



Hunt Institute for Botanical Documentation
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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.

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The funds reported should include all received or awarded during the calendar year 1972, or the fiscal year 1972-73.

Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
NSF	H. NICHOLS	12/1/70 - 11/30/72 (TO BE EXTENDED TO 5/1/73)	25,300	FOSSIL PALYNOLOGY / ARCTIC PALEOECOLOGY.
NSF	J. HESTER J. ANDREW'S H. NICHOLS	5/1/71 - 7/31/73	32,000	PALEOECOLOGY AND FOSSIL SHORELINES, BRITISH COLUMBIA.
NSF	H. NICHOLS	5/1/72 - 10/31/73 NSF PROMISED TO CONTINUE UNTIL 1974 WITH ADDITIONAL 37,000 for $\approx 72,000$	35,000	MODERN POLLEN TRANSPORT IN CANADIAN ARCTIC

Dr. Richard Jones
Ramaley

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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The purpose of this summary is to find means by which we can support your scientific endeavors to a fuller extent, not just to fill our files, nor to do any kind of propagandizing outside.

Would you please, therefore, fill in the accompanying questionnaire and return it as soon as possible to the EPO Biology Office, Ramaley 110? Thank you for your cooperation.

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
NIH	RICHARD JONES	1/1/72-12/31/73	* 34,280 (18,505 in 72) → 1000	REGULATION OF CYCLIC OVARIAN ACTIVITY
GRAD SCHOOL	RICHARD JONES	1/1/72-12/31/72		GRAD. STUDENT RESEARCH

CONFIDENTIAL

Dear Hobart:

Should the following activities for the calendar year 1972 be included:

Consultant for Molybdenum Corp. of America, Vail Associates, Marble Ski Area, U.S. Army Engineers, American Climax Molybdenum Corp.

All of these field and lab stream biology projects are being undertaken with the understanding that I may publish the results. In fact, I do not take on any consulting assignments without such an understanding.

From time to time I receive small funds to take care of wear and tear on field and lab apparatus for these projects. The Department definitely comes out ahead on such an arrangement.

I am careful not to use up more than one-sixth of my (normal 40-hour) work week in these activities in accordance with a mandate of the Regents. What I do with my time in excess of 40 hours (evenings, Saturdays, Sundays, vacations, summer months, etc.) is of no concern to the University. Neither are the stipends received for my services.

Bob Pennak

I do not think that any of the above information should be reported to or by the University.

CONFIDENTIAL

Dr. Robert Pennak
Hale

TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
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TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

Dr. Erik Bende
Hale

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
NSF (IBP)	JACK IVES	JAN. 1 - DEC. 31, 1972	\$ 8,733	INTERNATIONAL BIOLOGICAL PROGRAM RESEARCH ON PLANT GROWTH AND DEVELOP- MENT.

*Does a sabbatical leave for research
come under this?*

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None

W. Legal
Denison 108

Dr. Askeell Love
Ramaley

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
Smithsonian Institution	Askeell Love, Love	May 16, 1972 - Dec 30, 1972	\$57,935.00	Cooperative Studies on the cytotoxicity of the Yugoslavian flora.

Prof. Smith

~~Dr. John Marr~~
~~Hale~~

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
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Most of these are "cost" agreements in which we agree to do a particular job and the company pays wages & salary + expenses

Research Funding 1972.

John W. Moore

Source	To	Dates	Amount	Purpose
1. Meurer, Baffini, Meurer, Inc.	MAST and Students (Mittel, et al)	1971-72	\$2,500	Ecological inventory of Highway 285 widening.
2. Public Service Company	Mary and Students	Continuing	\$1,000 ± (1972)	Ecological considerations in pipeline routing and construction.
3. Colony Development Operation	Mast and Thorne Ecological Institute and Students (Buckner, et al)	1972	~~\$2,500~~ \$26,000 ±	Ecology of Western Colorado
H. Barton, Stoddard, Milchellen & Higgins	Mast and Students (Mittel, et al)	1971- 1972	\$2,500 ±	Ecology of Vail Park & Design For I-70.
5. Ken Right Engineers	MAST	1972	\$100	Waterway Green- belt in Copper Mt. Village
6. Rocky Mt. Center for Env. (from Vail Associates)				

- | | | | |
|---|---|--|--|
| 6. Vail Associates | Rocky Mt.
Center on
Environments.
for major &
students
(Larson - Giese, et al) | 1972 \$6,300 | Terrestrial ecology
of the Beaver Valley |
| 7. Aspen Citizens
Committee on
Greenway | Students
(Johnson +) | 1972 \$3,000 | Ecological Inventory
& Design of
Roaring Fork
Greenway |
| 8. American
Smelting &
Refining | Rocky Mt.
Center on
Environments
& Thermal
Ecological
Institute
for
major &
students
(Giese) | 1972 - \$3,500
1973 + special
air
transport | Ecological Inventory
of White Clouds
Area of Taylor Fork
Mts., Idaho |
| 9. Public Service
Co. | Rocky Mt.
Center on
Env.
for
students
(Giese - Larson, et al) | 1972 \$3,500 | ~~Design~~ Ecological
Considerations in
Design of
Blue River Power
Line |
| 10. Jefferson
Land
Assoc. | Major &
students
(Schultz - Mittel) | | Ecological Inventory
of Montana
Development
Area. |

11.

Morr &
Students
(Larson)

1972 \$1,000 ±

Ecological Inventory
of Eagle-Liny
Waters Project

Note: Fourteen students and one faculty member
in addition to Morr participated in
the summer program.
During the spring another and last fall,
another 25 students were involved.

The "amounts" are approximations since
the agreements are usual "cost-plus"
and several are not yet complete.
The figures given are minimum amounts.

Dr. Paul Winston
Ramaley

TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

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NSF	P. Winston	72-73	8,000	Insect Water balance 1708-62
NSF	W. Chappell (Physics)	72-73	22,437	Moly. Project 1778-58

Dr. Carl Bock
Ramaley

TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

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NSF	C. Bock	Oct 1 '71 - Sept 30 '73	\$30,000	Dipper study
Thane Institute	C. Bock (via John Mann)	July-Aug, '72	\$500	consulting (over)
Am. Museum of Natural History	H. Hadow	Summer '72	\$600	Vocalizations in <i>Sporobolus</i>
University of the Pacific	A. Charkoff	Summer '72	\$600	Ecology of the <i>Sporobolus</i>

Sigmar Xi

Joel Hubbard

1972-73

#250

Ecology of
the white-
crowned
sparrow.

Dr. Yan Linhart
Ramaley

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
Graduate School	Y.B. Linhart	72-74	\$ 7500	primarily for purchase of equipment and greenhouse remodeling

Dr. Hobart M. Smith
Ramaley

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
N644	RB & H M Smith	Apr. 1, 1971 - Mar. 31, 1974	\$65,000	Synopsis of Mexican Herpetology

Dr. Robert Gregg
Hale

TO: All Faculty of EPO Biology
FROM: Biology Office
RE: Research Funding

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Council on Research	R.E. Gregg	Nov. 1, 1971 to Oct. 31, 1972	1000 ⁰⁰	Travel in Mexico to collect ant species (July-Aug. 1972)
CHSP	R.E. Gregg	Feb. 21, 1972	575 ⁰⁰	Page charges for paper on northward distribution of ants
Council on Research	R.E. Gregg	Feb. 21, 1972	100 ⁰⁰	Reprints (100) of above paper

Dr. Pat Webber
Ramaley
INSTAAR

TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
Bureau of Reclamation	Webber	1972-3	29,251.	San Juan Ecology Project - Effects of Watershed Modification
National Science Foundation	Webber	1972-3	44,873.	International Biological Program - Tundra Primary Productivity
National Aeronautics and Space Administration	Webber	1972-3	7,975.	Earth Resources Technology Satellite - Vegetation mapping

(Note: the above funds are Webber's portion, i.e., jurisdiction, within INSTAAR group projects)

Dr. Jane Bock
Ramaley

TO: All Faculty of EPO Biology

FROM: Biology Office

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Several more things pending.

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Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
1. Burd Rec.	INSTAAR	Fiscal Yr.	\$10,000 (my share)	1. San Juan Ecology Project Phenology Study.
2. Corps. of Eng.	Thorne Inst.	Apr. - Oct. 1972	\$4,500 (my share)	2. Plant Ecology of North Boulder Creek.
3. CH ₂ M Hill Engineering Seattle	C. & J. Bock	1972 to date	\$1,000	3. Ecological Analysis of Watershed.
4. W. R. Beck Assoc. Denver	J. Windell & J. Bock	July - Sept '72	\$500	4. Ecological Survey of South Boulder Creek.
5. T. H. G. Assoc. Denver	J. Bock	Sept '72	\$500	5. Evaluation of Clear Creek development.

Organized by the Hunt Institute for Botanical Documentation

Dr. Rogers

DEPARTMENT OF EPO BIOLOGY
Meeting of the faculty - March 2, 1973

Present: H. Smith, P. Webber, P. Winston, R. Jones, W. Shulls, C. Norris,
D. Rogers, S. Shushan, E. Bonde, J. Bushnell, R. Pennak, A. Löve,
J. Bock, D. Norris, B. Pollack, O. Williams, C. Bock, W. Crumacker,
Y. Linhart, R. Gregg

The meeting was called to order at 4:00 p.m.

Announcements:

The Alexander memorandum concerning former graduate students of this department has been circulated to all staff members. Please supply Gordon with data, as requested, for as many students as possible and forward the cards to him before March 16th.

The staff is urged to attend the forthcoming A&S meeting on March 7. Notice of motion has been given for the election of two important committees, viz., budget and personnel, for the College of Arts and Sciences. As all matters pertaining to these topics would then have to be funneled through these committees, the persons functioning in those capacities would be in a position to direct all related decisions by Dean Briggs. Informal appointed committees now serve essentially the same advisory role.

Letter or pass-fail grades for mathematics, physics, chemistry, geology, geography, etc., required for majors in the biology department were brought up for review. Dr. Shushan moved that all such courses, taken by our majors, would require that each student obtain a passing letter grade. The motion was seconded and was passed unanimously.

Agenda:

✓ Dr. Rogers presented a detailed report on the findings and accomplishments of the departmental Development Committee, and circulated copies of this report among all members present. He commented that for the present the report is on the substantive level and that mention of any individuals by name was purposely omitted. Informal investigation (during visits to Washington) revealed that among a number of granting agencies contacted, NSF was guardedly enthusiastic about our aims and the possibility of providing funds, and that the National Institute of Education (a new organization) was not in a position to commit itself as yet. With respect to the matter of "interest groups", Dr. Rogers said that these may include from two to as many as 10 or more persons, and that the examples listed do not by any means pretend to be a complete survey of all such groups in the department, nor in any way indicate relative importance of the several listed. Additional groups may be suggested, and the committee welcomes continued input from all members of the staff.

Dr. Charles Norris moved the adoption of item #7 of the Rogers Report, concerning the establishment of a seminar series in honor of one of our predecessors, and the motion passed unanimously with one abstention.

The next item of business involved the matter of administrative essay for 1973-74, and the chairman explained that his position for next year needed to be clarified before he could carry out the necessary functions. Hobart Smith was re-elected as chairman for the next academic year, and by acclamation.

Dr. Pennak's report on merit criteria for the department was not presented directly. Instead, Dr. Bushnell moved that a mail ballot be held for the acceptance of this report. The motion was seconded and passed.

New courses in the department:

The Plant Kingdom, a new course in general botany as outlined in a memorandum from the EC to all EPOB and MCDB faculty, has been approved for Fall 1973.

Biology of the Social Insects, is in process of approval and is expected to be offered in Spring of 1974.

Ecology for Man, unfortunately will have to be cancelled on account of staff load. An appeal was made to the Environmental Division to see if it can somehow be re-activated.

The meeting adjourned at 5:00 P.M.

Respectfully submitted,
Robert Gregg, Sec'y.

ADDENDUM:

The Environmental Division has revived Ecology for Man, to be team-taught with John Bushnell as coordinator, as a 2-hr. course for non-majors (with 1 hr. additional credit available if desired, through independent study, for an individual project under the supervision of any associated faculty member), to be offered in Spring, 1974. This is a great service to the department in its role as the legitimate anchor for the study of ecology in this University. Thank you, one and all!

