauperula var. borealis Fulton Co.
112. Dipsacus sylvestris Miami Co.
113. " " Cass Co.
114. Lobelia Cardinalis Cass Co.
115. Eupatorium purpureum Elkhart Co.
116. Solidago juncea Miami Co.
117. " nemoralis var. decemflora Elkhart Co.
118. Aster sagittifolius microphyllus Starke Co.
119. " praealtus Kosciusko Co.
120. " interior Howard Co.
121. " dumosus Fulton Co.
122. Artemisia vulgaris Cass Co.
123. Inula Helenium Elkhart Co.
124. Ratibida pinnata Miami Co.
125. Helianthus tuberosus Fulton Co.
126. " giganteus Fulton Co.
127. Coreopsis palmata Tippecanoe Co.
128. Bidens vulgata Howard Co.
129. " bipinnata Miami Co.
130. Aparyia (Leontodon) autumnale
Aug 5. 1937. Golf Field S. Ci. park, Howard Co.
1 specimen!

from Ek 15-II-42

131 Sonchus arvensis var. glabrescens Elkhart Co.
132. Lactuca scariola Clinton Co.
133 " villosa Tippecanoe Co.
134. " saligna Tipton Co.
135 Hieracium scabrum Miami Co.
136. " " Starke Co.
[135 in all.)

Notes on above new Co. Records:-
98. Frasera Caroliniana 93- Viola eriocarpa var. leiocarpa - Possibly these are already reported.
130. Apargia (Leontodon) autumnale - is new to the state. You have it in your list sent to me recently. I distinctly remember of finding & working it - B-B - & looking for it every yr. year since.
33. Found a sheet of this - poor specimens - i.e. fragmentary - which I found June 22-1940 - Just worked it today (2-12-42) - So get it to you soon or sometime - Hope you can make a specimen from it

fromEK 15-II-42

1. Presume you have this one also.
34 It is rather bold in reporting this. - I sent some to Dr. Svenson - But he says it may be some time before he get a report on my Coriceae & other specimens sent. But it will be before next years season ends. There will be - perhaps - some more new Co. records. - which I will report. -

100. Cuscuta cephalanthi Howard Co 4 miles East - just E. of where we stopped for Beech flowers. I did not try to work it. So I included a sheet in De Pauw. & asked Dr. Yuncker to name it. - I feel sure you have it too on an Aster - if not its in De Pauw - & I can get more next year.

Probably there are a few other duplicates - If so - in your usual systematic and scientific - & effecient manner of working, - you will readily discover them. -

And so - a beginning for 1942 has been begun. -

Sincerely. -
Respectfully. -
Charles M. Ek

February 16, 1942

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

Dear Dr. Krukoff:

Your shipment of herbarium specimens has reached us in excellent condition. I am grateful to you for them because they will make a valuable addition to our herbarium.

According to my records this leaves me indebted to you to the extent of 264 specimens for which I will continue to be on the watch.

Sincerely yours,

Ray C. Friesner

RCF:mb

UNIVERSITY OF CINCINNATI

DEPARTMENT OF BOTANY—BIOLOGY BUILDING

Cincinnati, Ohio,
February 16, 1942

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

Dear Doctor Friesner:

At last I have gotten around to sending you the promised specimen of Solidago albopilosa. A few other Solidago specimens are included in the package which is going off this afternoon.

For some weeks I have been deeply involved in an ecological paper; now that it is completed I am getting back into some taxonomy again. In the consecutive time at my disposal during the Christmas vacation and between semesters I set aside everything else and worked on the "Forests of the Cumberland Mountains." It has been going along for some years and at last is being sent away, I hope to appear sometime in Ecological Monographs.

The most recent reprints will be along soon.

Sincerely yours,

E. Lucy Braun

E. Lucy Braun

February 16, 1942

Dr. Marion Ownbey
Curator of the Herbarium
Washington State College
Pullman, Washington

Dear Dr. Ownbey:

Your letter regarding resumption of herbarium exchange is at hand. According to my records I have sent your herbarium 461 specimens and have received from you 364. I shall be glad to receive the set you have tentatively reserved for us which will then leave me indebted to you to the extent of 276 specimens.

As soon as time permits, I shall go over our duplicates and if there are sufficient non-duplicating specimens on hand to warrant, I will send them and collect the remainder, and any additional species possible, during the coming season.

Sincerely yours,

Ray C. Friesner

RCF:mb

OBERLIN COLLEGE
OBERLIN, OHIO

February 17, 1942.

Butler University,
Department of Botany,
Indianapolis, Indiana.

Gentlemen:

In regard to the exchange of herbarium specimens that in the past has gone on between our Department and yours, I write to inquire whether you would be interested in receiving specimens of fungi. We shall this spring have rather a large number from eastern North America, chiefly from Maine, Ohio, and Florida, available for exchange purposes. Many of these have been identified by specialists.

From the records of the Oberlin Herbarium which are available to me, I believe our Herbarium is in your debt to a considerable extent - some 275 specimens, if I interpret the records correctly - and we should be very happy to take care of this by sending you fungi specimens if this is agreeable to you. Mr. Grover has suggested that in case you would not wish to make this exchange on an equal basis, perhaps you may have some suggestions as to how you would receive them.

Sincerely yours,

Pearl M. Nelson

Pearl M. Nelson
Secr. Dept. Bot.

Please address your reply simply to The Department of Botany, Oberlin College, Oberlin, Ohio.

February 18, 1942

Dr. E. Lucy Braun
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Braun:

I am certainly very greatly indebted to you for the specimens of Solidago recently received from your. You have been most generous to send me specimens of so great scientific value as your new species (S. albopilosa) and its hybrid with S. latifolia as well as the variation of S. latifolia. These are truly beautiful specimens.

Solidago species are known to hybridize fairly freely and I have just run across what I believe is another hybrid not previously recognized. Mr. August J. Breitung sent me a fine lot of material from Tisdale, Saskatchewan for determination and in it were several specimens I interpret to be hybrids between S. decumbens var. oreophila and S. nemoralis.

I think you have made a very worthwhile contribution in your recent paper in Castanea on Solidago in Kentucky. The extension of range of S. harrisii into Kentucky is valuable information. I have not compared your county records with those I have from a study of the specimens in the herbarium at Lexington but I am certain most of your locations are new reports.

Sincerely yours,

Ray C. Friesner

RCF:mb

Braun 18-II-42

1415 Solidago nemoralis var. longipetiolata (Mack & Bush) Palmer & Steyermark
The latest nomenclatorial changes for this variety results in the above. Ann. Missouri Bot. Gard. 22:660. 1935.

1450 Solidago nemoralis var. longipetiolata (Mack & Bush) Palmer & Steyermark
Heads are at the minimum for variety but the leaves are too narrow in proportion to length for the species. A beautiful specimen!

1325 Solidago glaberrima var. moritura (Steele) Palmer & Steyermark
This is somewhat intermediate between S. glaberrima and S. g. var. moritura. The narrowly linear-oblanceolate leaves are a definitely moritura character but the somewhat pubescent axis of inflorescence is a glaberrima character. A tendency toward secondary leaf fascicles in axils of primary leaves is a moritura character but these are not as pronounced as they usually are. I am calling it moritura more on the basis of general aspect.

1359 Solidago decumbens var. oreophila (Rydb.) Fern.
No doubt about this being the lower elevation extreme with determination correct as you have it except for spelling: "orophila" should be "oreophila".

1456 Solidago nemoralis Ait. OK.

1391 Solidago graminifolia var. nuttallii (Greene) Fern.
True graminifolia should not be hirtellous in the branches of the inflorescence. This specimen is only moderately so but probably would be best placed as the variety.

