



Hunt Institute for Botanical Documentation
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Carnegie Mellon University
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Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

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

About the Institute

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

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

**Index Technique
For Biosciences
To Be Discussed**

Miss Ann L. Farren of the Biosciences Information Service will speak at 4 p.m. Wednesday, Nov. 8, in 103 Hale at the University of Colorado on "Effective Use of Computer Produced Indexes to Biological Abstracts and Biological Research Index."

The free public lecture is sponsored by the Phi Sigma biological fraternity. Miss Farren, professional relations officer of the information service in Philadelphia, will demonstrate uses of various services of the Biological Sciences Information Retrieval Service and will discuss new indexing techniques.

oulder Camera 2 Nov 67



BioSciences Information Service
OF BIOLOGICAL ABSTRACTS

ANN L. FARREN
Professional Relations Officer

2100 ARCH STREET
PHILADELPHIA, PA. 19103 U.S.A.
Telephone: (215) LO 9-1100

Work Force Hiked

FILE COPY

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

TAXIMETRICS LABORATORY
DEPARTMENT OF BIOLOGY
ARMORY 101

PHONE: 303-443-2211
Ext. 6712

20 May 1969

Editorial Department
BioSciences Information Service
2100 Arch Street
Philadelphia, Pa. 19103

Gentlemen:

If BioSciences is to serve as an information retrieval concern, it would seem important to get at least some of its information correct. I have twice received an abstract for review, sent to me but intended for Donald P. Rogers. The first time it was forwarded to me from Colorado State University which I left two years ago; the second time it was addressed to Donald P. Rogers at the above address.

Dr. Donald P. Rogers is in the Department of Botany, University of Illinois, Urbana. Dr. Donald P. Rogers is a mycologist, and therefore should be the recipient of all questions which mycologists are capable of helping you with.

My name is DAVID J. Rogers. My address is indeed the Taximetrics Laboratory. My speciality and review subject for BioSciences is Economic Botany. I trust that you can get this difference between Donald P. and David J. straightened out.

I have forwarded the last abstract, mistakenly sent back to me, to the correct individual in Illinois.

Sincerely,

David J. Rogers
Professor of Biology

DJR:gm

BIOSCIENCES INFORMATION SERVICE

OF BIOLOGICAL ABSTRACTS 2100 ARCH STREET, PHILADELPHIA, PENNSYLVANIA 19103 U.S.A. TEL. LO 9-1100

COMMUNICATING THE PROGRESS AND DIRECTION OF BIORESEARCH

September 12, 1968

Dr. David J. Rogers
Department of Botany
Colorado State University
Fort Collins, Colorado 80521

Dear Dr. Rogers:

It was a pleasure meeting you at our booth at the A.I.B.S. meeting and I am enclosing the section definition to Economic Botany, General as I mentioned to you. Would you be so kind as to read it over and make your criticisms and comments on it? We will be revising our definitions in January, 1969, so we would appreciate a reply within a month.

Hope you enjoy a pleasant fall.

Cordially,

Elizabeth M. Zipf, Ph.D
Supervisory Editor

EMZ:pk
enclosure

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WILLIAM C. STEERE The New York Botanical Garden • F. W. WENT University of Nevada • DAEL WOLFIE American Association for the Advancement of Science

11 October 1968

Dr. Elizabeth M. Zipf
Biosciences Information Service
2100 Arch Street
Philadelphia, Penna. 19103

Dear Betty:

I am terribly sorry that I was so rushed during the meeting that we really didn't have a chance to talk about the reclassification of Economic Botany and more generally, ideas for the reclassification of all biological endeavor. I am sending back with a few scribbled notes the present status of Economic Botany. I hope these are meaningful. Perhaps if we can establish a dialog by correspondence we can improve the cross indexing of even more facets of economic botany.

With respect to the overall classification of biology, I would love to see a new look in the Taxonomy Section of both botany and zoology such that we forget the differentiation of the two parts and recenter with one category called perhaps Systematic Biology. There is a sufficient overlap at the lower end of the taxonomic scale such that I am apt to miss some of the organisms whose systematic position shifts back and forth between plants and animals at the whim of the biologist.