Announcement:

The Development Foundation has agreed to provide \$775 for purchase of four dictaphones - a transcriber-dictaphone for use by Janis in Hale, and three portable dictaphones for use in Hale, Ramaley or elsewhere. All work on these machines will have to be handled through the Hale office. See Janis or Dr. Bushnell about availability of the portable dictaphones.

D. Rogers

March 5, 1973

Memo to: EPO Biology Faculty

From: Development Committee

Subject: Further actions of the committee, and request for action from faculty.

Following our discussions in the faculty meeting last Friday, we wish to reemphasize that we look forward to faculty participation with the committee to further refine the "interest group" definitions, and to begin development of programs around the interest groups.

Given the programs (which include the members), we can then begin the process of chasing money to support our endeavors.

Please contact any member of the committee, and state your interests, and we will go ahead. Please do not delay. If you do, we will begin with gentle reminders.

Dave Rogers

Report of Development Committee, for March 2, 1973, Faculty Meeting

1. There has been a general air of enthusiasm amongst the members of the committee, and since this committee is a representative subset of the faculty, this augurs well for the philosophy, directions and activities of the development concepts we espouse.
2. We kept our direction as planned, that is, with The Department as the main concern for development, but also kept in mind the needs of individuals.
3. Results of interviews indicated what we anticipated: some desire for collective effort, but also reluctance on the part of a few faculty members to join any group function.
4. Our efforts uncovered concern (at some point) with all aspects of the Departmental and individual faculty function: pedagogical, research, and service to "the community." These were anticipated, and perhaps our discoveries were predicated by the type of questions which we asked during the interviews.
5. The efforts of the committee were almost totally with respect to the individual interviews (which took longer than we wanted, because of final exams, semester break, and start of the 2nd semester), but initial investigations of the funding picture in Washington were sampled -- the latter not totally pessimistic.
6. Some of the findings of the committee are:
 - A. Definite "interest groups" exist in the Department, around which programs of teaching and research can develop.
 - B. Individual scholarly efforts are in progress which could benefit from some kind of assistance, either money or time of helpers.
 - C. Some endeavors in the department are sufficiently basic to be required across individual and interest group lines (data processing, staff preparatory functions, shared facilities, etc.)
 - D. With respect to 6A, above, the following types of interests were found which could involve two or more individuals. (Please note that the following list is preliminary, not final, and is not necessarily all the kinds of interests we espouse. We hope the Faculty will review our findings, and bring to our attention any omissions we have made or additions necessary):

"Interest Groups"

1. Ecology-physiology-taxonomy of vertebrates.
2. Ecology-genetics of *Drosophila*.
3. Aquatic biology: bacteriology, algalogy, physiology, ecology, etc.
4. Mountain plant physiology-ecology; plant eco-physiology in general.
5. Teaching methods (for want of a better designation), including curriculum evaluation both internally and comparatively on this campus and at other campuses.
6. Systems biology (again, for want of a better designation) including:
 - Information retrieval
 - Data processing - statistical and non-statistical correlative methods.
 - Taximetrics (or numerical taxonomy)
7. Environmental (natural and disturbed) effects on germinability of dormant structures in plants and animals.

7. A recommendation from the Development Committee, which came after some deliberation, and which could be helpful to us all is the institution of a Seminar Series, named for one of our illustrious predecessors, where one of our own faculty is recognized for his/her scientific advancements, and is invited to be "The _____ Lecturer for 197____, etc.

8. The next steps for the Development Committee

1. Encourage any/all faculty members who identify with any one of the above functions, or interest groups, to contact the committee to help sharpen the definitions, functions, desires, potential scopes, and to find means by which the interest group can be brought to a meaningful operation.
2. Investigate more fully sources of support for interest groups and individual faculty.
3. Assist faculty in preparing proposals for research/teaching projects.

5.a. - Remodeling Ramsey lecture hall
for biology teaching - Charley Norris

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental,
Population and Organismic Biology

March 1, 1973

Dean Briggs
Arts and Sciences
Hellems

Dear Bill:

I write to recommend that a staff programmer position be established in Arts and Sciences to serve the needs of Lew Savin, your own shop, and the Department of EPO Biology. We have long felt the need of a position at the staff level to serve students and faculty in EPO Biology that cannot be met at the computing center.

The computing center advises on problems of building programs, but never has assumed the task of maintaining programs which they did not build. Some of our programs are very powerful tools in our departmental work, and need to be maintained by a responsible person. The computing center does not wish to add individuals to their staff whose main functions are in support of some department or other administrative unit. We are seriously hampered, therefore, by this situation.

I think that there are some rather fundamental relations between the types of problems Lew has and those we face in EPO Biology, even though the substantive content of our work is different. I can explain these relations, I think, but not in this memo. But if these relations do exist, it seems reasonable to me that we share an individual who could serve all our functions.

I trust that we can discuss this idea further.

Sincerely,

David J. Rogers

CC: Lew Savin
Hobart Smith

DJR/jlr

Carl: Connections, additions
by noon Friday -

Dave

Report of Development Committee, for Mar. 2, 1973, Faculty Meeting

Report of our deliberations of Wednesday, Feb. 21.

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"Interest Groups"

1. Ecology-physiology-taxonomy of ~~invertebrates~~ invertebrates
2. Ecology-genetics of Drosophila pseudoobscura
3. Aquatic biology: bacteriology, algology, physiology, ecology, etc.
4. Mountain plant physiology-ecology; plant eco-physiology in general.
5. Teaching methods (for want of a better designation), including curriculum evaluation both internally and comparatively on this campus and at other campuses.
6. Systems biology (again, for want of a better designation) including:
Information retrieval
Data processing - statistical
Biometrics for numerical taxonomy

7. A recommendation from the Development Committee, which came after some deliberation, and which could be helpful to us all is the institution of a Seminar Series, named for one of our illustrious predecessors, where one of our own faculty is recognized for his/her scientific advancements, and is invited to be "The _____ Lecturer for 197_, etc.

8. The next steps for the Development Committee

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2. Investigate more fully sources of support for interest groups and individual faculty.

3. Assist faculty in preparing proposals for research/teaching projects.

Bob Panek

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4. st Maintain plant physiology-ecology; Physio; Plantec-physiology in general.
5. Teaching methods (for want of a better designation), including curriculum evaluation both internally and comparatively on this campus and at other campuses.
6. Systems biology (again, for want of a better designation) including:
Information retrieval
Data processing - statistical
Taximetric for numerical taxonomy

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"Interest Groups"

1. Ecology-physiology-taxonomy of ~~herp~~ ^{herpetology}
2. Ecology-genetics of *Drosophila pseudoobscura*
3. Aquatic biology: bacteriology, algology, physiology, ecology, etc.
4. Mountain plant physiology-ecology.
5. Teaching methods (for want of a better designation), including curriculum evaluation both internally, and comparatively, on this campus and at other campuses.
6. Systems biology (again, for want of a better designation) including: information retrieval ^{and} ~~data processing, statistical, and statistical-correlative methods~~ ^{taxometrics (or numerical taxonomy)}
7. ~~Evolution~~ ⁷⁰ / natural and disturbed effects on germinability

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Information for Devel. Committee

Information on Individual Faculty Members

1. Recent publications indicating breadth of scholarly interests.
Projects currently in progress.
2. Current & recent courses taught, indicating present teaching activities.
3. Current graduate students and their research &/or teaching interests.
4. Current sources of financial support for research, teaching, &
graduate student work.
5. Future scholarly objectives - research, teaching, writing, etc.
6. Are present equipment & facilities adequate for these objectives?
If not, what is needed?
7. Is financial support now available? If so, what sources? If not,
what is needed?
8. Can you think of any colleagues with whom you would especially like
to collaborate in the future? To what endeavors?
9. Other professional activities (National & International): offices,
editorships, consulting, etc.
10. Memberships - Societies

Faculty

✓ Bock, Jane
✓ Bock, Carl
✓ Bonde
Bushnell
✓ Crumpacker
✓ Gregg
✓ Jones
✓ Linhart
✓ Löve
Marr
Norris, Charles
✓ Norris, David
— Pennak
Rogers
✓ Segal
✓ Shulls
✓ Shushan
Webber?
✓ Williams
✓ Windell
✓ Winston

✓ Smith

Interviewer

Jones
Jones
Bushnell-Shushan
Pennak-Bock
Bock
Bushnell
Bock
Bock
Rogers
Bock-Bushnell
Jones-Winston
Jones
Bushnell
Bock
Bushnell
Segal
Bushnell-Bonde
Rogers
Bock
Jones
Jones

Bock

Notes: Wed, Feb. 21, Dev. Comm.
mtg.

Love - sp. consid. for him from adminstr.

Ask him to give a Department Seminar
"The Kewaley" Seminar -

Ashell's suggestion that brought ICSEB here.

Carl's report -

Res. Groups - (Call them interest groups).

1. Crumfacker:

Ecology of *D. obscura* - Linhart, J. Bock associated.

2. Hohart -

Evo - physiol of herbs - Jones, Carl, Morris, Chizor (Psych)
Igor Gomon -

Lower vertebrate eco-physiol.

3. Info retrieval - Rosella, Davis,

Systems biology -

4. Teaching methods -

Curricula evaluation.

Both within this dept. and by comparison
with other university offerings -

3. Aquatic biology

Bob - Limnology

Segal - Bacteriology

Bushnell - Invertebrate

Algalogist -

P - Physiology

Engineering interested -

5. Numerical Taxonomy

6. Mt. plant physio-ecology group -

J. Bock, Shubert, Eric Bohl,

Man.

Individual efforts of many types - projects in progress



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
WASHINGTON, D.C. 20202

OFFICE OF THE DIRECTOR

January 15, 1973

Dear Colleague:

According to our records, you have asked to be placed on a mailing list for information about the National Institute of Education. Time and mechanical constraints have prevented us from developing separate lists for those who want different kinds of information or from eliminating duplications on the mailing list. Thus, this packet may contain more (or less) information than you want about NIE. Specifically, the packet contains:

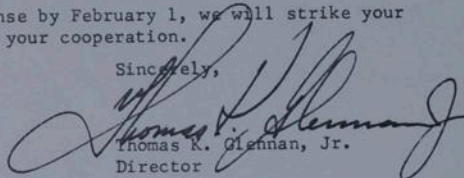
- A press release announcing our new national competition for Grants for Research in Education
- Detailed announcements of the six types of Grants for Research in Education
- An application form for use by those wishing to submit proposals in this competition

So that we do not include your name more than once in future mailings and so that you will receive only information that is useful to you, we would appreciate it if you would fill out the form below and return it to:

Office of Public Information
National Institute of Education
Code 600
Washington, D.C. 20202

If we have not received your response by February 1, we will strike your name from the list. We appreciate your cooperation.

Sincerely,


Thomas R. Glennan, Jr.
Director

Name _____

Title _____

Organization _____

Address _____

I wish to receive: Future guidelines for submitting proposals _____
Major informational releases _____
Grant and contract award announcements _____
All press releases _____

HEW NEWS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
National Institute of Education
Washington, D. C. 20202

Tim McCarthy--(202) 755-3407
(Home)--(202) 387-4382

Tom Clemens --(202) 755-7940
(Home)--(301) 530-2699

FOR RELEASE IN A.M. PAPERS
Friday, January 19, 1973

HEW-C62

About \$7 million to \$10 million in Federal support for field-initiated education research will be awarded this spring in a nationwide competition by the National Institute of Education.

This is the first new program undertaken by the Institute, which was created by legislation signed into law last June.

Researchers are being asked to submit proposals on topics promising to extend knowledge about American education. Colleges, universities, state departments of education, profit or nonprofit public or private agencies, and individuals are eligible to apply. The support areas are:

Selected Disciplines Research -- Support will be provided to encourage anthropologists, economists, political scientists, and persons interested in legal issues to apply their expertise to education problems. Each of the four competitions will support 10 to 15 projects averaging about \$50,000 for up to three years. Applicants are being asked to submit prospectuses postmarked by February 17. Those submitting the best prospectuses then will be invited to submit formal proposals.

(More)

Grants for Research in Education -- An undetermined number of grants and contracts of varying size will be provided for research by established investigators in fields other than the selected disciplines. Awards will be based on the proposal's technical quality and educational significance, the investigator's qualifications, and the adequacy of his research facilities. Support will be provided for up to three years.