1388 Solidago canadensis var. gilvocanescens Rydb.
Heads are at the upper limits of the size range for this variety.

1188 Solidago glaberrima Martens
Apparently intermediate between glaberrima and moritura but best kept as you have it because leaves will probably increase some with maturity, axillary fascicles are apparently absent and the axis of the inflorescence is quite pubescent.

1185 Solidago decumbens var. oreophila (Rydb.) Fern. OK..

1186 I am not sufficiently familiar with this specimen to be certain of its determination.

1449 Solidago decumbens var. oreophila (Rydb.) Fern.

1444 Solidago decumbens var. oreophila (Rydb.) Fern.

1271 Solidago glaberrima Martens OK.

1448 Solidago decumbens var. oreophila (Rydb.) Fern.
I would not be surprised if this were a hybrid between the above and S. nemoralis Ait.

1387 Solidago hispida var. lanata (Hook) Fern.

1326 Solidago glaberrima var. moritura (Steele) Palmer & Steyermark
Intermediate between S. glaberrima and S. g. var. moritura.

1416 Solidago nemoralis Ait. OK.

1417 Solidago decumbens var. oreophila (Rydb.) Fern.

1356 Solidago dumetorum Lunell
Runs our nicely in Hart's Key to Goldenrods of Saskatchewan but Rydberg's Flora of Prairies and Plains is useless for separating if from S. altissima. The only distinction I can find between S. dumetorum and S. altissima is in relative length and width of leaves. S. altissima has leaves 6-15 X as long as wide while S. dumetorum has them only 3-5.5 X as long as wide.

1474 Solidago canadensis var. gilvocanescens Rydb.
Heads are at upper limit of size range for this variety. The specimen is too pubescent for S. canadensis.

1148 Solidago nemoralis var. longipetiolata (Mack.&Bush)Palmer & Steyermark

1159 Probably S. canadensis var. gilvocanescens or it might be S. pruinosa.

1180 Probably S. canddensis var. gilvocanescens.

1189 Solidago nemoralis var. longipetiolata.

1411 I think this is a hybrid between S. nemoralis and S. decumbens var. oreophila.

1389 Solidago decumbens var. oreophila (Rydb.) Fern.

1472 Solidago gigantea var. leiophylla (Ait.) Fern. (S. serotina)

1473 Solidago lepida var. fallax Fern.
Leaves are not entirely typical. They should be minutely pubescent.

1435 Solidago graminifolia (L.) Salisb.

1446 Solidago hispida Muhl.

1482 Solidago rigida L.

February 18, 1942

Mr. August J. Breitung
Tisdale, Saskatchewan

Dear Mr. Breitung:

I am enclosing the results of my determinations of the specimens of Solidago recently received from you. I wish to compliment you on the fine specimens and the penetrating discrimination you have shown in collecting them. This has been one of the most interesting lots of specimens I have worked with for a long time. Your determinations show real ability and care. Most of the changes I have made are more nomenclatorial changes and not changes of determinations.

I shall await with interest your future sendings and I hope you will not worry aboutsending an exact number or about sending specimens for the Solidago paper.

Sincerely yours,

Ray C. Friesner

RCF:mb

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

DEPARTMENT OF BOTANY AND ZOOLOGY

February 20, 1942

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

Dear Dr. Friesner:

Under separate cover I am sending 164 herbarium specimens in continuation of our exchange. I hope you will find them to be satisfactory.

Sincerely,

Earl L. Core

Earl L. Core
Curator of the Herbarium

ELC/eab

February 20, 1942

Mr. C. R. Hanes
Schoolcraft, Michigan

Dear Mr. Hanes:

I am glad to send you a copy of my key on goldenrods. A number of nomenclatorial changes have been make since it was published and I am sending you a list of those which might affect your area.

S. erecta has been reported by Otis and by Gleason for Michigan and we have two specimens so labelled in our herbarium from Michigan but I have re-examined them carefully today and I am certain that one of them is S. randii while the other is probably S. speciosa. The second specimen is immature and has the aspect of S. randii but the involucre and the achenes are definitely not the latter species. S. speciosa and S. erecta are not easy to differentiate unless one has mature achenes. My differentiation is as follows:

Achenes 5-angled, without secondary ribs between the angles; lower and median cauline leaves varying from oval to obovate and oblanceolate.....S. erecta

Achenes 5-angled, with 2-3 secondary ribs between each pair of angles; lower and median cauline leaves varying from oval to ovate or lanceolate.....S. speciosa

I am of the opinion that S. rigidiuscula should be maintained but it so grades into S. speciosa that it may be that it would be best to consider it as a variety of the latter. If that were done it would be necessary to go back to Torrey and Gray's type of S. speciosa var. angustata and determine whether it was a synonym of S. erecta or whether it is what we are calling S. rigidiuscula.

I would be very glad to receive specimens from you for study at any time. I remember you from some of our field trips and I understand that the May meeting of the Academy is to be in the region of Kentland. If so, I hope to see you there.

Sincerely yours,

Ray C. Friesner

THE STATE COLLEGE OF WASHINGTON
PULLMAN, WASHINGTON

COLLEGE OF SCIENCES AND ARTS
DEPARTMENT OF BOTANY

February 21, 1942

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

Dear Dr. Friesner:

In response to your letter of February sixteenth, we are sending you by prepaid express three hundred seventy-three (373) duplicate herbarium specimens previously set aside for you. We trust that you will find among them many of interest or value. There is, of course, no need for an immediate return shipment, but we will be glad if you will keep us in mind when making future distributions. We are happy to now have our exchange with you back on an active basis, and wish to assure you that we intend to keep it going.

Sincerely yours,

Marion Ownbey

Marion Ownbey
Curator of the Herbarium

JOHN D. DWYER, PH. D.

220 DANFORTH AVENUE
JERSEY CITY, N. J.
BERGEN 3-6588

Feb. 23, 1942.

Dr. Roy Friesner,
Dept. of Botany,
Bulter University,
Indianapolis, Ind.

Dear Dr. Friesner:

I guess that you must have given up as to when I was going to pay you back for the specimens you sent to me a few years ago. Actually the intention to repay was in the back of my mind but various things seem to have popped up whenever I decided to do something about the situation.

I am sending you one third of what I owe you. The majority of these specimens are better than the ordinary. In fact Corema Conradi is a collection at approximately the type locality. Polemonium van Bruntiae and Aconitum noveboracense are certainly worthwhile; Corydalis Halei is a range extension into North Carolina. I expect E.J. Alexander of the N.Y. Botanical Garden to publish this range extension. Arabis Holboelli Hornem is, as you know, one of the endemics listed by Fernald in his discussion of the plants of KEweenaw Co., Mich. The other material which I am sending may be of interest to you.

I shall not say when I propose to send you the remainder of my debt. I trust that I still stand in your good graces.

Sincerely,

John Dwyer.

John D. Dwyer.

February 23, 1942

Department of Botany
Oberlin College
Oberlin, Ohio

Dear Sirs:

Your letter regarding exchange of herbarium specimens of fungi is at hand. This is the only group we do not have represented in our herbarium and we will be glad to have your specimens to start us off in that direction. At present there is no one here to add to it but we may, at some future time, have a member of our staff who would be glad for the start your material will give him.

In regard to the basis of exchange: It appears to me that there is as much, perhaps more, work involved in collecting and preparing fungi as any other specimens and hence I will be glad to have them on an equal basis. However, if you feel that you should rate the fungi higher, we will be glad to have you send up half as many as we sent or whatever proportion you may feel is fair.

Sincerely yours,

May C. Friesner

MCF:mb

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

DEPARTMENT OF BOTANY AND ZOOLOGY

February 24, 1942

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

Dear Dr. Friesner:

Thank you for your letter of January 28, in which you offer to cooperate in our State Flower project. I hope we can have the sets ready for distribution about January 1, 1943.

I would appreciate it very much if you could accompany your specimens with a quotation from your State Code relative to the selection of the State flower, or at least a statement concerning it.