But even more fundamental than this I would like to have an opportunity some time to run the present classification of biology through our Cluster Analysis technique to discover the similarities and differences actually existing in biology so that all of biology could be more meaningfully categorized. It's not impossible to make this kind of a scheme analysis, using our computer classification techniques. Maybe we want to think about this. I hope so.

Sincerely, yours,

David J. Rogers
Professor of Biology

DJR:gm



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Thank you for responding to our shipment of abstracts and citations from BIOLOGICAL ABSTRACTS, and titles from BIORESEARCH TITLES. We sincerely appreciate the time and effort you have given to evaluating the material sent to you.

As indicated in an earlier letter, we have proceeded with the search through more current material and are enclosing the results of this phase of search. We are continuing to seek evaluation of the pertinence of the items elicited from this fragment of the file and have enclosed an addressed envelope for return of the evaluation forms. Packets subsequent to this one will not include a transmittal letter, however, and we hope that you will remember to continue to return the forms. We hope to complete our statistical evaluation early in 1967 and will need your inputs by 1 March 1967 to meet our deadlines for analysis work.

Your continued interest and participation are invaluable to development of contemporary information services.

Cordially yours,

Louise Schultz
Systems Development Director

Enclosures



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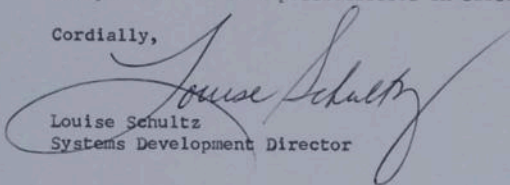
ROBERT S. COOK
PRESIDENT
FOR ADMINISTRATIVE AND
BUSINESS OFFICES

29 September 1966

Dear Dr. Rogers:

Thank you for returning the evaluation forms. We are proceeding with the next phase of search on your list. Although we returned to you only the first page (our form) for terms, we scanned the "Mathematical Biology" section of BIOLOGICAL ABSTRACTS for entries mentioning the ideas and phrases on the separate typed sheet. Although the original papers, represented by abstracts other than those we reproduced for you, might mention the statistical and data processing techniques you listed, the abstracts--which is our basis for selection for reproduction--do not. We will be particularly alert for such possibilities in subsequent searches.

Cordially,


Louise Schultz
Systems Development Director

Dr. David J. Rogers
Department of Botany and Plant Pathology
Colorado State University
Fort Collins, Colorado 80521

July 28, 1966

Please note: After surveying this list, I find it meaningless for me to attach a ranking to these words which has any significance.

If for the sake of the project it is essential that a ranking be given, please let me know and I will force a rank order on the enclosed list. But if it is possible to accomplish the project without this ranking, I will be much happier.

The terms placed to the right as synonyms under one general term may indeed fit more comfortably under other of the general terms and the combination in a title for example may throw any one of the synonyms into a general term rather than as a synonym for one of the general terms to which I have assigned it.

GENERAL TERMS

SYNONYMS

quantitative taxonomy

Numerical taxonomy (German = numerische taxonomie), taximetrics, computer classification, automatic classification.

Quantitative classification, quantitative systematics, biometric classification, statistical taxonomy.

Any mathematical designation coupled with classification, systematics, or taxonomy, i.e., graph theory, information theory, factor analysis, principal component analysis, iterative techniques, partitioning, etc.

Classification models.

Pattern analysis and/or recognition.

Phenetic classification.

Non-Linnean classification.

Adansonian methods, (also include search for Adanson).

Medical classification and/or diagnosis.

Hierarchical classification (non-hierarchical classification).

Clustering techniques for classification

Iterative techniques for cluster analysis; several statistical terms apply, i.e., multivariate analysis, principal component linkage analysis, factor analysis, multidimensional analysis, etc.

Plus other mathematical disciplines.