Small Grants Research -- Grants and contracts of up to \$10,000 will be awarded to qualified but less experienced or established researchers in any field. In addition to the adequacy of available research facilities and the quality and significance of the proposal, criteria for selection include the probability of completing the proposed work within 18 months and within the researcher's budget estimate.

Applicants in the latter two areas are being asked to submit formal proposals postmarked by March 1. Proposals and prospectuses submitted in all areas will be reviewed by NIE staff, assisted by outside experts.

Researchers may obtain competition announcements, guidelines and application forms, and further information from:

Field Initiated Studies Program
National Institute of Education
Code 600
Washington, D. C. 20202

NOTE TO EDITORS: Copies of the competition announcements are attached.

#

NATIONAL INSTITUTE OF EDUCATION

GRANTS FOR RESEARCH IN EDUCATION

JANUARY - JUNE 1973

The National Institute of Education (NIE), Department of Health, Education, and Welfare, is announcing a funding activity for research to be supported out of funds available in Fiscal 1973. Applied and basic research proposals from all fields of study with relevance to American education are eligible for submission, except for anthropology, economics, political science, and legal research, for which special activities are provided.

Both studies seeking information needed for a specific purpose or course of action and studies in which the investigator seeks to fill a theoretical knowledge gap and to conceptualize and understand selected phenomena are eligible for support. The research should show promise of contributing significantly toward one or more of the following goals:

- To expand and strengthen the foundations of scientific knowledge about the processes and conditions of American education
- To provide tested solutions to specific practical problems of American education
- To provide perspectives on and clarification of the goals and issues of American education

Activity Scope

The range of eligible studies covers pre-experimental, historical and philosophical reviews and syntheses, pilot explorations, empirical research on processes and phenomena; and exploratory development to include empirical identification of a developmental need, feasibility testing of alternative versions or a prototype, and development of design specifications. Consideration also will be given to proposals for integrative reviews of a field or area to provide state-of-knowledge analyses, investigations of improved research methodologies, studies in psychometrics, as well as research on educational R&D policy and policy-making and studies directed to a science of R&D management. The activity will be responsive to all ideas for innovative, high quality, educationally relevant research.

This funding activity is intended to support individual projects rather than large development or programmatic efforts or parts of such efforts. The amount awarded to approved studies will be subject to negotiation.

The duration of projects approved will be limited to three years. In the event an investigation requires more than three years, it will be necessary to submit a new proposal for competitive evaluation.

Eligibility

Grants may be awarded to colleges, universities, State departments of education, and other public or private agencies, organizations, groups, or individuals. Profit-making organizations are eligible to participate, but they will be awarded contracts rather than grants.

Application and Review Procedures

Applicants should submit 20 copies of a full proposal prepared in

accordance with NIE guidelines which are attached to this announcement.

The review criteria against which proposals will be evaluated include:

1. The quality of the proposed research in terms of scope, design, methodology, and instrumentation if appropriate.
2. The significance of the proposed research for American education.
3. Qualifications and record of prior research productivity of the principal investigator and other professional personnel.
4. Adequacy of the facilities available to the investigator to conduct the proposed study.
5. Reasonableness of the budget in terms of the work to be accomplished and the anticipated results.

Grants will be awarded by the Director of NIE on the basis of a national competition in which the proposals will be reviewed by staff members of NIE assisted by non-government specialists in the areas covered in the proposals.

The following panels are being assembled to evaluate proposals:

1. Learning and Instruction- Basic studies of cognitive functions and processes -- memory, information processing, and learning environments; learning theory, instructional theory, and applied research on instructional methods and techniques, including communication studies, instructional media texts, computers, T.V., etc.
2. Human Development- Studies of the growth and maturation processes -- psychological, sociological, physiological, and biological; research on cognitive, perceptual, language, and affective development as related to human learning and education.
3. Objectives, Measurement, Evaluation, and Research Methodology- Studies on educational goals and their relation to social goals of individuals and society, psychometrics, evaluation of educational programs and outcomes, effects of measurement and evaluation on students and on education, and studies leading to improved education research methodologies.
4. Social Thought and Processes- History and philosophy of education, comparative education, social issues, school-community relations, community influences, classroom interaction, small and large group processes, role theory, attitudes, values, and interests formation, etc.
5. Organization and Administration- Basic and applied research on educational systems at all levels, including school and college organization and administration; topics dealing with organizational structure and functions, management studies, budget and finance, policy, staffing, personnel selection and training, etc.

Applicants are invited to designate the panel they wish to review their proposal. If no designation is made by the applicant, NIE staff will make the assignment.

Time Schedule

Postmark deadline for submission of proposals is March 1, 1973. Awards will be announced during June, 1973. Projects should be scheduled to start within a reasonable period after that.

Federal Register

This activity will be announced in the Federal Register and may be subject to minor revisions. Applicants will be informed immediately of any changes.

Further Information

For additional information on this and other research activities, contact:

National Institute of Education
Proposals Clearinghouse
Code 600
Washington, D. C. 20202
Telephone: (202) 755-7940

Other Research Activities

In addition to general Grants for Research in Education, the following activities will be conducted. Announcements describing each may be obtained from the NIE by writing to the above address.

Small Grants

Considers proposals for educationally relevant applied and basic research by younger investigators who have not had time to establish an extensive record of research productivity. Project duration must not exceed 18 months and Federal funding will be limited to \$10,000 or less.

Anthropology

A special activity to encourage research relevant to American education by anthropologists.

Economics

A special activity to encourage research relevant to American education by economists.

Political Science

A special activity to encourage research relevant to American education by political scientists.

Legal Research

A special activity to encourage research on legal issues of American education by members of the legal profession and specialists in school law.

NATIONAL INSTITUTE OF EDUCATION
GRANTS FOR RESEARCH IN EDUCATION--SMALL GRANTS
JANUARY - JUNE 1973

To encourage high quality, significant, and educationally relevant research by investigators who have not had time to establish a record of research productivity, the National Institute of Education (NIE) is announcing a funding activity for small grants of \$10,000 or less.

Dimensions of the Small Grants Activity

Basic or applied research proposals on any topic relevant to American education are eligible. Proposals from experienced researchers requiring funds of \$10,000 or less will be considered under the regular Grants for Research in Education activity.

Activity Scope

To be considered, proposals must meet two basic requirements:

1. The total cost to the National Institute of Education must be no more than \$10,000, including overhead costs.
2. The project must be scheduled for completion within 18 months.

Eligibility

Grants may be awarded to colleges, universities, State departments of education, and other public or private agencies, organizations, groups or individuals. Profit-making organizations are eligible to participate, but they will be awarded contracts rather than grants.

Proposals submitted from institutions in foreign countries and proposals from individuals who are currently supported by a Federal grant are not eligible for consideration.

Application and Review Procedures

Applicants should submit to the address below 20 copies of a full proposal prepared in accordance with NIE guidelines attached to this announcement.

National Institute of Education
Proposals Clearinghouse
Code 600
Washington, D. C. 20202

The review criteria against which proposals will be evaluated include:

1. The quality of the proposed research in terms of scope, design, and methodology.
2. The significance of the proposed research for American education.
3. The probability that the proposed work can be successfully accomplished within the proposed cost and time constraints.
4. The adequacy of the facilities available to the investigator to accomplish the work.

Grants will be awarded by the Director of NIE on the basis of a national competition in which the proposals will be reviewed by NIE staff members and by non-government specialists in the areas covered by the proposals.

Proposals should be identified on the cover as submitted to the "Small Grants Activity."

Time Schedule

Proposals must be submitted by March 1, 1973 to be eligible for Fiscal 1973 funds. Awards are expected to be announced during June, 1973. Projects should be scheduled to begin within a reasonable period after that.

Federal Register

This activity will be announced in the Federal Register and may be subject to minor revisions. Applicants will be informed immediately of any changes.

Other Research Activities

In addition to the small grants activity, the following research activities also will be held. The announcements describing each may be obtained from the NIE.

General Grants for Research in Education

Considers proposals for educationally relevant applied and basic research by competent, established investigators in all fields of study except the selected disciplines below.

Anthropology

A special activity to encourage research relevant to American education by anthropologists.

Economics

A special activity to encourage research relevant to American education by economists.

Political Science

A special activity to encourage research relevant to American education by political scientists.

Legal Research

A special activity to encourage research on legal issues of American education by members of the legal profession and specialists in school law.

NATIONAL INSTITUTE OF EDUCATION

GRANTS FOR RESEARCH IN EDUCATION--POLITICAL SCIENCE

JANUARY - JUNE 1973

To encourage political scientists to increase their involvement in research related to American education, the National Institute of Education (NIE) is announcing a special competition. This activity evolved from work of the Committee on Basic Research in Education (COBRE) of the National Academy of Sciences and the National Academy of Education.

Dimensions of the Research Activity

This competition is part of a planned effort to interest researchers outside the traditional educational community in directing their attention to American education. Grants during Fiscal 1973 also are being offered to anthropologists, economists, and legal researchers.

Political Science Studies Relevant to Education

A number of distinguished political scientists recently addressed the problem of describing research relevant to the discipline of political science and American education. The examples they provided illustrate, but do not delimit, the scope of the activity. Other ideas for research significant to American education are welcome. The topics include:

- The school as a political system
- The interrelationships of society, politics, and education
- Political and legal socialization, political functions in the dynamics of change in curricula, the organization of schools, and the societal roles of the schools
- The antecedents and consequences of political education
- The politics of educational budgeting and finance
- The politics of protest and public education
- The use of schools as arenas for non-educational issues
- Systematic comparisons (across educational and/or non-educational settings) of the mechanisms and dynamics of change

Activity Scope

All proposals for disciplined inquiry will be considered, provided the topic holds promise of benefit to American education. However, this funding activity is intended to support individual projects rather than large development or programmatic efforts or parts of such efforts. The amount of funds awarded to approved projects is subject to negotiation. The duration of projects supported is limited to three years.

Eligibility

Grants may be awarded to colleges, universities, State departments of education, and other public or private agencies, organizations, groups, or individuals. Profit-making organizations are eligible to participate, but they will be awarded contracts rather than grants.

Application and Review Procedures

Grants will be awarded on the basis of national competition. The

NATIONAL INSTITUTE OF EDUCATION

GRANTS FOR RESEARCH IN EDUCATION--ANTHROPOLOGY

JANUARY - JUNE 1973

To encourage anthropologists to increase their involvement in research related to American education, the National Institute of Education (NIE) is announcing a special competition. This activity evolved from work by the Committee on Basic Research in Education (COBRE) of the National Academy of Sciences and the National Academy of Education.

Dimensions of the Research Activity

The competition is part of a planned effort to interest researchers outside the traditional educational community in directing their attention to American education. Grants during Fiscal 1973 also are being offered to economists, political scientists, and legal researchers.

Anthropological Studies Relevant to American Education

Because pure anthropological studies vary in their relevance to American education, a number of respected anthropologists were asked to describe areas of research of mutual interest to the discipline and to American education. The areas that they identified illustrate, but do not delimit, the scope of the activity. Other ideas for research significant to American education are welcome. The topics include:

- The influence of parents upon formal and informal learning
- Differences among ethnic, social, and linguistic group responses to formal education
- The influence of cultural factors which have shaped the existing models of cognition and learning
- The relationship between educational institutions and the cultures they serve
- The description of educational institutions as cultures
- The cross-cultural comparison of educational philosophies, organizations, and practices
- The cultural determinants of innovation
- The relationships among prenatal care, nutrition, child-rearing practices, and educational outcomes.

Activity Scope

All proposals for disciplined inquiry will be considered, provided the topic holds promise to benefit American education. However, this funding activity is intended to support individual projects rather than large development or programmatic efforts or parts of such efforts. The amount of funds awarded to approved projects is subject to negotiation. The duration of projects supported will be limited to three years.

Eligibility

Grants may be awarded to colleges, universities, state departments of education, and other public or private agencies, organizations, groups, or individuals. Profit-making organizations are eligible to participate, but they will be awarded contracts rather than grants.

Application and Review Procedures

Grants will be awarded on the basis of national competition. The

NATIONAL INSTITUTE OF EDUCATION
GRANTS FOR RESEARCH IN EDUCATION--LEGAL RESEARCH

JANUARY - JUNE 1973

To encourage members of the legal profession and specialists in school law to increase their involvement in fundamental research related to legal issues in education, the National Institute of Education (NIE) is announcing a special competition. This activity evolved from work by the Committee on Basic Research in Education (COBRE) of the National Academy of Sciences and the National Academy of Education.