To date we have not received offers of cooperation from all States and it seems likely that some may be permanently lacking. Because we may, thus, be unable to offer complete sets, we have decided to ask collectors to send only 50 sheets, instead of 100, which will be much better in the case, particularly, of those State flowers which happen to be somewhat rare.

As you suggest, I suppose any variety of Zinnia would be satisfactory, although we should probably make a statement concerning it on the label.

Sincerely,

Earl L Core

Earl L. Core
Editor of Castanea

ELC/eab

February 26, 1942

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

Dear Mr. Ek:

I am enclosing a list of species added to the Butler herbarium from those which you recently sent us via express. Those marked * are new county records for the State Flora Report. The list which you sent me a week or so ago contains 4 types of species, viz. 1) Some reported in the 1941 report which you did not have to check by
2) Some reported in the 1940 report which you apparently have not added to your book
3) Some which are new but which were included in my last report to you
4) Some which are now added to the list for the 1942 report.

The total list for 1942 stands a little above 50 at present.

I have also enclosed a list of species being sent in exchange from your material. You will note two new herbaria that were not indicated on the previous list, viz. Washington State College and West Virginia University.

The situation still looks bad for the coming season. My retreaded tires have not been delivered and cannot be under the present set-up. I hope there will be a possibility of getting some by the time my others are gone but there is no promise that I can. I guess we will just have to make the best of the situation.

Sincerely yours,

Ray C. Friesner

RCF:mb

EK 26-II-42

Additions to Butler Univ. Herbarium
February, 1942 - by Charles M. Ek

*= New County Record for State Flora

*Carex molesta - Tippecanoe
*C. normalis - Wabash
*C. substricta - Elkhart
*C. emoryi - Howard
C. lanuginosa - Wabash
C. cristatella - Lagrange
C. vulpinoidea - Wabash
Solidago juncea - Elkhart
*Eupatorium purpureum - Elkhart
Rubus flagellaris - Tippecanoe
Lysimachia terrestris - Kosciusko
L. lanceolata - Lagrange
Equisetum fluviatile - Elkhart
*Hypericum canadense - Steuben
*Panicum meridionale - Steuben
*Equisetum laevigatum - Lagrange
*Salix nigra - Howard
Scirpus acutus - Lagrange, Elkhart
Solidago uniligulata - Elkhart

*Cerastium arvense - Howard
*Rosa gallica - Howard
Rosa setigera var. tomentosa - Tippecanoe
Polygonum punctatum - Elkhart
Panicum virgatum - Clinton
Lysimachia ciliata - Clinton
Agropyron repens - Clinton
Elymus canadensis - Clinton
Setaria viridis - Clinton
Amaranthus graecizans - Clinton
Polygonum convolvulus - Clinton
Bromus kalmii - Steuben
Agropyron subsecundum - Steuben
*Calamagrostis inexpansa - Steuben
Carex comosa - Elkhart
Agronomia pubescens - Elkhart
Salix serissima - Lagrange
Bidens coronata - Elkhart
Elymus riparius - Tippecanoe

Additions to Butler Herbarium

Smilacina stellata - Howard
Carex grisea - Howard
Carex muhlenbergii - Steuben
Hierochloe odorata - Lagrange
Bromus kalmii - Lagrange
Scirpus atrovirens - Elkhart
Panicum hunchuense - Elkhart
Carex lupulina - Elkhart
Rhyncospora glomerata var. minor Steuben
Geranium carolinianum var. confertiflorum - Tippecanoe
Dulichium arundinaceum - Elkhart

Datura stramonium - Kosciusko
Juncus effusus var. solutus - Steuben
Juncus canadensis - Steuben
Juncus nabor - Steuben, Marshall
Carex crinita - Marshall
Galeum pratense - Tippecanoe
Setaria viridis - Tippecanoe
Potentilla monspeliensis - Tippecanoe
Carex cephalophora - Tippecanoe
Specularia perfoliata - "
Valerianella intermedia - Howard

Exchange

R= Rose, California Acad. Sci.
K= Krukoff
N= New York Botanical Garden
Gr= Gray Herbarium
Ca= University of California
C= Core, West Virginia Univ.
W= Washington, State College

Carex muhlenbergii - K - R
Salix candida - N - W
Crataegus crus-galli - Gr
Juncus dudleyi - Ca - Gr
Salix interior - W - N
Carex laxiflora - W
C. emoryi - K

Carex lanuginosa - R - N
C. cristatella - R - G
C. nigra - N - G
Cerastium arvense - Ca
Carex emoryi - R - N - C
C. prairea - R
Glyceria canadensis - K
Boehmeria cylindrica - R
Crataegus crus-galli - N
Rhyncospora glomerata var. minor - K - Ca
Blephilia ciliata - Gr (Gr - W
Carex interior - K
Vitis vulpine - W
Glecoma hederacea - K
Carex sparganoides - Gr - W

Exchange (continued)

Aristida purpurascens - Gr
Agrimonia parviflora - Gr
Dulichium arundinaceum - Gr
Carex lurida - W
C. muhlenbergii - N
Desmodium canadense - W

Muhlenbergia racemosa - W - C
Euphorbia supina - W
Bromus kalmii - K
Anemone cylindrica - W
Vaccinium oxycoccus - N

Miscellaneous Notes

The fern from Howard Co. among the new county records is Pteridium aquilinum var. latiusculum. Previously reported.

TELEPHONE SEDGWICK 3-3200

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

February 27th/42

Butler University
Indianapolis, Ind.

Dear Doctor,

You may be interested to know that I have undertaken a study of the Beeches of North America in conjunction with Dr. Camp of the New York Botanical Garden. We have been very fortunate to read your very interesting article on Chromosome number in Fagus, published some twelve years past. Of course, we are interested in the problem from the Taxonomists point-of-view. However we are interested in finding out all we can about our Beeches. Since your studies have done so much already, we feel that it can serve us further under the proper conditions. Would it be possible for you to send us some leaf, flower and fruiting material from the same tree you studied? In that instance our work would be more certainly tied in with what you have already done. Hoping that you may be able to help us; with very best wishes, I remain

Sincerely yours

Fr Adam Zajdel

13

KANSAS STATE BIOLOGICAL SURVEY
DIVISION OF BOTANY

Specimen No. _____ Date Oct 4, 1941
Collector W. H. Harr
Name _____
Local Common Name _____
Locality—County Chautauqua
Post Office Sedan
Distance from P.O.—miles ~~N.~~ 6 E. 3 S. ~~W.~~
Altitude _____

Habitat—Creek. Creek Valley. Creek Bank. Hill Slope.
Hilltop. Level Land. Cliff. Dune Slope

Grassland. Thicket. Forest Undergrowth. Forest.
Swamp Pasture
Hydrophytic. Mesophytic. Xerophytic. Halophytic.
Native of Soil—Sand. Gravel. Rock. Clay. Loam.
Calcareous

Soil Moisture—Dry. Intermediate. Wet.
Prevalence—Scattering. Common. Prevalent.
Introduced. Escaped. Native.
Color of Flower. Yellow ~~Orange~~
Flowering-time—Past. Present. Future.
Remarks:
There may have been a little orange in the flowers.

Pallida

12

KANSAS STATE BIOLOGICAL SURVEY
DIVISION OF BOTANY

Specimen No. Date Oct 4, 1941
Collector W. H. Horn
Name
Local Common Name
Locality—County Montgomery
Post Office Havana
Distance from P.O.—miles N. E. S. W.
Altitude

Habitat—Creek. Creek Valley. Creek Bank. Hill Slope.
Hilltop. Level Land. Cliff. Dune Slope
Roadside bank
Grassland. Thicket. Forest Undergrowth. Forest.
Swamp
Hydrophytic. Mesophytic. Xerophytic. Halophytic.
Native of Soil—Sand. Gravel. Rock. Clay. Loam.
Calcareous

Soil Moisture—Dry. Intermediate. Wet.
Prevalence—Scattering. Common. Prevalent.
Introduced. Escaped. Native.
Color of Flower. yellow
Flowering-time—Past. Present. Future.
Remarks:
Seems to vary quite a bit.