(Continued on attached page)

GENERAL TERMS

SYNONYMS

Similarity measures

Distance functions, correlation coefficients, Pearson-Lee regression coefficients, simple matching coefficients.

Character analysis

Differential operators, character coding, bionumeric codes, weighted and/or unweighted characters.

Evolution models and computer programs

1. cladistics
2. phylogenetic
3. branching sequences in phylogeny
4. ground-plans

Key programs with computers

Identification routines.

Numerical representation.

Applications to specific groups of plants or animals of any of the above categories.

Books or articles entitled "Use of computers in"

- a. biology
- b. anthropology
- c. sociology
- d. psychology



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JUL 5 1966

June 27, 1966

Dear Dr. Rogers:

You have been selected as a potential participant in a current awareness service experiment being initiated by BioSciences Information Service of Biological Abstracts. The goals of this experiment are to study requirements for specifying lists of terms that describe the interests of an individual, such that the terms may be used successfully for direct matching against entries in indexes to BIOLOGICAL ABSTRACTS and BIORESEARCH TITLES. With the information derived, BIOSIS hopes to develop an effective current awareness service for the biological community.

The program for this experiment consists of the collection from each of approximately 100 participants a list of terms believed by that participant to represent his interests. Using each of these lists, BIOSIS will search the indexes to BIOLOGICAL ABSTRACTS for 1965 and provide to the participant a packet of prints of abstracts believed pertinent. Each of these abstracts will be accompanied by a short evaluation form, the return of which will allow BIOSIS to analyze the effectiveness of the search and the search vocabulary. For the remainder of 1966, a monthly search of BIOLOGICAL ABSTRACTS and BIORESEARCH TITLES will be conducted for each participant. At the end of the year, each participant will be requested to complete a short questionnaire concerning the effectiveness of the service and eliciting his comments (anonymously) concerning improvements in the techniques of designing vocabularies for search.

In general, we estimate that each participant will receive approximately 300 prints of abstracts or title entries representing items published during 1965 and the calendar year covered by the experiment. Keep in mind that a current awareness service can't hope to keep you abreast of current literature in a broad area of the discipline of biology. Rather, such a service should prove most useful in affording you access to papers in your general field that appear in journals too obscure, little used, or otherwise not conveniently available to you but that are processed as matter of course by BIOSIS. Therefore, in listing the index terms on which you would like us to search, please restrict your interest area to the subjects most intimately involved in your present research activity. In listing the terms, you may use single words or multiple-word phrases. Please list all synonyms you consider pertinent and check the spelling of each term listed. A request once submitted for a search on "Diptera," for example, yielded no references on "diphtheria," the subject for which the requester actually was looking.

June 27, 1966

After you have listed all of the terms you would like us to search, please assign to each term a ranking number indicating its relative importance to the search for you. The term you consider most important should have the number "1" attached to it, etc. Synonyms that are wholly identical in meaning should be ranked with same number. Quasi-synonyms may bear slightly different ranks to indicate the disparity between meanings. You will notice that we are offering no thesaurus or guide to your choice of terms because we believe that the progressive development of such a vocabulary guide constitutes one of the subsequent phases of this experiment. In conducting retrospective searches, we have gathered a great deal of information and gained experience in "exploding" a requester's vocabulary into the potentially productive terms that might appear in the indexes. Studying the applicability of this "explosion" technique to a current awareness search service is a goal of the overall project.

Please indicate your interest in participating in this experiment by returning the enclosed forms. Notice that your name appears on the page to be used for submitting the list of index terms. The other page does not bear your name and will serve to provide correlative statistics for the project.

Your cooperation will be sincerely appreciated and we hope that the service we perform in the execution of this experiment may increase the usefulness of biological literature to you.