Dimensions of the Legal Research Activity

The competition is part of a planned effort to interest researchers outside the traditional educational community in directing their attention to American education. Grants during Fiscal 1973 also are being offered to anthropologists, economists, and political scientists.

Legal Research Studies Relevant to Education

In planning this program of support for research on legal issues in education, a number of distinguished members of the legal profession and others interested in this aspect of education were asked to describe examples of research which might be supported. The following are some of the areas identified as worthy of NIE support.

These should be considered as illustrative only and not delimiting of research which will be supported. Other ideas for research significant to American education are welcome. The topics include:

- Rights of youth and the parameters of parental responsibility
- Appropriate locus for the power to govern the educational process
- Benefits from using the knowledge in law about the storage of contested beliefs
- Effectiveness of changing the educational process from transmitter of ideas to arena for contesting opposing beliefs and ideas
- Determining the legitimate formulators of public policy
- Legal dimensions of accountability in education--accountability for what, by whom, to whom
- Relationships of State constitutions to effective educational achievement, cost distribution, accountability and uniformity of services
- Legal implications of Federal presence at State and local level
- Difference between legal problems involved in creating new educational systems and those involved in renovating existing systems
- Role of teachers associations and unions in collective bargaining, and negotiable areas for school board and teachers
- Effect of hidden or submerged educational power structures upon educational decision-making and the learning environment
- Legal and economic implications of dropouts and pushouts
- Educational implications of changes in laws, such as reduction of voting age
- Development of a variety of alternative models on which to base legislative actions
- Legal problems of educational experiments
- Legal aspects of credentialing and credential barriers
- Limitations on fiscal control
- Issues involving university governance -- roles and rights of students, trustees and faculty, and administration and labor-management issues

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

NATIONAL INSTITUTE OF EDUCATION

Instructions for Submitting Proposals:
Grants for Research in Education

JANUARY 15, 1973

These Guidelines are issued in amplification of General Provisions for NIE published as proposed rules in the Federal Register on January 8, 1973; and Special Provisions for NIE Field Initiated Studies published in the General Guidelines refer to sections of the Code of Federal Regulations proposed by the January 8 notice and indicate the regulatory basis for the indicated paragraphs herein.

Eligibility

Grants may be awarded to colleges, universities, State departments of education, or to other public or private agencies, organizations, groups, or individuals. Profit-making firms are not eligible for grants, but may be offered a contract in response to an unsolicited proposal. As stipulated in the Review Criteria at the end of this document, awards will be made only to applicants whose research competence and facilities are determined to be adequate to carry out the proposed task. (45 C.F.R. Sec. 1403.2a)

Activities Supported

NIE will consider proposals for research, development, and related activities, provided that the topic holds relevance for American education. Eligible studies include pre-experimental observations, historical and philosophical reviews, theory formulation, secondary analyses, empirical research on phenomena, and exploratory development. Exploratory development includes empirical identification of the need for a product, feasibility testing, and formulation of design specifications. (45 C.F.R. Secs. 1403.1, 1403.2b); (Field Initiated Studies General Notice).

Proposals

Formal proposals should be submitted in 20 copies and should include the following items in the order indicated:

- a) Three signed copies of the completed application form (Appendix A)
- b) A cover page in the format shown in Appendix B
- c) An abstract as described below
- d) The body of the proposal (content described below)
- e) The budget, with appended explanations and justifications (Appendices C & D)
- f) HEW form 661 (unless previously submitted (Appendix E))

The purpose of the proposal document is to communicate the applicant's intentions to reviewers who are technically competent in his or her area of research. Reviews will be made by NIE staff assisted by outside experts chosen from appropriate disciplines or fields. Applicants are encouraged to present their ideas in the manner they consider most effective, but such devices as expensive graphic techniques and bindings are not necessary. While a rigid limit on the number of pages is not prescribed for proposals, a narrative of not more than 20 pages can usually communicate the needed information. (45 C.F.R. Secs. 1403.4, 1403.10a)

Content of the Proposal

Except in cases where it would be inappropriate to do so, applicants should use the following format for proposals:

- 1) An abstract of about 200 words should present what the applicant proposes to do, the rationale of the proposed project, some information about the procedures, and a statement about the possible implications. The abstract is very helpful in allocating proposals to appropriate reviewers.
- 2) The first section of the body of the proposal usually describes the study and presents the argument for its value. The argument can be derived from previous research, from practical experience, or from an analysis of needs, and should discuss previous relevant research, including that research which is in conflict with the position presented.
- 3) The procedures to be used should be described in sufficient detail to permit an assessment of their technical adequacy and their appropriateness to the research questions to be addressed. A brief overview of the procedures, with a time schedule, is a useful device in introducing the discussion of procedures. Such concerns as sampling, data acquisition, instrumentation, and data analysis should then be described in full detail.
- 4) The personnel and facilities to be involved in the research need to be described so that reviewers can evaluate their appropriateness and adequacy. *Vitae* of the principal personnel should be included as addenda.
- 5) Special notes, inserted near the end of the proposal, may address any topic the applicant wishes to emphasize. For example, if the success of a proposed activity hinges upon the cooperation of a public school system, a letter from the school officials can be included to show that cooperation is assured. If the proposal is being submitted simultaneously to another funding agency, the applicant should append a special note which provides pertinent details. Data gathering instruments, especially those not in widespread use, may be attached for evaluation by the reviewers.
- 6) The budget proposed for the project should be prepared in the format shown in Appendix C. Use one sheet for each 12-month period and a summary sheet for the total project. A detailed description of the individual budget items should be appended to the budget summaries. Appendix D describes the information required. Note:

It is advisable to keep expenditures for equipment to a minimum since the adequacy of available facilities is a criterion of evaluation. (45 C.F.R. Secs. 1403.4, 1403.10).

Review Criteria

The review criteria against which proposals will be evaluated are:

1. The quality of the proposed research in terms of scope, design, instrumentation if appropriate, and methodology.
2. The significance of the proposed research for American education.
3. The qualifications and record of prior research productivity of the principal investigator and other professional personnel.
4. The adequacy of the facilities available to the investigator to conduct the proposed study.
5. The reasonableness of the budget in terms of the work to be accomplished and of the anticipated results. (45 C.F.R. Sec. 1403.10).

Mailing Instructions

Please mail all proposals to:

National Institute of Education
Research Grants Clearinghouse
Code 600
Washington, D.C. 20202

Proposals from state and local governments

In lieu of the attached forms, state and local governments should utilize the forms as prescribed by OMB A-102.

APPLICATION FOR FEDERAL ASSISTANCE (NONCONSTRUCTION PROGRAMS) PART I		1. State Clearinghouse Identifier	
		2. Applicant's Application No.	
3. Federal Grantor Agency National Institute of Education Organizational Unit Administrative Office Street Address - P.O. Box City State Zip Code		4. Applicant Name Department Division Street Address - P.O. Box City County State Zip Code	
5. Descriptive Name of the Project			
6. Federal Catalog No. 13.582		7. Federal Funding Requested \$	
8. Grantee Type State, County, City, Other (Specify)			
9. Type of Application or Request New Grant, Continuation, Supplement, Other Changes (Specify)			
10. Type of Assistance Grant, Loan, Other (Specify)			
11. Population Directly Benefiting from the Project		13. Length of Project	
12. Congressional District a. (of applicant's location) b. (of the research site(s))		14. Beginning Date	
		15. Date of Application	
16. The applicant certifies that to the best of his knowledge and belief the data in this application are true and correct, and that he will comply with the attached assurances if he receives the grant.			
Typed name		Title	
Signature of Authorized Representative		Telephone Number	
		AREA CODE	NUMBER
		EXT.	
For Federal Use Only			

INSTRUCTIONS

PART I

This form shall be used for all Federal assistance except for (a) construction, land acquisition or land development projects and (b) single purpose one-time assistance requests of less than \$10,000 which do not require a clearinghouse review, an environmental impact statement, or relocation of persons, businesses or farms. This form shall be used also to request supplemental assistance, to propose changes or amendments, and to request continuation or refunding, for approved grants originally submitted on this form.

Submit the original and two copies of the forms. If an item cannot be answered or does not appear to be related or relevant to the assistance required, write "NA" for not applicable. When a request is made for supplemental assistance, amendments or changes to an approved grant, submit only those pages which are appropriate.

Item 1 - Enter the State clearinghouse identifier. This is the code or number assigned by the clearinghouse to applications requiring State clearinghouse coordination for programs listed in Attachment D, Office of Management and Budget Circular No. A-95.

Item 2 - Enter the applicant's application number or other identifier. If a preapplication was submitted, show also the number that appeared on the preapplication if different than the application number.

Item 3 - Enter the name of the Federal grantor agency, the name of the primary organizational unit to which the application is addressed, the name of the administrative office having direct operational responsibility for managing the grant program, and the complete address of the Federal grantor agency.

Item 4 - Enter the name of the applicant, the name of the primary organizational unit which will undertake the grant supported activity, and the complete address of the applicant.

Item 5 - Enter the descriptive name of this project.

Item 6 - Enter the appropriate catalog number as shown in the Catalog of Federal Domestic Assistance. If the assistance will pertain to more than one catalog number, leave this space blank and list the catalog numbers under Part III, Section A.

Item 7 - Enter the amount that is requested from the Federal Government in this application. This amount should agree with the total amount shown in Part III, Section A, Line 5 of Column (e). For revisions, changes, or amendments, show only the amount of the increase or decrease.

Item 8 - Check one grantee type. If the grantee is other than a State, county, or city government, specify the type

of grantee on the "Other" line. Examples of other types of grantees are council of governments, interstate organizations, or special units.

Item 9 - Check the type of application or request. If the "Other Changes" block is checked, specify the type of change. The definitions for terms used in Item 9 are as follows:

- a. New grant - an action which is being submitted by the applicant for the first time.
- b. Continuation grant - an action that pertains to the continuation of a multi-year grant (e.g., the second year award for a project which will extend over five years).
- c. Supplemental grant - an action which pertains to an increase in the amount of the Federal contribution for the same period.
- d. Changes in the existing grant - Specify one or more of the following:
 - (1) Increase in duration - a request to extend the grant period.
 - (2) Decrease in duration - a request to reduce the grant period.
 - (3) Decrease in amount - a request to decrease the amount of the Federal contribution.

Item 10 - Check the type of assistance requested. If the assistance involves more than one type, check two or more blocks and explain in Part IV - Program Narrative.

Item 11 - Enter the number of persons directly benefiting from this project. For example, if the project is for a neighborhood health center, enter the estimated number of residents in the neighborhood that will use the center.

Item 12

- a. Enter the congressional district in which the applicant is located.
- b. Enter the congressional district(s) in which most of the actual work on the project will be accomplished. If the work will be accomplished city-wide or State-wide, covering several congressional districts, write "city-wide" or "State-wide".

Item 13 - Enter the number of months that will be needed to complete the project after Federal funds are made available.

Item 14 - Enter the approximate date the project is expected to begin.

Item 15 - Enter the date this application is submitted.

Item 16 - Complete the certification before submitting the report.

Research Proposal
Submitted to the National Institute of Education
(Title of NIE activity to which submitted)

Title of Project:

Applicant Institution:

Principal Investigator: (Full name, title, address and telephone number
of the individual who will direct the study)

Co-investigator (if any)

Transmitter: (Full name, title, address and telephone number of the
individual empowered to commit the institution to the
activity)

Proposed Project Duration: From _____ To _____

Total Federal Funds Requested: _____

Date Submitted: _____

Technical data contained in pages _____ of proposal shall not be used or disclosed, except for evaluation purposes: Provided, That if a grant or contract is awarded to this submitter as a result of or in connection with the submission of this proposal, the Government shall have the right to use or disclose this technical data to the extent provided in the award. This restriction does not limit the Government's right to use or disclose any technical data obtained from another source without restriction.

Project Budget Summary
(Federal Support Only)

Project Director _____ Institution _____

Time Period: From _____ To _____

A. Direct Costs:

Personnel Salaries:	\$ _____
Employee Benefits:	\$ _____
Travel:	\$ _____
Supplies and Materials:	\$ _____
Communications:	\$ _____
Services:	\$ _____
Duplicating and Reproducing	\$ _____
Statistical	\$ _____
Other (explain)	\$ _____
Final Report Production:	\$ _____
Equipment:	\$ _____
Other Direct Costs: (explain)	\$ _____

Subtotal, Direct Costs \$ _____

B. Indirect Costs \$ _____
Indicate the basis for calculating indirect costs

C. Total Costs (Federal Support) \$ _____

- Notes: 1. Use one sheet for each 12-month period and a summary sheet for totals.
2. Consultants: Show fees under personnel, transportation and per diem under travel.