Wardii

THE UNIVERSITY OF KANSAS
LAWRENCE

DEPARTMENT OF BOTANY

March 3, 1942.

Dr. R. C. Friesner
Butler Univ.
Indianapolis, Ind.

Dear Dr. Friesner:

I am sending you three specimens of Solidago which I am curious about.

#2. A duplicate of the one I sent under that number before. You said, 'Probably S. altissima L." I wish that you would take another look.

#12 & #13 - data sheet enclosed.

Thanks

W. H. Harr

Hanes

Schoolcraft, Mich.,
Mar. 3, 1942.

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

Dear Mr. Friesner:—

Received the monograph on Solidago and expect it will help me with this genus. I shall try to send you specimens from our locality the coming season. We have several species in different groups of Goldenrod which have puzzled us for some time. The differences in these that we see do not appear to appeal to others.

I wonder if the odorous plant I wrote about might be S. randii. Descriptions give it as often glutinous. This character might give it the fragrance of which I spoke. Our S. graminifolia var. nuttallii Fern. is somewhat glutinous and has a mild odor.

Sincerely yours

Clarence R. Hanes.

March 5, 1942

Fr. Adam Zajel
New York Botanical Garden
Bronx Park,
New York, New York

Dear Sir:

Your letter regarding material of North American Beeches addressed to Hellen Aufderheide has been referred by her to me for reply since her work was done from material supplied to her by me.

I am sorry that I cannot now recall the exact trees from which the material came. I am under the impression that the fruits were gathered from different trees but the exact specimens cannot now be certainly identified.

During the past collecting season I collected considerable material for Dr. Camp and, on November 19, 1941, wrote him for instructions regarding sending it. Not having had a reply I am still holding the material for him. I shall be glad to collect fruits, flowers or any other material for you during the coming season should you care for it.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 6, 1942

Dr. John D. Dwyer
220 Danforth Avenue
Jersey City, New Jersey

Dear Dr. Dwyer:

Your package of herbarium specimens came today. I appreciate them very much because a number of them are of extraordinary taxonomic and geographic significance and all represent new localities not covered for those species by our herbarium.

Inasmuch as your specimens were all mounted, I have given you credit for 3 times the number you sent so that we are now even as far as exchange relations are concerned.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 5, 1942

Curator of the Herbarium
Washington State College
Pullman, Washington

Dear Sir:

Your shipment of herbarium specimens has arrived in first class condition. I have spent an hour this morning dipping them in poison solution and I want to congratulate you on their unusual quality. I have never seen better specimens and I have seldom received a sending with such uniformly high grade material.

I am a little surprised to find as many species common to our area here as there are in your set. I have always taught plant geography as being very different in the west from our flora, but you have a considerable number of species similar to ours.

I hope I can have specimens equivalent in calibre to send you in return.

Sincerely yours,

Ray C. Friesner

RCF:mb

TELEPHONE SEDGWICK 3-3200

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

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TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

March 7, 1942

Dr. Ray C. Friesner
Butler University
Indianapolis
Indiana

Dear Dr. Friesner:

We are beginning work on a new project, and, in this connection, we would appreciate your suggestions as to plants (particularly your local plants) that you think we should test in connection with this project.

The project in question involves "repellents" for insects and it goes without saying that if we should find a good repellent for mosquitoes it would be useful to the Army operating in the tropics. The project is being handled by us on a newly approved schedule of research for 1942. Several specialists will be involved and two or three years doubtless will pass before we are through with it.

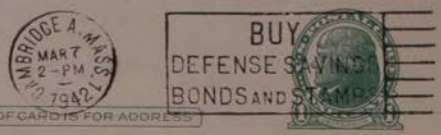
Your suggestions would be welcomed and appreciated.

Very truly yours,

B. A. Krukoff

Bak/Jd

Hedeoma pulegioides
Saponaria officinalis
Eupatorium perfoliatum
Cunila origanoides
Aucuba maculata
Conium maculatum
Achillea millefolium



THIS SIDE OF CARD IS FOR ADDRESS

Prof. Ray C. Friesner,

Dept. of Botany,

Butler University,

Indianapolis,

Indiana.

GRAY HERBARIUM OF HARVARD UNIVERSITY

CAMBRIDGE, MASS., Mar. 7, 1942.

Dear Prof. Friesner:

In continuation of exchange we are sending you:

Plantae Exsiccatae Grayanae, Cent. XII. .	100
Mounted Forbes Hb.	32
	132

Trusting that you will find the above useful in your herbarium, I am

Sincerely yours,

Lyman B. Smith

Curator.

Wa Due - Wash - Gray

THE UNIVERSITY OF NEBRASKA
DEPARTMENT OF BOTANY
LINCOLN

March 9, 1942

Mr. Ray C. Friesner
Butler University
Indianapolis, Indiana

Dear Mr. Friesner:

Your name appears in the Directory of the American Society of Plant Taxonomists as one willing to identify material of Solidago.

During the course of my research on the "Flora of Richardson county, Nebraska", my Master's problem, I have built up a fair collection of composites, and especially of Solidago. If you could find time to examine my collection you would be welcome to them in exchange for determinations.

If you decide to do this, you will be given full credit in my thesis, or any publication of it. Incidentally, my thesis is to be in presentable form by the middle of April, but should you find it inconvenient to make the determinations before that date, I should nevertheless like to have them at a later date in order that they may be used in the event of later publication.

I shall welcome any assistance you may be able to give me in this matter.

Sincerely Yours,
Howard C. Reynolds

Howard C. Reynolds
318 Bessey Hall
University of Nebr.
Lincoln, Nebraska

TELEPHONE SEDGWICK 3-3200

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

March 9, 1942

Dr. R. C. Friesner
Butler University
Indianapolis
Indiana

Dear Dr. Friesner:

We have on hand the Howard J. Banker collection amounting to 224 duplicates, collected at Cold Spring Harbor and Florida.

We wonder whether you would be interested in receiving these on a basis of exchange.

Very truly yours,

H. L. WITTROCK
Custodian of the Herbarium

Clw:Em

March 10, 1942

Mr. Clarence R. Hanes
Schoolcraft, Michigan

Dear Mr. Hanes:

I have never paid particular attention to odor in goldenrods because it is such an elusive character. It is not only difficult to describe but people differ so in their abilities to detect odors that it would be a poor character for many to judge by.

I would be pleased to have specimens from your region and would be glad to send them from here should you care for them.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 10, 1942

Dr. W. H. Horr
Department of Botany
The University of Kansas
Lawrence, Kansas

Dear Mr. Horr:

The specimens of Solidago arrived yesterday. There is no doubt about no. 2 this time. It is S. mollis. Number 12 is S. wardii and no. 13 is S. pallida. I appreciate the privilege of seeing this material. You did not state whether you wished the specimens returned. In case you do, please let me know; otherwise I shall mount them for our own herbarium.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 11, 1942

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

Dear Dr. Krukoff:

Your letter regarding plants for study in search for "repellants" is at hand. I know so little about the chemical properties of plants that I am not in a position to make intelligent suggestions.

On a few occasions I have used crushed plants of Hedeoma pulegioides to keep mosquitos and chiggers away but I cannot recall whether the use of the material did any good because I am practically immune to both of those pests. Other plants which I could send you in abundance and which might possibly be of value are: Saponaria officinalis, Eupatorium perfoliatum, E. maculatum, E. rugosum, E. serotinum, Cunila origanoides, Cicuta maculata, Conium maculatum, Achillea millefolium, Chenopodium ambrosioides and C. botrys. I shall be glad to cooperate by sending material of any species you may wish from our area.