Cordially yours,



Phyllis V. Parkins
Director

Dr. David J. Rogers
Taxonomy Laboratory
Department of Botany
Colorado State University
Fort Collins, Colorado 80521

PVP:mts
Enclosures



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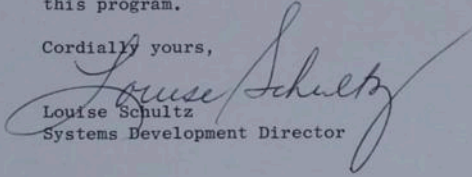
Secretary

Enclosed is a packet of abstracts and citations published in BIOLOGICAL ABSTRACTS and of titles published in BIORESEARCH TITLES during 1966, which were judged pertinent to the search described by the terms you selected. Each abstract is accompanied by a form for individual evaluation. You need only circle one of the letters and one of the numbers on each evaluation form. We will consider the return of the evaluation forms as your expression of interest in continuing with the experiment and we will provide to you a packet containing items published during each remaining month of 1966. With each print, a comparable evaluation form will be provided. Please return these forms to us in care of the Research and Development Division.

At the conclusion of the experiment we will request your cooperation in completion of a brief questionnaire such as that enclosed with this letter. Response to it will be anonymous and you may wish to keep its major points in mind during the progress of the experiment. You will also receive a copy of the report we prepare on the experiment, sometime early in 1967.

Again, may I express our sincere appreciation of your cooperation in this program.

Cordially yours,


Louise Schultz
Systems Development Director

Enclosures

BIOSCIENCES INFORMATION SERVICE
OF BIOLOGICAL ABSTRACTS

QUESTIONNAIRE ON INFORMATION SOURCES FOR
CURRENT AWARENESS SERVICE EXPERIMENT FOR BIOLOGY

1. I subscribe to or have routed to me _____ journals covered by BIOLOGICAL ABSTRACTS (BA) as listed in the brochure provided.
2. I estimate there are _____ journals, other than those to which I have regular access, that regularly contain papers pertinent to my principal field of professional interests.
3. I estimate there are _____ journals, other than those to which I have regular access, that sometimes contain papers pertinent to my principal field of professional interests.
4. I consider my principal field to be part of biology. _____ YES NO _____
5. I estimate that of these sources the relative proportions of literature sources for my field to be: _____ % open literature; _____ % preprints and unpublished manuscripts; _____ % reports available through a formal announcement and distribution agency such as the AEC, NASA, the Clearinghouse for Federal Scientific and Technical Information, etc.
6. I have convenient access to a current awareness service in my field. _____ YES NO _____
7. I have convenient access to current issues of BA and its indexes. _____ YES NO _____
8. My use of current issues of BA decreased during this experiment. _____ YES NO _____
9. I have discussed this experiment with _____ people.
10. I would pay the checked rate for the type of current awareness service provided during this experiment.
_____ \$0.75 per abstract (15 abstracts minimum, maximum specified by the requester)
_____ \$25 per year for a service of 100 abstracts maximum
_____ \$35 per year for a service of 200 abstracts maximum
_____ \$10 per year plus \$0.25 for each abstract in excess of 25
_____ \$0.
11. I have convenient access to back issues of BA. _____ YES NO _____
12. I would pay the checked rate for retrospective searches of BA since 1959 (600,000 items).
_____ \$0.75 per abstract (15 abstracts minimum, maximum specified by the requester)
_____ \$25 per year for 100 abstracts, any number of terms up to 25
_____ \$2 per term plus \$0.20 per abstract
_____ \$0.
13. I would pay the checked rate for retrospective searches of BA since 1927 (nearly 1-3/4 million items).
_____ \$1.00 per abstract (25 abstracts minimum, maximum specified by the requester)
_____ \$50 per year for 100 abstracts minimum, any number of terms up to 25
_____ \$4 per term plus \$0.20 per abstract
_____ \$0.
14. I would pay an additional checked amount per page of original article or report for hard copies.
_____ \$0.50 per page (minimum of \$5 for any one order)
_____ \$15 per year (maximum of 50 pages, any number per order during year)
_____ \$0.
15. I would pay an additional checked amount per article or report for microfiche or aperture card reproductions.
_____ \$1 per article or report (minimum of \$5 for any one order)
_____ \$15 per year (maximum of 25 fiche or aperture cards)
_____ \$0.
16. "PANS AND PUFFS" (Please comment on the service and its effectiveness. If you were not satisfied in any way we cannot deduce from analysis of the evaluation slips, please comment. If you consider any aspect of the experiment particularly satisfactory—in a way we cannot deduce from analysis of the evaluation slips—please comment. Use extra paper if necessary. Your comments will be entirely anonymous.)