Description of Project Costs

A. Direct Costs

Personnel Salaries: (Provide information on the percent of each individual's time to be allocated to the project, and the basis for computing salaries (or fees) paid).

Employee Benefits: (List the employee benefits for each person employed. Justify any departures from your organization's general policy on benefits).

Travel: (List the travel events proposed for each employee and justify in terms of the project).

Supplies and Materials: (Describe any unusual items aside from normal office supplies and materials).

Communications: (Describe only unusual requirements).

Services: (Describe in detail any unusual requirements beyond routine duplicating and statistical services).

Final Report Production: (Self-explanatory)

Equipment: (Provide detailed justification for any capital expenditures).

Other Direct Costs: (Explain)

B. Indirect Costs. (Indicate the basis for computing indirect costs).

Will Segal

Research:

1. No long range goals
2. Continue $\bar{c}$ in vivo Tuberculosis study
3. Notes & starting back on "Microbial Solidities to Environmental Problems".
4. Would be much motivated by Coop. environmental research
5. no ~~long~~ grant support - then not willing to give all extra time to research (much worse by pay salary).
no sense of respect

Teaching: 1. always surprised about effective presentation.
2. most willing to work on creative teaching programme

Coop. Res. - would welcome coop research - environmental & J.H. B. etc.

needs: some equipment - e.g.

liquid ionization counter -

Students: can take only 2 or 3 at most to present equipment
Psychol. shocked at loss of grant in 1968

Considers himself a dilettante, but ~~happy~~ ^{happy}
& always will be - likes variety in his ^{challenges}

A. Joint research.

1. IBP: Research Associate of Institute of Invertebrate ^{Tundra} (Alpine).
2. IBP (Gressland) ^{Cooperating with Maxine Freeman}
with Sam Shushan. ^{Assoc. in 4th year} - ~~gardens~~
Proposal to study antitoxins in the Fescue Grasslands:
effects of lichens and fungi on germination and
growth of higher plants
3. Growth + development of grass ecotypes in experimental
gardens at various altitudes (with M. Freeman).

B. Projects under way other than the above

1. Setting up minimal sterile culture facilities - 17A
 - a. Mimulus internodes
 - b. Azolla

- greenhouse {
2. Azolla studies
 3. Pea studies - parthenocarp
 4. Mimulus photoperiod: comparison of
low temp. (Colorado) form with high temp. (Yellowstone)

C. Writing

1. IBP phytometer results
 2. "Experimental gardens"
 3. Tissue culture results (mimulus)
 4. Mimulus photoperiod results
 5. Pea parthenocarp results
 6. Azolla growth studies
- } C. D. R. S., France

D. Needs

1. Sterile chamber (research and new course facilities)
 - a. Air conditioner
 - b. Glassware
 - c. Chemicals
 - d. A-v. tubes
 - e. Partition installed with door (179)
2. Growth chambers
3. Greenhouse facilities (new building)
4. Immediate classroom needs:
 - a. Balances (4)
 - b. pH meters (3)
 - c. Spectrophotometers (2)

} long range

WANTS CHARGE COOP. ON ENVIRON.
CONSULTING.

GRADS - 4 PRESENT PH D's
PLAN 6 BY FALL

AAAS S.W. Div. COMMITTEE

BOB GREGG

RESEARCH: Much work + British + African
mats. year to finish.
wants to do monograph on Rheidole (10 species).

like to see macarodane in Coccinellids of
Green Mt. & springtails on moss
+ wingless scorpion flies.

Needs: 1. Greenhouse & "insectory" - C THIS
more students

2. Can we have competent student help
3. Transportation funds for students -
4. Would welcome more students
5. Good directing microscopes

Teaching: would be willing to
mentally social with course if
load was sufficiently light.

10-11 years on edit. board of Cal.
Studies

would coop. with Brothman -
says we need morphologist - ecologist
~~but~~ entomologist
will retire between 65 & 68.

Bob: TENNAK

Research - broad,

Continuing lg # Proj.

Act. cent. on consultation -

Pays his way - no need for \$ from grants.

All-consultation on stream biology -

Provides input to continuing research efforts -

14 diff Proj; 7 are from commercial firms

Needs - ^{WILL CONTINUE REVISION OF INVERTEBRATE} research assistant time - Book

Grad. Student level ok -

Envir. Impact studies

Wants - no new courses

- off of committees.

- more time for his own work.

Likes teaching -

Hopes - big aquatic ecology endeavor
teaching + research -
well-equipped lab.

NEEDS: RESEARCH ASST.

GRAD " " FOR

OIL SHALE PROJ.

MORE RESOURCES ON STREAM BIOL.

THAN ANY OTHER LAB

RETIREMENT EARLY

Windlell -

Bio energetics

Beil Test -

" Lab. Man.

Int.

Energy flow

" budget

State game + fish -
10 G/year.

Cook Brewery

Gregg -

Retirement time

Teaching -

Social insects?

Entomol. needs.

Initiative -

Cook teaching.

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

DEPARTMENT OF
AEROSPACE ENGINEERING SCIENCES

November 20, 1972

Dear Colleague:

For the past few years we have had a seminar on Environment and Public Policy during the Spring Semester. The last four topics have been:

1969 - World Food and Population Crisis

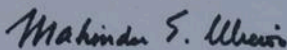
1970 - Ecology

1971 - Energy

1972 - Transportation Problems of the Front Range

This year we will emphasize Land Use. The plan for the seminar is enclosed herewith. We invite suggestions and participation from the faculty for this and future seminars. If you have good students who are interested in an independent study type course you could ask them to contact one of the participating faculty members listed in the announcement, or contact me at extension 6416.

Sincerely yours,



Mahinder S. Uberoi
Secretary of Participating Faculty

MSU:ams

Enclosure

ALL UNIVERSITY SEMINAR, SPRING 1973

Environment & Public Policy

LAND USE

Land use is central to the quality of environment. The seminar will focus on:

Classification of Land — urban, suburban, rural, coastal, and natural (federal land, wilderness systems) environment;

Tax Policy and Economics of Land Use;

Land Use Regulation by Local and Federal Governments;

Mineral and Natural Resources;

Impact of Cultural and Social Aspects — population, crowding, transportation.

The seminar will be organized in three phases:

I. Lectures, reading, and discussion;

II. Small, interdisciplinary student groups with tutorial supervision, devoted to study of parts of the problem;

III. Review and discussion of these deliberations and synthesis, by the students, into a comprehensive view.

When: SPRING SEMESTER 1973, 7:30-9:30 P.M., TUESDAY EVENINGS (First Session January 23)

Where: ENGINEERING CENTER, EC CR 2-26

Who: A restricted number of undergraduate and graduate students will be admitted. We hope to get the largest possible interdisciplinary distribution of faculty and students. In general, each department is restricted to three students.

How to Register: Choose preferred departmental listing and obtain permission of faculty member before registering. Three hours' credit is offered.

<u>Faculty Members:</u>		<u>Univ Office</u>	<u>Univ Ext</u>
Aerospace Engineering Sciences	Mahinder S. Uberoi	ECOT 6-16	6416
(Secretary of participating faculty)			
Architectural Engineering	Robert Rathburn	ECOT 5-25	7165
Arctic and Alpine Research	John T. Andrews	Res Bldg I 258	6387, 6172
Astro-Geophysics	John E. Hart	Gamow 827	8768
Chemical Engineering	Ronald E. West	ECOT 3-5	7689, 7471
Civil and Environmental Engr	J. Ernest Flack	ECCE 0-4	7111
Economics	Dwight R. Lee	Econ Bldg 102	6394
Environmental, Population, and Organismic Biology			
Vis Prof Hugh Clifford (Univ of Alberta)		Hale 203C	6547
Geography	Nicholas Helburn	Guggenheim 110	8311
Geological Sciences / Geography	T. Nelson Caine	Res Bldg I 253	6387
Honors	Walter Weir	Norlin 26	6617, 7047
Psychology	David Chiszar	Muenzinger 260A	8738
Sociology	John Bramsen	IBS 2 102C	6404

11/14/72

Report to Dev. Comm.

1. Agencies actually visited -
Monthly NSF.

Div. of Bio + Med Sci.
Systematics + Evolutionary Biol.

← International Program

OSIS

Interdisciplinary - RANN.

Did not get into education
programs -

2. Called but not visited

A. OE - needs much more effort
to lib.

B. Natl. Inst. Ed. - new, disorganized
no clear-cut programs yet.

3. E.P.A. - no contacts made -

4. AID - my own project.

Results - as I suspected, we
have to start small, no big
programs w/o demonstration
of capacity.

Most are interested in integrated,
systems approach - any
personnel must be later guaranteed
by Univ - but front money ok.

One program, also new, is
Univ. wide res. inqut. - ~~to~~
~~to~~ to be

To: Members of the Development Committee, and Executive Committee

From: Dave Rogers *DJR*

Subject: Meeting with Dean Borgman, Dec. 6, 1972

Hobart Smith, Bob Pennak, Gil Hersh and I met with Dean Borgman as planned, and we believe that the meeting accomplished what we hoped it would. We reviewed the objectives of the Development Committee. Since our meeting was intended as a means of communication and information, we did not specify any areas where we might make specific proposals. Those come later. We found Dr. Borgman to be receptive and, I believe, enthusiastic about our efforts.

Dean Borgman volunteered information that there is a good chance of financing trips to Washington in search of funds. He put no upper bounds on the number of trips that could be made, but suggested that before making any such trips, we had to have some pretty sound ideas about what the trip would accomplish. If there be some reason for one or more faculty members to represent some interest in the Department, any faculty member could be given the opportunity to travel.

The interview should ^{with Departmental members} act as a stimulus to get on with the work of the Committee. The interviews should be completed in a relatively short time. We must not drag it out. Until the interviews are complete, we cannot get on with planning. Please accept this as a stimulus to continued activity.

To: Members of the Development Committee

Subject: Continuation of interviews, and meeting

From: DJR

Since I will be in Washington next Tuesday, I am not scheduling a regular meeting of our committee.

However, you should not take this as free time, but rather, should try to get some interviews done. Use every possible spare minute to get on with the job.

Thanks.

Dave

Environment Aide Named

BOULDER—Floyd C. Mann, 55, visiting University of Michigan professor of business and sociology at the University of Colorado, has been named director of the University of Colorado Environmental Council.

The council is responsible

for promoting research and instruction and cooperation between the university and Mann has served since 1964 as director of the University of Michigan Center for Research and Utilization of Scientific Knowledge.

R5921 T3



To: Development Committee

From: D..J. Rogers

There will be a meeting at our regular time, 11 AM, Tuesday,
November 28, Rm 108, Hale.

Items for agenda:

(1) Activities on interviews

(2) Activities of financial aspects (grants, etc.)

To: Development Committee

From: D..J. Rogers

There will be a meeting at our regular time, 11 AM, Tuesday,
November 23, Rm 100, Hale.

Items for agenda:

- (1) Activities on interviews
- (2) Activities of financial aspects (grants, etc.)

Fri., Nov. 10

To: Members of Development Committee

From: Dave Rogers

Subject: Meeting at 11 AM Tuesday, Nov. 14.

Two major topics for attention:

- (1) Eliciting information from individual faculty members
- (2) Report on my investigations in Washington on funding potentials.

Copies to C. Bock, E. Bonde, J. Bushnell, R. Jones, R. Pennak, D. Rogers,
H. Smith, W. Segal

D. Rogers

Friday, November 10

To: Members of Development Committee

From: Dave Rogers

Subject: Meeting at 11 AM Tuesday, Nov. 14.

Two major topics for attention:

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- (2) Report on my investigations in Washington on funding potentials.

October 31, 1972

Memo to: Members of Development Committee

From: D. J. Rogers

Subject: Presentation at Faculty Meeting of ideas on development

Please let me have any suggestions you might have for this important meeting. If we don't come across in a very open and positive manner, we will not be able to carry out the objectives of the committee.