Sincerely yours,

May C. Friesner

MCF:mb

March 11, 1942

Dr. G. L. Wittrock
Custodian of the Herbarium
New York Botanical Garden
Bronx Park,
New York, New York,

Dear Dr. Wittrock:

I would be glad to have the Howard J. Baker collection of Cold Springs Harbor and Florida plants on an exchange basis if you are willing to send them in the light of the fact that I am already deeply in debt to you.

I shall, of course, continue to collect as long as war restrictions do not stop me but it is likely to take several years to get out of debt to you.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 12, 1942

Mr. Howard C. Reynolds
Bessey Hall
University of Nebraska
Lincoln, Nebraska

Dear Mr. Reynolds:

Your letter regarding determination of Solidago specimens is at hand. I shall be glad to do the best I can toward getting a report to you in time for use in your thesis. At present I am about half-way through a large collection from Arkansas which I hope to complete next week. One other small collection is on hand but no definite promise has been made regarding it.

Our spring vacation comes the first week in April and I shall be away from the laboratory during that time. All of this means that if you get your material to me early next week there is a possibility that I may be able to report by April 1st.

Sincerely yours,

Ray C. Friesner

TELEPHONE SEDGWICK 3-3200

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

March 14, 1942

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

Dear Dr. Friesner:

Many thanks for your letter of March 11th. Unlike you, I am sorry to state that I cannot say that I am immune to chiggers, etc. The small white ones in South America usually bother me quite a bit.

In reference to the plants which you list in your letters - we would like very much to have samples of Hedeoma pulegioides, Eupatorium perfoliatum, Achillea millefolium and Chenopodium ambrosioides. Samples weighing one or two pounds would be quite sufficient for our preliminary tests.

Very truly yours,

B. A. Krukoff

Bak/Jd

Howard C. Reynolds
318 Bessey Hall
University of Ne

LINCOLN
MAR 14
6:30 PM
1942
NEBR.

THIS SIDE OF CARD IS FOR ADDRESS

BUY
DEFENSE SAVINGS
BONDS AND STAMPS

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

Lincoln, Nebraska
March 14, 1942

Dear Prof. Friesner:

Am sending off the Solidago specimens today. These have all been poisoned by the Corrosive sublimate method as used by our herbarium, and you are perfectly welcome to keep the specimens for your own private collection or to make such disposition of them as you desire.

Thanking you for your kind cooperation,
I remain,

Sincerely Yours,
Howard C. Reynolds

Howard C. Reynolds
318 Bessey Hall

Horr

THE UNIVERSITY OF KANSAS
LAWRENCE

DEPARTMENT OF BOTANY

March 14,1942

Dr.R.C.Friesner
Dept.of Botany
Butler University
Indianapolis

Dear Dr.Friesner;

I am still puzzled over Solidage #2. I have been using Rydberg's Manual and I always seem to get back to S.dumetorum. However I don't find that species in other manuals. Is this a recognized species? Rydberg took it there on the basis of the horizontal underground stems. I'm not sure that these stems were present on the specimens I sent you. I hope you don't mind my sending you a bundle of them to look over. I will include postage for their return. If you see a better specimen for your collection take it out.

I hope that you can put me straight on this . I'm not much of a taxonomist. My training was in anatomy and physiology.

Do you know where a job might open for a bryologist this season? He is Rufus Thompson son of the late C.H.Thopmson of Mass.Aggies. He did most of his undergraduate work with us a nd got his Ph.D. at Stanford with Smith. He has also done a lot of work with algae. He has had a temporany position with us this year. There is nothing objectionable about Thompson and he has a wonderful personality and there is no question in my mind that he will soon be one of our leading botanists if he can get a place where he has a chance to do some research along with his teaching. That may sound a little strong but it is not. Thompson is about 34 years old

Another question about the solidagoes. You called #13 S.pallida. Is that synonomous with S.rigiduscula(T.and G.) Porter?

If there is anything I can collect for you this coming season pleasecall on me. I hope to spend considerable time in the field.

Very truly yours W.H.Horr

W. H. Horr

March 16, 1942

Dr. Delzie Demaree
Department of Botany
Arkansas A. & M. College
Monticello, Arkansas

Dear Dr. Demaree:

Your card came this morning and I hasten off to you the determinations to date. They are all done except a few that have me stumped and which I will report upon as soon as I can get anywhere with them. I certainly appreciate your generosity in letting me keep them because I have very few specimens of some of them and none of S. lindheimeriana.

I have a rush sending from a graduate student at U. of Nebraska who needs them for his Master's thesis and then I'll get to your new lot. I am grateful to you for these new ones, too.

Tire conditions will confine our collecting to Marion and adjoining counties this summer but they have never been adequately botanized and so it will not be so bad after all.

Sincerely yours,

Ray C. Friesner

RCF:mb

Phylum IV. Spermatophyta

Class 1. Gymnospermae (Pines)

The Spermatophyta are the highest plants and ~~that~~ constitute the majority of plants that are useful to men. They are the characteristic land plants. In the Spermatophyta, the sporophyte reaches its fullest development. The main advances over Pteridophyte are the production of true seeds which contain the embryo sporophyte. Also the male gametes are non-motile and are carried to the female by pollen tubes. They consist of two classes, the Gymnospermae & the Angiospermae. The pines belong to the Gymnospermae.

The leaves of pines are mostly evergreen and xerophytic in structure. Pines themselves are found mostly in cold temperate or mountainous regions. At the base of each cluster of leaves are minute scale leaves. The leaves are arranged in pairs. The fascicle scars where leaves have dropped are spiralled. Cross sections of the leaf are shaped like the letter "d". The outer row of cells are the epidermis. Then comes the supporting layer. It varies in width from 2 to 4 cells. Next is the mesophyll. The cells are large and rounded and have infolded walls. Each cell contains a visible nucleus. In the mesophyll are the resin ducts. Next is the endodermis. This surrounds the central cylinder which contains the 2 vascular bundles. Each bundle is half xylem and half phloem, the phloem being near the convex side. Between these bundles & the endodermis are the transfusion tissues.

The stem is made up of the bark and the wood, and the pith. The wood contains the medullary rays and annual rings. In the bark are the resin ducts. In detail, the epidermis is surrounded by the cuticle. Next is the cork cambium. Next is the cortex or middle bark. Beneath the cortex is the phloem. The outer part is crushed but gradually forms rectangular cells. The comes the cambium which forms the

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JOHN L. MERRILL

TREASURER
ARTHUR M. ANDERSON

DIRECTOR
WILLIAM J. ROBBINS

March 18, 1942

Dr. R. C. Friesner
Butler University
Indianapolis
Indiana

Dear Dr. Friesner:

We are mailing to you today the Howard J. Banker collection amounting to 224 duplicates collected at Cold Spring Harbor and Florida. These are being sent to you on a basis of exchange.

The exchange balance will naturally be in our favour, and as you say it may take years before you may make a balance. However, Dr. Gleason feels we should not be too concerned with obligations of this nature, since he states definitely that it will be more valuable to have more specimens distributed to institutions where they will be of use and service than to have the specimens stored in closets accumulating dust.

Very truly yours,

G. L. Wittrock

G. L. WITTROCK
Custodian of the Herbarium

GLW:lm
Enc.

March 20, 1942

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

Dear Dr. Krukoff:

Your letter regarding material of Hedeoma pulegioides and others is at hand. I shall be glad to collect and send this in season. I presume material collected at flowering time would be best. How about roots? would you like them included ? Would you like the material fresh or dried or both?