FORM FOR INITIATING PARTICIPATION IN
CURRENT AWARENESS SERVICE EXPERIMENT FOR BIOLOGY

SU23

17A, 14C, 3 Biot / 29 and out 57a 21 Biot
30c 10/10

Name (last, first middle) Rogers, David James	Date July 27, 1966	Project I.D. number
Affiliation (organization) Dept. of Botany & Plant Pathology Colorado State University	Title Professor of Botany	
Address for correspondence on this project Old Music Building Dept. of Botany Colorado State Univ., Ft. Collins, Colo. 80521		
Describe your principal interest area of biology Quantitative taxonomy: classification by use of mathematical models, usually, but not necessarily, employing computers. Theory of Taxonomy. Terms to be searched (may be single words or multiple word phrases. Please list all synonyms you consider pertinent. Please check spelling. You will set what you ask for. After listing all terms, attach ranking of "importance" to each. Rank of synonyms should be the same but use of differing rank will imply some disparity of "importance.")		
<u>GENERAL TERMS</u>		<u>SYNONYMS</u>
<p>quantitative taxonomy</p> <p>Numerical taxonomy (German - numerische taxonomie), taxometrics, computer classification, automatic classification.</p> <p>Quantitative classification, quantitative systematics, biometric classification, statistical taxonomy.</p> <p>Any mathematical designation coupled with classification, systematics, or taxonomy, i.e., graph theory, information theory, factor analysis, principal component analysis, iterative techniques, partitioning, etc.</p> <p>Classification models.</p> <p>Pattern analysis and/or recognition.</p> <p>Phenetic classification.</p> <p>Non-<u>Linnean</u> classification.</p> <p>Adansonian methods, (also include search for <u>Adanson</u>).</p> <p>Medical classification and/or diagnosis.</p> <p><u>Hierarchical</u> classification (<u>non-hierarchical</u> classification).</p> <p>Clustering techniques for classification</p> <p>Iterative techniques for cluster analysis; several statistical terms apply, i.e., <u>multivariate analysis</u>, principal component linkage analysis, <u>factor analysis</u>, <u>multidimensional analysis</u>, etc.</p> <p>Plus other mathematical disciplines.</p>		
return to: BIOSIS, 3815 Walnut St. Philadelphia, Pa. 19104		

(Continued on attached page)

ROGERS

GENERAL TERMS

SYNOPSIS

Similarity measures

Distance functions, correlation coefficients, Pearson-Lee regression coefficients, simple matching coefficients.

Character analysis

Differential operators, character coding, bionumeric codes, weighted and/or unweighted characters.

Evolution models and computer programs

1. cladistics
2. phylogenetic
3. branching sequences in phylogeny
4. ground-plans

Key programs with computers

Identification routines.

Numerical representation.

Applications to specific groups of plants or animals of any of the above categories.

Books or articles entitled "Use of computers in"

- a. biology
- b. anthropology
- c. sociology
- d. psychology

Please note: After surveying this list, I find it meaningless for me to attach a ranking to these words which has any significance.

If for the sake of the project it is essential that a ranking be given, please let me know and I will force a rank order on the enclosed list. But if it is possible to accomplish the project without this ranking, I will be much happier.

The terms placed to the right as synonyms under one general term may indeed fit more comfortably under other of the general terms and the combination in a title, for example, may throw any one of the synonyms into a general term rather than as a synonym for one of the general terms to which I have assigned it.

Materials
from Biological
Abstracts

removed & returned
~~to author~~ disposed of

1-1981

711 J