As an outline for the presentation, I have the following ideas:

1. How this committee came into being
2. The new sets of directives for the committee, given by the Exec. Comm.
3. How we see our job - how will we meet the directives. (The three sub-committees within the overall committee).
4. Requirements as we see them - please refer to the memo I sent to Dr. Smith, dated Oct. 17.
5. Emphasis will be on the departmental needs overall, but with very careful attention to the needs of the individual faculty member. That is, how do we support the needs of both the individual and the department.

I assume that all members of the committee will participate in the discussions at the Faculty Meeting. If all of us are not thoroughly convinced of the value of this committee, then how can we hope to convince the full faculty?

Oct. 17, 1972

To: Members of Development Committee

From: Dave Rogers

1. Enclosed is a thumb-nail sketch of our activities to the Chairman. I hope to keep him up-to-date on our work. I may have abbreviated our deliberations too much, but hope you will understand that I know that you know more than what I said.
2. Since we had everyone in attendance at the meeting this morning (Tue., Oct. 17, 1972), this seems to be a satisfactory meeting time. We will, therefore, meet at this time each week.
3. ~~Enclosed~~ I hope that each subcommittee will have met to work out procedures to continue, before next Tuesday's meeting. Until we have all agreed upon procedures, I would recommend that you not discuss our work with our colleagues, because nothing could damage our activities more than for our preliminary choice of words to have an adverse effect. This sounds like a poor direction, I know, but realize that we have some very important work to do, and we can't do it if misinformation precedes information. We will be certain of our directions, and then we will share with all.

Oct. 17

Dear Hobart:

This is to keep you abreast of the activities of the Development Committee.

Last Thursday night, we had our first organizational meeting, to get the whole committee abreast of the decisions made by you and the Ex. Comm., and to let the committee members ~~be~~ "turned on" to the ideas I proposed to you and the Ex. Comm.

Today we had our first working meeting, and the following activities were agreed upon.

1. To start our work by investigating the desires and interests of each faculty member.

2. To take a look at the strength of the department, its unique attributes, both from the standpoint of this campus and in the country.

3. To examine the various agencies which support endeavors of teaching, research, and community service. We are to look at all types of funding possibilities: Federal (NSF, NIH, Off. of Education, EPA, etc.) State agencies, Private foundations, and local possibilities.

Each of the above activities has a sub-group within the committee.
For #1, John Bushnell, Carl Bock, and Dick Jones.
For #2, Bob Pennak and I
For #3, Willie Segal, Eric Bonde and Gil Hersh.

#1 activity is a very sensitive area, and one we have to work out details on to be certain that our attitudes are honest, and that we do not hurt anyone by the type of inquiry necessary to elicit the needed information.

#2 activity, while sensitive, is not as much so as is #1. It however, takes as much work to accomplish, and we will have to have much input (from all to be certain that we identify our strengths in all areas, and to faculty) describe the uniqueness of our department.

#3 requires much work, but as far as "sensitivity" is concerned, is the least of the 3 activities. But it needs some help, probably from a graduate student (or a work-study student?) to do some of the leg-work, letter writing, et al. This subcommittee needs to do some telephone work, and may even require a visit to the mecca of all good things, Washington.

I hope you have some ideas to help underwrite these activities. I'll talk to you later about it, once you have had time to chew it over. I know you mentioned that the Graduate Dean (I've forgotten his name) as a good friend in this connection. When we have something to do, we'll let you know, and then we proceed from there.

We should have an opportunity to report to the full faculty on our activities. Before we proceed into any of activities, particularly numbers 1 and 2 above, we should bare our chest to all concerned (the faculty). But it is our earnest desire that the movement come from you and the Ex. Comm., not from a bunch of prima donnas who now sit on the committee. This last is an important feature we hope you will concur with.

Notes for 1st Mtg. w/ Devel. Comm.

1. History of this Development -

- a - charge to committee
- b - dissatisfaction with past functioning of comm.
- c - approach to Ex Comm.
- d - Told them we would need to ~~have~~ enlarge committee -

report from
O.R.S.

2. Requirements

- a - Individual grants -
- b - Institutional grants
 - 1 - equipment + facilities
 - 2 - training grants
- c - continuing funding permanent budgets -
not always dependent on outside.

3. Reasons for choosing this group.

- a - Represent a swath through the Dept.
- b - " influence in and outside the U.
- c - " a hardworking bunch -

4 - My views -

- a - we need a team approach -
- b - we have a chairman behind whom we can all work -
- c - There is a spirit of cooperativeness and desire to do something -
- d - But can't do this without some good organizing and planning skills -
- e - Personally - willing to help build our

5. Duties of this committee -

- a - Discern the strengths of dept.
- b - Work with all dept. in designing grant proposals -
 - 1) problem is that some members never have submitted proposals -
 - 2) others may not feel need to get any outside funds -
- c - Design a program for dept. which looks to the future -
 - What do we want to do -
 - " can we realistically do ourselves
 - " outside needs have we for personnel + equipment and building -
- d - Develop a plan to proceed in orderly manner -
- e - Keep all members ~~in~~ of dept. informed -
- f - Provide the chairman with ammunition -
he is the executive officer - not this committee.

6. Next mtg -

- a - can we get day time?
- b - get a list of functions (all types) for dept.

What prompted me to request this session:

1. The ORS report on contracts and grants inforce
2. The statement of the duties of the grant committee.
3. Need to know what priorities ~~this xxxxxxxx~~ The Executive Comm.(and whole dept.) places on this function.
4. If high priorities set on this function then,
 - a. we can get the job done
 - b. we will need to reestablish (or change) some of our other priorities
 - c. we will need a different set of men to function on the grant committee
 - d. we will have to do some first-class organizing to get things going.
 - e. the grant committee does not have the power to carry out its own and acting participation of suggestions, and needs the backing/~~of~~ the chairman and ex. comm. (with their agreement)
5. If above agreeable, I will select/those whom I believe have the best chance of making a go of departmental grantsmanship to work with me on a departmental effort.

I will volunteer the services of my assistant, Gil Hersh, a very good grantsman, organizer, and budgeteer, to help us.

We should have available a good secretary--not a clerk-typist--to help us out. We'll have to spend a little to get a lot.

6. The first report of the new committee will be made in 3 week's time.
~~Rellex~~ This report will be a plan of action for the department.

Pages

TO: All EPOB faculty, graduate student representatives, MCDB (Porter)

FROM: EPOB Executive Committee

RE: Minutes of meetings Sept. 27 and Oct. 4, 1972

All members were present at both meetings. Business completed:

1. The Grants Committee was dissolved, effective immediately, and was replaced by an "EPOB Development" committee, with a membership of C. Bock, Bonde, Bushnell, Jones, Pennak, Rogers (chairman) and Segal. The directives for this committee are: "Exploration of development of the department as a whole and of segments thereof, with a primary objective of obtaining university, state and federal support. Promotion of investigational, scholarly activities of all faculty members."
2. Summer School, 1972. Only 4 individual responses have been received, and no Divisional responses. DEADLINE Oct. 15. Gregg, C. Norris and Pennak must indicate their desires, in conformance with their distinctive contracts.
3. LSRB refrigerator. New cost estimate is minimal \$175, with possible levels well above that figure. Box is mostly freezer (about 3/5 or 2/3). Decision is to forego the opportunity in favor of less expensive routes, although no immediate steps are available.
4. Alumni organization. A proposal to Gordon Alexander is under consideration.
5. New faculty. Firm assurance for new faculty next fall cannot be given by Dean Briggs until budgetary approval has been received, and that could be as late as March but is expected earlier--later this fall or early in 1973. However strong encouragement is offered, anticipating approval. Positions expected are 2: the algologist-pollution ecologist, for which Schlichting is our prime candidate (solicitation of departmental desire relative to him will follow his colloquium in early December); and a minorities member to teach General Biology. The algologist-pollution ecologist will also teach General Biology one semester, taking permanently Jane Armstrong's temporary position. The minorities person will temporarily (1-2 years) handle both semesters of the educationally disadvantaged section (Sect. 4) of General Biology, taking permanently Vernon Avila's temporary position; however still another position is anticipated, 1-2 yrs. hence, to share that load, alternating semesters and allowing each person an "off" semester in which to teach specialty courses and carry on research. Therefore we need to search for the best person we can get, who would be productive and active in research as well as an effective teacher.

Since few applicants are expected who can fill all three requirements (minority member, outstanding research prospect, outstanding teaching ability), it is expedient not to limit the area of specialization except that it be ecological, populational or organismic. Carl Bock was appointed chairman of the Selection Committee for that position, and will issue a flier to be mailed out generally, announcing the anticipated opening, and will place an advertisement in one or two journals.

6. Pollock. The EC unanimously recommended his appointment adjoint, and authorized a poll of the departmental members to determine final action. Ballots will be distributed shortly.
7. Colloquium attendance. It is well understood that occasionally professional or academic demands will prevent attendance at departmental colloquia, but the regularly low level of attendance this year is most disturbing. Colloquia are offered as a means of diversification of intellectual awareness within the broad parameters of biology. As biologists we are all expected to cultivate interests and knowledge in the whole field, and to resist the temptation to devote attention wholly to our specialty. Faculty members must consider it their obligation to exemplify the need to maintain diversifying effort by attending colloquia whenever at all possible. They should not only practice what they preach in this manner, setting examples for both their colleagues and their students, but should also actively try to influence their students to attend. Please do your part in making the colloquium program effective. It deserves your full support.
8. Division of Biological Sciences. Acting upon recommendations received from the Executive Committee of the DIBS, the EPOB EC authorized;
 - a. Formation of DIBS Joint Seminar Committee, consisting of Marr from EPOB and Prescott from MCDB (each is chairman of his departmental seminar or colloquium committee), charged with the duty of developing one joint seminar each semester--one early and one late). Part of the job will be to devise topics as well as to find speakers who will appeal strongly to both departments. Please submit at once to John Marr your suggestions for either suitable topics or suitable speakers, or both. It is important that we make this joint effort a success; please give it a boost with your ideas as well as attendance. Participate! It is vital to the health and welfare of our organization and ultimately to ourselves.
 - b. Formation of a DIBS Joint Space Committee, consisting of Bushnell, Jones, Linhart, Segal, Smith and Windell from EPOB, and from MCDB Bonneville, Dubin, Flexer, Gold, Porter and Runner. This committee is to meet with the DIBSEC Thurs. noon, Oct. 12, to formulate plans for space requests, particularly in the Centennial Building. Please help the committee to plan for anticipated and current needs.
 - c. MCDB Open House. To be given for EPOB members in late October. Biologists from extension and nearby universities will be invited also.
9. Sabbaticals. Three have been requested for 1973-4: D. Norris, spring '74 (teaching Gen. Biol. in fall suspending Endocrinology one year); Windell, whole year (hiring a 1-sem. replacement to handle Gen Biol., suspending his fish courses for 1 yr.); and Winston, spring semester '74 (suspending his advanced course in spring). Since none of these will require new funds for replacement, the chances for approval seem good.
10. Registration assistance. Assignment of professorial assistance at registration, to supplement Mrs. Owen and/or Wayne Whitmarsh, was approved, with the admonition that only those broadly experienced should be given the assignment, rather than passing the duty around impartially.

11. Phones. A strong appeal has again been made for restoration of the phones. A response is expected by Oct. 17. No attempt will be made to install a buzzer or speaker system in Hale until the results of this appeal are known. If it is unsuccessful, Boratgis is ready to start at once--or we will have company--installed buzzers.
12. Ramaley Plaque. Dr. Edna Johnson has had a beautiful plaque made for the Ramaley Bldg. It has been delivered and will be installed shortly in the foyer of Ramaley, when Dr. Johnson and Dr. C. Norris have determined exactly where it is to be mounted.

Rogers

EPOB BUDGET

1972-1973

A. General Overview

The comments on financial austerity facing the University and the department, as stated with presentation of our 1971-1972 budget, can be repeated almost verbatim for 1972-1973. We had hoped that we hit bottom in 1971-2, but actually we hadn't reached it yet. Intuition tells us that 1972-3 will be the real bottom, and there is plenty to justify that impression.

So far as EPOB itself is concerned, however, it is apparent that we are already, in advance of the University as a whole, on the rebound, gaining and not losing in internal strength, in recognition by the Administration, in facilities and in planning to provide more appropriately for us in the future. It cannot be expected under the most ideal conditions that all inequities that evolved gradually over the past years be suddenly and completely rectified; regeneration takes as long as degeneration, and misguided impatience may severely impede or reverse the regenerative process.