Sincerely yours,

Ray C. Friesner

RCF:mb

March 23, 1942

Miss Anna V. Bray
University of South Dakota
Vermillion, South Dakota

Dear Miss Bray:

I have just come across a reference to your paper on the goldenrods of South Dakota and am writing to ask whether you would be willing to send me a reprint in exchange for reprints of my papers dealing with the same genus.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 23, 1942

Dr. Delzie Demaree
Arkansas A. & M. College
Monticello, Arkansas

Dear Dr. Demaree:

Enclosed I am returning determinations of all specimens in your last shipment except no. 22560 which so far eludes my efforts. There were 7 specimens of what I take to be the same species in your former shipment which I am still holding for more study. There are also 2 other specimens from your first shipment which I take to belong to a second species and which I am unable to place. This sums up to 10 specimens belonging apparently to 2 species, which I am holding for further study. I will let you know as soon as I can make a decision regarding them.

You have certainly helped me to broaden my conception of some species, particularly S. ulmifolia which seems to be more glabrous and with tegules more acute in your material.

How would you like a tentative key to the species which you have and those which should be sought in Arkansas. After a few more years of collecting and study we ought to have material for a paper on the Solidago of Arkansas. There is no manual at present which has all of them in it. You have an interesting commingling of northern and southern forms and I have an idea that the northwestern part may yield some new species.

At any rate it has been a real pleasure to work on this material and I hope you will have more in the future.

Sincerely yours,

Ray C. Friesner

RCF:mb

CABLE ADDRESS - MUSEUM, CHICAGO

FIELD MUSEUM OF NATURAL HISTORY
ROOSEVELT ROAD AND FIELD DRIVE
CHICAGO

OFFICE OF
THE DIRECTOR

March 23, 1942.

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

Dear Doctor Friesner:

In continuation of exchanges, Field Museum is forwarding by express a carton containing 277 specimens of plants. It is hoped that you may find these a desirable addition to your herbarium.

Very truly yours,

C. C. Gregg

Clifford C. Gregg
Director.

HFD

Howard C. Reynolds
318 Bessey Hall
University of Nebr.

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

Lincoln, Nebraska
March 25, 1942

Dear Prof. Friesner:

Thank you for your prompt response and the determinations. They will be most helpful to me in my thesis.

Winter in his "Analysis of the Flowering Plants of Nebraska"--1936, does not list S. pallida or S. somesii Rydb. so I am wondering if they might not be new records for Nebraska in so far as determined specimens are concerned.

I shall be glad to refer future collections of Solidago to you for determination.

Sincerely Yours,
Howard C. Reynolds
Howard C. Reynolds

pallida - Rydb. Prairie state Sask-Minn, Neb Colo
somesii Ia. Sw. ne. of Louisville Cass Co along C.B.+Q. RR and the Platte R. Neb.

March 25, 1942

Dr. W. H. Horr
University of Kansas
Lawrence, Kansas

Dear Dr. Horr:

Your box of Solidago specimens came through safely yesterday. I have gone over them carefully again and still feel that they are S. mollis. On a separate sheet I am giving you a comparison of S. mollis and S. dumetorum. From this comparison you will see that the chief distinctions lie in the characters that deal with the flowering and fruiting parts. There is also a difference in the leaves but this is only workable when you have the lower cauline leaves most of which are gone in your specimens.

I have measured a large number of heads and the involucres all run between 5 and 6 mm high which is 1-2 mm too high for S. dumetorum. In the second place, the tegules (involucral bracts) in your specimens are ovate to oblong rather than linear as in S. dumetorum. I have compared them from the two species and when placed side-by-side under the binocular microscope there is no doubt about the difference. The tegules of S. dumetorum are only about one-half as wide as those of S. mollis. Those of your material are very definitely of the mollis type.

In the third place the akenes of S. mollis are long-hairy (hirsutulous) while those of S. dumetorum are very short-hairy (hispidulous). Your material has the akenes very densely and quite long-hairy.

Species of Solidago are notorious for their variation in vegetative parts and too much dependence must not be placed on such characters.

I have appreciated the privilege of going over this material and am returning it by parcels post.

I am sorry that we do not have an opening nor do I know of any now where Mr. Thompson might apply. It seems too bad when promising young men are unable to locate positions.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 25, 1942

Dr. Clifford C. Gregg
Director, Field Museum
Roosevelt Road and Field Drive
Chicago, Illinois

Dear Dr. Gregg:

Your shipment of herbarium specimens reached us safely and in excellent condition yesterday. We are very grateful to you for them and assure you that they will make a valuable addition to our herbarium.

Sincerely yours,

Ray C. Friesner

RCF:mb

March 27, 1942

Dr. Paul Weatherwax
Indiana University
Bloomington, Indiana

Dear Dr. Weatherwax:

Babbett has found a few specimens of Ranunculus abortivus var. acrolasius near Voedersburg according to his report in the current number of the American Midland Naturalist. I am writing to ask whether you could have someone check your material in both the Deam collection and the I.U. collection for this variety. The variety differs from the species in that the stem and young peduncle of the variety is densely short pubescent while in the species they are entirely glabrous. In case you find any specimens of the variety they should be added to the 1942 report.

I am ordering 200 copies of the 1941 report and so will have plenty for those who wish them.

Sincerely yours,

Ray C. Friesner

RCF:mb

Ray C. Friesner.

Tisdale, Sask.
Mar. 27, 1942.

Dear Fellow Botanist:—

I have received your letter and determinations on Goldenrods some time ago. I wish to thank you ever so much. Perhaps I already answered your letter in that respect.

I am herewith sending another parcel of 200 plants, Salix, Rubus, Betula, Carex, etc. I hope they will arrive in good condition and that they are satisfactory I hope.

There is a genus cover about in the middle of the bundle containing some Solidago, for your det. which I recently got from G. H. Turner, Fort Saskatchewan Alberta. I made some changes from his determinations. I am particularly interested in those "S. missouriensis" I think he told me that Dr. Rouy had put them all in missouriensis. He also puts my glaberrima in S. missouriensis. He does not seem to regard S. glaberrima + monticola. If convenient I would like to have all of Dr. Turner's goldenrod specimens back. I believe Dr. Turner is intended to make a new collection on all the goldenrods in his area this summer. He puts up excellent specimens and if you write to him I believe he will be glad to send you

specimens at the end of the season. I sent him some of my specimens which may help him to find S. dumetorum, S. lepida var. fallax, S. canadensis var. gilvocanescens.

Well, I must now close with best wishes.

Yours Very Truly

August J. Breitung

March 30, 1942

Mr. Howard C. Reynolds
Department of Botany
University of Nebraska
Lincoln, Nebraska

Dear Mr. Reynolds:

Solidago pallida is listed in Rydberg's Flora of the Plains and Prairies for Nebraska. Your specimen is the only one I have seen from your state. The only published distribution for S. somesii that I know of is from near Elmira, Iowa (Rydberg, Brittonia 1:79-104. 1931). I have a specimen collected by John L. Morrison from a locality along the C.B. & Q. railroad south of the Platte river, 2 miles no. of Louisville, Cass county, Nebraska. This with your specimen from Richardson county would constitute a range extension and you should mention them when you publish your thesis unless some other published report is discovered or appears before your thesis is published.

Sincerely yours,

Ray C. Friesner

RCF:mb

April 6, 1942

American Forestry Association
919 17th Street, N. W.
Washington, D. C.

Gentlemen:

At the request of Mr. Charles C. Deam of Bluffton, Indiana, I have recently measured a few large trees in Indiana, some of which he says are larger than the records you have in your list of large trees. My botanical work carries me over most of Indiana and I would be glad to be on the look-out for new records if I might have a copy of your present records. Mr. Deam suggests that we might be able to add some species which you do not at present have.

Sincerely yours,

Ray C. Friesner

RCF:mb

April 10, 1942

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

Dear Mr. Ek:

The date for the spring meetings of the Indiana Academy of Science has been tentatively set for May 22-23 and the place is the Muscatatuck State Park near Vernon. I have been asked to lead the botanists field trip on Saturday and so will have to go down on Friday to work out the details. Mr. Deam and I have made arrangements to work together all day Friday. He will reserve a room for you for Friday and Saturday nights.