Merely look for reassurance upon EPOB progress during the past year, and you will see that indeed we have turned a corner and are visibly improving on a pretty large scale. For example:

1. Administration explicitly recognizes that massive transfusions of faculty are justified for EPOB (about 10 by its own calculations).
2. Tremendous (almost double) space allotments provided in the form of Ramaley Biology and new areas in LSRB-1 (despite loss of some Armory, Hunter and Hale space).
3. Development of explicit and working rapport with our sister dept. MCDB.
4. Reorganization of General Biology in units of manageable size.
5. Continued increase of enrollment in Biology as a whole as well as in EPOB courses.
6. Significant increases in both faculty and staff salaries, at least the former to a much greater-than-average degree.
7. Demonstrable zeal on the part of the administration to improve physical facilities as best possible despite financial limitation (e.g. through efforts of Dean Sawin, Carl Peters, etc.).
8. Provision of supplemental equipment moneys to a grossly disproportionately favorable degree (almost half of the total amount available for A & S).
9. Explicitly stated desire by the Provost to put University support back of EPOB needs - explicit sympathy rather than explicit rejection.
10. Explicit plans to provide greenhouse and garden facilities on 30th St.
11. Explicit plans to provide space in the Centennial Bldg. for parts of the Dept. now in Hale and Denison.
12. Significant improvement in Grant productivity.
13. Increase, even though slight, of the EPOB operating budget for 1972-73 over the 1971-72 budget.

These improvements can mean only that our star is rising, as it were, not falling any longer despite the fact that for the University as a whole budgets are tighter this year than they were last year. These improvements still leave a great deal to be desired, and they are accompanied by some disturbing regressions, such as loss of proper telephone service. Nevertheless the over-all picture is clearly one of distinct betterment in sluggish times, and this should not be denied.

That such a record exists reflects chiefly the development of a capacity of department members to work in good will with each other, with other biologists on the campus, and with the administration. As long as each person trusts and actively works with his colleagues at every level, our fortunes will continue to rise. We get our strength from such interaction; every breakdown in communication, in active desire to cooperate, in will to adjust to others' needs as well as to our own, diminishes our progress. The fact that we have gained despite the odds means that for the most part all of us have exercised more or less effectively our potential for teamwork. We have therefore ample cause for gratitude up and down the entire line of all members of the department (faculty, staff, students) to each other for contributing to improvement especially of the whole, as well as of its parts.

The following table facilitates evaluation of our budget position this year as compared with previous years.

Budget	Requested 1972	Received 1970-71	Received 1971-2	Received 1972-3
Hourly Wage (Code 4)	\$2,500	\$1,400	\$1,350	\$1,380
Operating (Code 5)	72,874	43,350	44,638	45,000
Equipment (Code 8)	183,454	None	None	8,000
Faculty Supplement (Code 1)	10,950*	900	900	10,950
Staff supplement (Code 3)	18,840**	None	None	None
TA (code 2)	44	34	37	39

*For honoraria and part-time instructorships for Armstrong, Avila, Riggs, Weiser. One full-time faculty member was also requested but not received.

** For an additional General Biology preparator, a Physiology preparator, augmentation for Greenhouse foreman to make a "career" job.

B. 1972-1973 Budget Breakdown

1. Office

Peterson Guide-----	\$250.00
Permanent charges (insurance, maintenance)-----	750.00
Physical plant repairs, moving; maintenance-----	1000.00
Keypunch-----	610.00
Operating expenses (telephones, typewriters, copying, postage, supplies, over-runs)-----	13,475.00
Total-----	\$16,085.00

2. Research and supplies

Thesis research supplement only (\$25 maximum for 50 students)-----	1,250.00
Faculty research supplement (\$100 maximum for 19 members)-----	1,900.00
Shop-----	1,000.00
Stockroom-----	500.00
Greenhouse-----	1,000.00
Total	\$5,650.00

3. Class costs

Summer, 1972-----	1,215.00
Fall, 1972-----	11,620.00
Spring, 1973-----	10,395.00
Total	\$23,230.00

4. Totals

Office-----	16,120.00
Research and supplies-----	5,650.00
Class costs-----	23,230.00
Total	\$45,000.00

C. Individual Allocations

Your allotment for both research and class needs for 1972-1973, both fall and spring, is: \$300.00

D. Status of Expenditures

Our program of commitment on Work-Study help is going to require half again as much as we have been allotted if we maintain the same level next semester that we have started this semester. A request will be submitted in due time for enough of a supplement to cover our needs next semester at the same level as this semester, although no assurance of success can be entertained.

Our course budget, at \$23,265, is about \$13,500 less than we requested. A supplementary request will be presented at once. If it is successful, you will each be notified of any additional allotment that is made possible.

Otherwise, the above allocation is your top figure available. Don't overspend it. Mrs. Owen will supply you a statement monthly. If you can economize, it is your responsibility to do so. Unexpected needs will always arise, for which we will need a cushion not otherwise provided. If on the contrary it is absolutely necessary for minimally acceptable operation in either teaching or research for you or your students to spend more than is allocated to you, we shall try to provide. We may be able to help through the "overhead" account if in no other way.

Dr. David Rogers
Hale

TO: All Faculty of EPO Biology

FROM: Biology Office

RE: Research Funding

A thick synopsis, departmentally arranged, of grants administered through ORS for each project director, effective as of July 1, 1972, has just been circulated to all administrative offices. The Department of EPO Biology has the lowest funding figure of any science department--and about one-twentieth that of our smaller sister department. However, our image as portrayed by this synopsis is considerably worse than reality, for quite a few funds supporting professional activities of our faculty are not administered through ORS (or are subsumed under other names such as INSTAAR). We would like to compile a more accurate summary to rectify the record, regardless of where that leaves us relative to the other departments.

The purpose of this summary is to find means by which we can support your scientific endeavors to a fuller extent, not just to fill our files, nor to do any kind of propagandizing outside.

Would you please, therefore, fill in the accompanying questionnaire and return it as soon as possible to the EPO Biology Office, Ramaley 110? Thank you for your cooperation.

Please report all funding for professional endeavours that are not more appropriately assignable to administrative entities other than EPO Biology, and that do not constitute strictly personal honoraria. Anything that supports purchase of equipment, salaries for yourself or others, or expenses for research by yourself or others, should be reported. Funds received from the University itself, as for example the council on Research and Creative Work, as well as from sources outside the University, including commercial concerns, private foundations, etc., should be included.

The funds reported should include all received or awarded during the calendar year 1972, or the fiscal year 1972-73.

Sources of Funds	To whom Allocated	Effective Dates	Amount	Purpose
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OEO Gil. Hevsh

W. Rogers

To: GRANTS AND DEVELOPMENT COMMITTEE

From: Dave Rogers

Subject: First Meeting of expanded committee.

As I feared, your combined schedules completely occupy the day-time hours. We might be able to find some regular day-time hours later, but we will have to meet first to try to agree on such a time.

To get things moving, I will ask for the first meeting of the committee on Thursday evening, October 12, at 7:30 PM, in Room 108, Hale Hall.

We will spend the first meeting in a general discussion of objectives of the committee, and matters of procedure. We may get to some substantive discussions, but I do not anticipate that we will have time for that. Allow about two hours time.

To: Hobart

Oct. 2, 1972

Subject: Expanded committee on grants and development.

From: Dave Rogers

DRK

Following the agreement at the Executive Committee meeting on Sept. 27, I have selected and contacted the following faculty, who have agreed to serve: Bob Pennak, John Bushnell, Carl Bock and Dick Jones.

I am sending each of the above a note to ask for their most convenient time of service on the committee, and hope to get going either this week or next. Until we have met, I will not have any formal report of activities to make.

As I mentioned in the EC, I will ask my assistant, Gil Hersh, to work with us in the planning and organization which must be done first, before going after funds. I hope that, later in the semester, we can have a full faculty meeting at which time we expose our plans, and call for full cooperation of each faculty member.

Sept. 8, 1972

To: Drs. Bonde + Segal

From: Dave Rogers

Subject: Committee on Grants

Congratulations! You're on another committee. Hobart is pushing me to do something, and I have ~~to~~ some ideas on what to do, but want to try them out on you first.

Can you stop by my office sometime soon (I'm in all the time except MFW 9-10 AM).

Thanks.

~~Saxt.~~ Oct. 2, 1972

To: Members of the Committee on Grants and Development.

From: Dave Rogers

Subject: Schedules for meeting, and members now assigned.

Enclosed is a blank schedule to fill out so that I can arrange for meeting time of the committee. We will try to keep the meeting during regular working hours, but it may be necessary to eventually go to evening meetings to provide sufficient time for our ~~im~~portant work. So, when filling out your schedule, please indicate which evenings are already occupied.

The committee as now expanded, has the following members:
Carl Bock, Eric Bonde, John Bushnell, Richard Jones, Bob Pennak, Dave Rogers
and Willie Segal.

Carl Bock

October 2, 1972

To: Members of the Committee on Grants and Development.

From: Dave Rogers

DR

Subject: Schedules for meeting, and members now assigned.

Enclosed is a blank schedule to fill out so that I can arrange for meeting time of the committee. We will try to keep the meeting during regular working hours, but it may be necessary to eventually go to evening meetings to provide sufficient time for our important work. So, when filling out your schedule, please indicate which evenings are already occupied.

The committee as now expanded, has the following members: Carl Bock, Eric Bonde, John Bushnell, Richard Jones, Bob Pennak, Dave Rogers, and Willie Segal.

DEVELOPMENT COMMITTEE MEMBERS

Dr. Erik Bonde
Professor, Biology Dept.
Hale 15
X7084 - 7288

Dr. Carl Beck
Asst. Prof., Assoc. Chmn.
Biology Dept.
Ramaley 115
X7184

Dr. John Bushnell
Professor, Biology Dept.
Hale 112B
X6547 - 7265

Dr. Robert Pennak
Professor, Biology Dept.
Hale 6
X7041

Dr. William Segal
Professor, Biology Dept.
Denison 108
X6180

Dr. Hobart Smith
Chairman, Biology Dept.
Ramaley 110

Dr. Paul Winston
Professor, Biology Dept.
Ramaley 208
X7185 - 8614

Gr St. -
Sally Anderson
xt. 7362

EPOB Student Enrollments

1. Graduate Students - 125
2. Undergraduate Majors - 1,100 +
Mostly soph, jun, & seniors
3. Student Credit Hour Production

<u>Year (Fall)</u> only	<u>SCIT</u>
73	11,052 (approx.)
72	11,335
71	9,656
70	8,897

Call Bruce Pallock 8383 for
of pre meds in EPOBiology -
production rate over the years

Crowe

1. Teaching
of premeds is
but one chore

TO: All Biology Faculty, Graduate Student Reps.

March, 1972

FROM: Biology Office

SUBJECT: Research Laboratories

The following laboratories are recognized at present in the Biology Department. This list will be used in all promotional and advertising literature for the department. Omissions and errors can be rectified and modification entered in our working office copy at any time, and a new list will be issued when changes require it.

Research laboratories are recognized where space and facilities exist for research activities in any given specific discipline, by graduate students, postdoctorals and other faculty. Its director is responsible for the laboratory, and anyone else who participates in use and in guidance of use of the laboratory is an associate, subject to approval of the director.

LABORATORIES

Animal Physiology and Behavior

Director: John Windell

Associates: Olwen Williams, David Chiszar, Donald Horak

Aquatic Biology

Director: John H. Bushnell

Bibliographic Data Systems

Director: Rosella B. Smith

Associates: Sam Coleman, Lewis Savin, H.M. Smith

Comparative Endocrinology

Director: David O. Norris

Associate: R. Jones

Comparative Reproduction

Director: Richard Jones

Associates: T. Paul Maslin, D.O. Norris, R. Smith

Cryptogamic Botany

Director: Sam Shushan

Ecoenergetics

Director: Olwen Williams

Associate: John Windell

Ecological Genetics

Director: Yae Linhart

Entomology

Director: Robert Gregg

Environmental Physiology and Hygrobiology

Director: Paul Winston

Associate: Alan Brockway

Experimental Plant Ecology

Director: Jane Beck

Associate: John Marr

Mr. David Royce

Herpetosystematics

Director: T. Paul Maslin
Associates: Richard Jones, H.M. Smith

Lichenology

Director: Robert Pennak

Microbiology

Director: William Segal
Associate: Wells Shulls

Palynology (Chemical Treatment, PSRB1-288; Microscopy, PSRB1-285)

Director: Harvey Nichols
Associates: Margaret Nichols, L. Scott, S. Short

Plant Biosystematics

Director: Askeell Löve
Associate: Doris Löve

Plant Physiology

Director: Erik K. Rønde
Associate: Maxine P. Foreman

Population Genetics

Director: Wilson Crispacher

Taximetrics

Director: David Rogers

Vertebrate Ecology

Director: Carl Book

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Division of Biological and Medical Sciences

**Grants for Improving Doctoral Dissertation Research
In the Field Sciences**

Purpose:

These grants are intended to improve the quality of doctoral dissertations in the field sciences, such as systematics, ecology, and biological oceanography. They will make possible the use of data of better quality and from sources that otherwise could not be exploited. It is also hoped that the time required for the completion of dissertations can be reduced.