We would like for you to come to Indianapolis by bus on Thursday, May 21 and stay at my house over night. We would then leave early Friday morning and meet Mr. Deam at the hotel at the park by 7 a.m. We can have a real treat to be with him that day. Saturday will be devoted to the Academy trip for all members and then we can get away to ourselves again for Sunday.

This area lies in the Illinois Drift Plain and is of unusual interest botanically. Sunday will be a most profitable day for us. We will return to Indianapolis Sunday evening and you may either go home that same day or stay over Sunday night at my house and then spend Monday at Butler, going home whenever you have had "your fill" of Butler. You will be welcome to stay as long as you care to. If you can bear your expense of transportation from Kokomo to Indianapolis and return we will see to it that you have no other expense.

Sincerely yours,

Ray C. Friesner

RCF:mb

to my study of the Illinois Drift unless mine are also over by that time.

At any rate we will have a treat to have you with us again.

Sincerely yours.

April 10, 1942

Dr. Delzie Demaree
Arkansas A. & M. College
Monticello, Arkansas

Dear Dr. Demaree:

I have at last reached a conclusion regarding the remaining numbers of Solidago. After carefully filling out a complete diagnosis sheet for each specimen there remained no doubt that they were all one species and this turns out to be Solidago pendula Small. You will find it described in the 1913 edition of Small's Flora of S.E. United States. These specimens belonged to the following numbers: 18190, 18194, 18273, 19870, 20193, 20525, 20561, 20581, 20697, and 22568. Now I am ready for more, that is, I will be as soon as I take care of a small lot from Saskatchewan.

Sincerely yours,

Ray C. Friesner

RCF:mb

ARKANSAS AGRICULTURAL AND MECHANICAL COLLEGE
MONTICELLO, ARKANSAS

April 11, 1942

Dear Dr. Freisner:

I will take up your proposition on the Solidago paper. I am sending you a list of Solidago names that have been applied to Arkansas species. BC beside a name means that it was listed by Branner and Coville in their Geological Survey of Arkansas in 1888. PB means that Palmer and Buchhloz listed them in their Supplement of Arkansas Plants in 1926. I have been trying to make up a list of plants from these old lists that are probably not here. Some do not have specimens to back up the name, others are out of range, etc. Specimens marked O.K. I have collected. I wish you would go through the list, spending only a short time, making any notes you wish concerning these names. Some I am aure are obselete

Yours,

Delzie Demaree

Delzie Demaree

BC = Branner + Coville
PB = Palmer + Buchholz
OK = Demaree has Coll

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

Tuesday Night
April 14, 1942.

Dear Dr. Fiedler: -

Your exceedingly interesting letter Came Saturday. I had planned for over 2 weeks to write you - mostly about nothing. Spring is here - with its joys, hopes, uncertainties and sorrows - Have started my collecting - nothing of importance - Got some Skunk Cabbage Apr. 1 - drying nicely - + about a dozen other sheets - Going east 10-15 mi. tomorrow - with old man Sorg - at Corner 1 Sq. north. Don't expect much -

Have been busy "grinding out" squibs for the weekly Telegraph. - Must Fri - Am'g - will complete a yr - of 52 "articles" - I have enough "on the book" to run until August - maybe Sept. ! - Have 5 here on the desk - in the Rough - + I fear they'll get little polish. - Haven't time nor mentality -

I keep busy - busy as eyes will permit.

Deam sent me some more Science & The Scientific Monthly. There are no better. Dr. Rickett sent me 8 Jours of the N.Y. Bot. Garden. - which contain a lot of good material. From the Index & entire year - I gather that Mrs. Plum K. Small died about a year ago. Also - from "School & Society" Library - Dr. Karl M. Wiegand died recently - about my age.

Your letter thrilled me. - The plan suits me - There is every indication that I'll want to come home Sun Evening. I'll be "all in" - dirty - et cetera - - - - & home to attend to specimens.

The good old Doctor Deam wrote me 4 pages Mch. 7 - Did not have details then. Thought they may try S.W. Lafayette & then go west somewhere & some deep gully Canons. - I forget place. - Also mentioned Shakamak Park - & said he doubted if he would find much new there - but was ready & go anywhere. - Said he would come past & get me. - etc. I am presuming that you & he have the plans made - & I abide by any method you decide upon. - Deam also

From EK 14-IV-42

remarked that his eyes were bad and it may not be safe to drive. So that for I can guess, has formed your plans for me & come to Indpls. Thurs. P.M. - & you & I start early Fri. - for the Cork region any way - I'll be with you & Dr. Dean Fri. - & with crowd Sat. - & you & I & perhaps Grandpop Dean Sun. - The whole program sounds so good. - New territory - new species & me - & I trust, new Co. records.

I am sending you one of my squibs. I am indebted to "Science" for a few facts and ideas - & suggestions here & there. - The ideas have been mine for a long time - "Science" gave me the courage to do them. Reason I send this one is - I have several duplicates. - Doubt if many appreciate such "stuff". I have had 5-10 on similar lines. - others are purely local. This is a sample - some better - others worse & poorer. -

A month or so ago sent to Wildlife

Federation, Wash. D.C. - & Got 3 pamphlets
one of them 242 pages - all on Education
in Conservation - In a footnote is given
the title of a Report on Botany Teaching,
Dr. Henry B. Ward, Urbana, Ill., - He
sums up this report but I'd like to have
the whole report. Title is: "An Ex-
ploratory Study of the Teaching of Botany
in the Colleges and Universities of the
U.S. By the Committee on the Teaching
of the Botanical Society of America. 1936."
Was wondering if you had it & if you
could let me see it. - & what part you
had in it. - If not - O.K. - Have written
some articles on Conservation based upon
these pamphlets - one on "How shall we
teach Conservation"

I wish I could come for your Birth
letter and invitation to your home. In
my old age, I dislike to stay over night in
private homes; but I'll try to behave the
best I can. - With Best Wishes, - I am -
Very Sincerely Yours, Chas. M. Ek.

April 15, 1942

Mr. August J. Breitung
Tisdale, Saskatchewan

Dear Mr. Breitung:

Your package of herbarium specimens arrived in good condition last Thursday. We are very glad to get these specimens both because they cover a territory little represented in our herbarium and because of their fine quality.

I have studied the collection of Solidago from Dr. Turner and am returning it to you by parcels post. The specimens are certainly excellent and I am glad for your suggestion that he might be willing to exchange with me.

In regard to the difference between S. missouriensis and S. glaberrima I may say that they are difficult to separate. It is even doubtful in my mind whether we ought to consider them as separate species. In their extremes they are quite different but in areas where both are present they seem more difficult to sharply define. I am now differentiating them as follows:

Inflorescence compact with branches ascending and not recurved; heads not secund.....S. missouriensis

Inflorescence open, with branches spreading and the lower often recurved-arching; heads strongly secund .....S. glaberrima, and S. g. moritura

One of the two specimens under number 2586 has its lower branches spreading and the heads secund as in S. glaberrima var. moritura. If I were to see this specimen alone I would probably call it this latter species, but the other one is very definitely not secund and probably it is best to let both go as S. missouriensis.

I am not certain how carefully this difference was applied to your specimens and they probably should be re-checked. Gray, in his Synoptical Flora of North America 1(2):155. 1884, does not separate glaberrima from missouriensis and I am inclined to believe his judgment was better than that now followed when we try to maintain both as species.

Sincerely yours,

Ray C. Friesner

April 15, 1942

Dr. G. H. Turner
Fort Saskatchewan
Alberta, Canada

Dear Dr. Turner:

For the past year or so Mr. August J. Breitung and I have exchanged herbarium specimens and in the exchange of communications he has mentioned your interest in collecting goldenrods. I am writing to ask whether you would care to collect specimens of this genus in your area to trade with me for some from Indiana. I could send you fifty or more species from various parts of the United States should you care for them.

Sincerely yours,

Ray C. Friesner

RCF:mb

April 16, 1942

Mr. Claude A. Barr
Prairie Gem Ranch
Smithwick, South Dakota

Dear Mr. Barr:

I have at last gotten to the specimens you sent last December. My conclusions are as follows:

Hot Brook 1: Solidago trinervata Greene
Typical except for leaf-tips which are too bluntly and abruptly acute and for the tegules which are too obtuse in many heads.

Hot Brook 2: S. trinervata Greene
Typical except heads are too obscurely secund.

Hot Brook 3: S. trinervata Greene
Typical.

Hot Brook 4: S. trinervata Greene
Typical.

Hot Brook 5: S. trinervata Greene
Leaves too bluntly and abruptly acute, heads too obscurely secund.

Tilford: S. trinervata X S. mollis
Leaves are typical of trinervata but the heads are not at all secund which is a mollis character.

In all of these specimens the leaf shapes and sizes are definitely those of S. trinervata. The Tilford specimen might be assigned to that species too, but the inflorescence has so much of the aspect of S. mollis that it might well be looked upon as a possible hybrid.

I appreciate the privilege of studying these specimens and thank you also for the presentation of them to our herbarium.

Sincerely yours,

Ray C. Friesner

LEWIS SAMUEL ROSE
2165 JACKSON STREET
SAN FRANCISCO, CALIFORNIA

April 17, 1942

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

Dear Dr. Friesner;

I have just put aside for you about 230 more of my specimens, all of which are species and varieties which I have not sent to you previously. In case you should care to have them at this time I should be glad to send them to you with my compliments as a gift to your herbarium.

On account of the war conditions I do not expect to be able to make very extensive collections until victory is here. Would you kindly let me know if I should put aside for you any more collections that I should happen to make?

Sincerely yours,

Lewis S Rose

TELEPHONE SEDGWICK 3-3200

THE NEW YORK BOTANICAL GARDEN
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WILLIAM J. ROBBINS

April 17, 1942

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

Dear Dr. Friesner:

We are still getting organized for our work on "repellents", and I hear that we will have supplies of insects for tests within a few weeks.

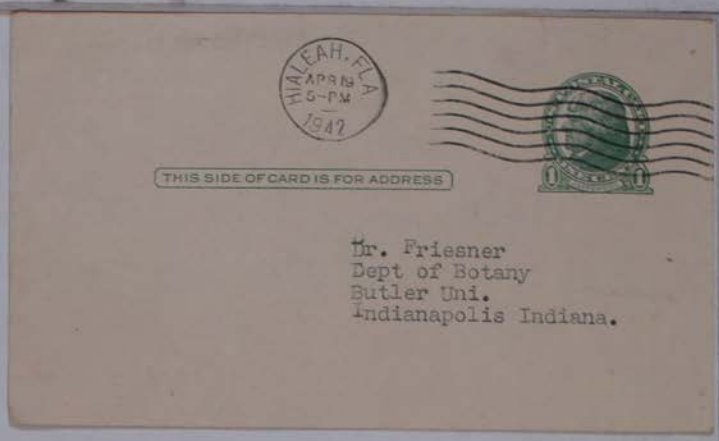
Answering your query of March 20th, we do not care to have roots included in the sample. We prefer to have dried samples rather than fresh material, and it is immaterial to us whether the plants are in flower or not, but we would like to have, however, fairly matured plants.

We shall be waiting with interest material of the four plants covered in my letter to you of March 14th. In addition to samples of these four plants, we would also like to have a sample of Cumila origanoides (Labiatae). You will recall that you called our attention to this plant and our chemists would now like to test it.

Very truly yours,

B. A. Krukoff

Bak/Jd



Route I BoxI067-Miami Florida
Care of John Szady

Dear Dr. Friesner :-

I am collecting in Monroe Co. at Pine.Crest and among the collected material is a quantity of a rare tropical fern -I want tropical ferns from any where in Mexico or Central America for st study-if you have a chance to ar range for exchange wld be glad t to ship a quantity to you-also wld like from time to time to se a package direct to you if you w wld pay the express- , wld under take the identification,with the help of Field Museum if necessar I expect to turn up new species here- will collect here off an o on all summer- have the use of a bldg at the Y -40 miles west o Miami and on the Chevrolet Road Send reply to Naples Fla as I wd be going back there for a time very soon the ferns and plants d deteriorate here very fast becau of the humidity-

Very sincerely

Eleanor Scull

G. H. TURNER M.D.
FORT SASKATCHEWAN
ALBERTA, Canada. April 19, 1942

Dear Professor Friesner,

I have your esteemed letter, and I will have great pleasure in collecting for you this year a set of the goldenrods of this area as far as I am capable of distinguishing them. The number that I have found so far is small. I have them named at present as follows:

Solidago canadensis L.
" rigida L.
" gigantea Ait. var. leiophylla Fernald.
" Missouriensis Nutt.
" decumbens Greene
" decumbens Greene, var. crassipila (Rydb.) Fern.
" graminifolia (L.) Nutt. var. Camporum Fern.
" nemoralis Ait.
" nemoralis Ait., var. decemflora (DC) Fern.

I hope diligent field work may reveal that I have been overlooking some forms. This area was originally mainly wooded with poplar and Willows, with many open spaces, (park land), and I believe many of the prairie species, such as S. mollis, S. hispida, S. Lunellii, etc., are missing here.

If you wish to send me some of your own species I will much appreciate the kindness, though I will be much more than repaid for my specimens by your determinations of my species.

With best regards, I am, Yours sincerely,
George H. Turner

April 21, 1942

Dr. Lewis S. Rose
2165 Jackson Street
San Fransisco, California

Dear Dr. Rose:

Your letter regarding herbarium specimens is at hand. I would be very glad to receive the set you have ready to send, but you must take into consideration the fact that we are already indebted to you to the extent of 233 specimens. I shall, of course, continue to send you material until I get you repaid in numbers, but the longer it goes the more difficult it is to find non-dulpicating material.

While I am always glad to get your specimens, it might be well after you send this set, if you took a vacation from sending me material until I get you paid up.

Sincerely yours,

Ray C. Friesner

RCF:mb

April 22, 1942

Dr. Eleanor Scull
Naples, Florida

Dear Dr. Scull:

Your card received. It will be all right for you to send material to the Botany Department of Butler University by express collect. If it is material needing poisoning we will take care of the poisoning and hold it for you until such time as you may issue directions for its disposal.

We are not exchanging with any one in either Mexico or Central America but will be glad to try to find some individuals with whom we can trade.

We will be glad to furnish you a place to work when you come to do the identifying.

Sincerely yours,

May C. Friesner

MCF:mb

IRA W. CLOKEY
1635 LAUREL STREET
SOUTH PASADENA, CALIFORNIA

April 27, 1942.

Dr. Ray C. Friesner
Botanical Department
Butler University
Indianapolis, Ind.

Dear Dr. Friesner:

In continuation of exchange I am sending to you today a small package 108 specimens which I trust you will find of interest. The amount of material I had on hand was smaller than expected.

There has been delay in publishing the botanical papers mentioned previously. I have two papers in now for publication but they will not appear until fall. Another paper is outlined and will soon go to the printer. The paper in cyto-genetics that Anderson and I expected to star in several parts is being held up for some further data. The first interchange in position and hence the first that must be presented lacks some necessary information. We hesitate to start with one of the weaker ones so are holding it over until next winter.

Sincerely yours,

Ira W. Clokey

P. S. Owing to the shortage of tires and the necessity of making trips to Berkeley by train, will you please send any specimens addressed to me in care of the Botanical Department of the University of California, Berkeley, Calif.

Ira