Applications will be judged on the basis of scientific content and originality, and awards will be made only when it is clear that they are required to develop a dissertation of high scientific content.

Funds may be used for travel to specialized libraries, museums, or field research locations; costs of specialized equipment; purchase of computer time only where an appropriate machine is not available in the institution; and for field research expenses. Textbooks and journals cannot be purchased with dissertation research grant funds, and funds may not be used for typing or reproduction of the student's dissertation. These funds may not be used as a stipend. Support for living expenses while conducting the research should be sought from other sources (including NSF fellowships and traineeships). Requests for expenses or per diem allowances for periods when the student is away from his home base for research purposes should be appropriately adjusted to take account of this rule, and must be carefully justified in terms of living costs. No funds can be provided for dependents of students.

Application Procedures:

Who may submit:

Applications may be made on behalf of a graduate student who is at the point of initiating dissertation research, though proposals may be submitted prior to the student's completion of all requirements for the doctorate except the dissertation.

The application should be submitted by the dissertation advisor, department chairman or chairman of the departmental committee on doctoral degrees. One application may be on behalf of several candidates provided the budget and other information relevant to each candidate are set out as separate parts of the proposal.

25F-71-36
NSF-70-34

Contents of Application:

Each application should contain (a) a description of the research, including the plan of work, or project design, and its scientific significance (approximately 1,000 words); (b) a statement of the items for which funds are requested and their estimated costs with an explanation, if necessary, of their relevance to the research; (c) a list of other financial aid received, applied for, or anticipated during the award period; (d) a time schedule for the research including the date funds will be required, and (e) biographical data on the student and his educational background, training and experience directly relevant to his dissertation. Awards may be requested for a period of up to 24 months.

It should be emphasized that items (a) and (b) should clearly show why award of the requested funds are required for research of higher scientific quality, would allow earlier completion, or would make possible research on a subject of scientific concern which otherwise could not be investigated.

Except for these and other appropriate minor modifications, the proposals and grants are subject to the same requirements as are research proposals by faculty members for their own research. These are explained in the NSF booklet, *Grants for Scientific Research*.

Submission Procedures:

Applications should be submitted by the university to the Division of Biological and Medical Sciences, National Science Foundation, Washington, D.C. 20550. Five copies of doctoral dissertation research grant applications are necessary, one of which should be endorsed by the student, the dissertation advisor, the department chairman, and an official authorized to sign for the institution. No special forms are needed. Applications may be submitted at any time. Four months should be allowed for normal processing, but the Foundation's decision will be announced as promptly as possible.

Grants Administration:

Awards will be made to the institution with the chairman or advisor designated as "project director." Grants will be awarded for periods up to 24 months. Financial accounting is required from the business office of the institution. A report of the research accomplished or a publication deriving from it is required at the end of the grant period. No indirect costs are allowable and no cost-sharing is required for dissertation research grants.

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

DEPARTMENT OF BIOLOGY
OFFICE OF THE CHAIRMAN

Nov. 2, 1972

Dr. David Rogers
Hale 114
Campus

Dear Dave:

Herewith are a couple of summaries of objectives relative to Educationally Disadvantaged Students in General Biology. Our objectives are not only to assure rectification of educational deficiencies of EDS, but to motivate them for biological careers, particularly in medical and paramedical fields. Our Medical School in Denver is all geared up for facilitation of medical and paramedical study by minorities students - with no students. We must funnel more talent into that area.

This year we have stopgap instruction in our Sect. 4 for EDS. Enrolled are 125 students - fewer than anticipated because the program was not known early enough to get the full benefit of enrollment potential. However the incumbents are exceptionally well qualified: Vernon Avila, a last-yr. Ph.D. candidate, at \$6,000 for the year (!), a Chicano with exceptional experience and drive, as the "director" or chief instructor; and Doris Jackson, a Black girl finishing her Master's degree this year, also with extensive teaching experience, acting as TA coordinator and lab supervisor. We have a TA in each lab section, selected for sensitivity to needs of our students. All devote considerable time to individual consultation. I think this shoestring operation is going to meet all our expectations; continuation by the University is assured.

What we need now is personnel money (salaries for the "director and "senior TA") and facilities money. We are short on microscopes, and are scrounging for teaching material. We have very little audiovisual materials, demonstration material, supplementary materials, and experimental equipment that the students are simply not getting the high quality of experience they should have before entering the sophisticated levels they will find in medical school and in advanced biology.

Our department is also participating in a summer course, Biol. 100, for orientation purposes - a strictly lecture course aimed at improvement of background for students never having had High School Biology. This has been supported by the UMAS (United Mexican American Students) and BEP (Black Education Program) budgets, from which our summer instructors are paid.

Our program is thus a very sound one, we believe, and it is actually in operation. It is too early to document its level of success, but we have every reason to expect it to be high. It merits a generous effort for improvement especially for facilities, and if possible also for the top personnel.

Any headway you could make in learning how we may effectively seek this sort of help would be very welcome.

Very sincerely,



Robert W. Smith

May 4, 1972

Provost Lawson Crowe
Regent 303
Campus

Dear Provost Crowe:

During the present academic year this department has submitted to a rather extensive realignment of teaching duties, in accordance with the accompanying formula. At the same time, in response to student opinion as well as administrative insistence, we adopted a policy of multiple lecture sections (as well as multiple laboratory-recitation sections) for General Biology. These two operations yielded two additional participants in General Biology from among our current faculty, shuffling courses they released, as well as others, among the remaining faculty so that we continue to offer about as many courses as before, but at less frequent intervals. Thus the student load is more equitably distributed than before and in fact I don't see how we can do much more than this in terms of teaching load/faculty member. Dean Briggs of course supplied the initial impetus for undertaking this upheaval, and as a recognition of our efforts to "clean house" in conformance with his demands for more equitable teaching loads and a better system for Biol. 101-2, he indicated willingness to do all possible to secure for us this fall a replacement for a faculty member (Bruce Criley) who left at the end of last year, to assume a one-semester responsibility for one section of General Biology. In addition, I have exerted every effort since the first of the year to do something constructive to rectify the abysmal record of performance of Negroes, Chicanos and Amerindians in General Biology, by seeking soft money for a 4-yr. period beginning this fall. Our plan as it emerged is as follows:

Biol. 101 - Fall
Sect. 1 (350-450 students) - new FTE Y(A&S)
" 2 (350) - Windell
" 3 (350) - Bonde
" 4 (175 ed. disadv. students) - new FTE Y(minority grant funds)

Biol. 102 - Spring
Sect. 1 Jane Bock
" 2 Dave Norris
" 3 Carl Bock
" 4 new FTE Y

Each of these persons, except new FTE Y, will teach other courses in the alternating semester, allowing some time for attention to research, since 350+ students in a large lab course is a full-time job for that semester. FTE Y is to spend full-time in Sect. 4 of 101-102.

We have set up a special examination and advising system with Mr. Whelstone so that all entering students interested in taking any introductory biology course will be screened for proper placement into either Sect. 4 of 101-102 (the educationally disadvantaged group), or Biol. 103-4 (non-majors), or WNR 105-6 (or Biol. 101-2, sects. 1-3) (mostly science majors).

Although final decision has not yet reached us about our new FTE X, the prognosis obviously is not good. If indeed that position does not materialize, and if I am in addition not successful in obtaining grant funds to subsidize FTE Y, our program in General Biology will be in severe jeopardy, for several reasons. For one, we are locked by schedule into rooms that will accommodate no more than 350-375 for each lecture section except Sect. 1 which could go to 450. More importantly, we must implement our course-improvement program, which requires that the lecture sections be retained at a reasonable size, not exceeding the maxima now established for next year. To reduce our accommodatory capacity to 700 from a current request of over 1200 would damage an important segment of student morale and would perpetuate the image of difficulties in the Biology department that we are striving so hard to rectify.

What I'd like to urge for your serious consideration is that subsidy of at least the Sec. 4, FTE Y, be assured for a minorities incumbent, at least for one year, in case I do not obtain funds for it from elsewhere. At least that would assure us of handling 850 in General Biology - 900 or 925 if we stretch room capacity to the absolute maximum. And at least this would get us over the hump, so that full schedule in 1973-4 at seq. would enable us to "catch up" with the backlog and thereafter to maintain facilities for regular needs.

We would greatly appreciate your consideration of this proposal. I do expect to try to secure OE support for the FTE Y for 1973-4 and the following 2-3 years, so that the University will not involuntarily be saddled with the obligation for that subsidy indefinitely. I have not attempted so far this year to get anything from OE because even if successful the support could not be available in time for this fall semester, when we so sorely need to start the program. We'll try however to get the necessary support beginning the next year. Pres. Nixon's recently-announced multimillion-dollar program for educationally disadvantaged students augurs well for such an attempt.

Very sincerely,

Hobart M. Smith
Chairman

HMS:eo

Project for the Educationally Disadvantaged
Student in General Biology
at the University of Colorado

May 25, '72

The Department of Environmental, Population and Organismic Biology at the University of Colorado offers two semesters of a full-year course for a total of 8 credit hours in General Biology, to a beginning group (65% freshmen) of about 1200 students. The course is aimed primarily at science majors. Two other courses in general Biology are given in other departments: one to 500-600 students in the department of Integrated Studies, for non-science majors, and one in the department of Molecular, Cellular and Developmental Biology to 200-400 students, ostensibly for both science majors and non-science majors (although few non-science majors take it).

In all these courses the record of performance of minorities students is dismal, none receiving A's, 27% failing, and the mode a D. Indeed the record is worse for Integrated Studies Biology than in other courses. The performance of minorities is demonstrably not an indication of an inefficient course for other students; our students in general perform 20% above the national mean in post-tests (CLEP.) of national comparative potential.

The clue to our instructional failure with educationally disadvantaged students is provided by a refreshingly non-conformant record provided by a course in Physics given specifically to educationally disadvantaged students at CU over the past two years. In that course the mode is a B(!), the failure rate is 4%, and 6% receive A's. More importantly, the performance of these students on national post-tests is even slightly higher than that of students in the "regular" courses in general Physics. Yet the instructor does not use any "gimmicks" to induce learning - no automated teaching-learning devices, no audiovisual aids, no special modules, cubicles, resource centers, etc. His key to success is visibly total involvement and personal concern for the individual problems and needs of every student. He identifies with them effectively, communicates freely and thereby provides the motivation they otherwise lack and which is the primary default in other courses.

We do not now have, and have never had at this University, the luxury of recourse to "gimmicks" to support our teaching efforts. We do have in this Department a consuming desire to succeed in arousing the motivation of most of our students to learn well. We see the technique needed, of personal approach, to handle educationally disadvantaged students (EDS) as successfully as we do our others, and all it needs is a faculty position assigned to it and occupied by a dedicated instructor who can identify and communicate with his students, stimulating them to exercise of their latent talents. The incumbent is the most vital cog in the machine, to be sure, but we are confident that a diligent search will yield a person who will be as successful as the Physics instructor.

The difficulty lies in the fact that we have no faculty member now on our roster who can be released from other duties to handle the job, which in itself is full time, the year around. Indeed, the Administration admits that we are short 10 members to handle the load we are already carrying, on an equitable basis with other departments. We have tried unsuccessfully since January to obtain funds to hire a new member, appealing to each of the minority centers in the University, to our Dean (of Arts and Sciences), to the local EOP office, the University Provost, to about 250 foundations (mostly in-state, a dozen out-of-state), and to the regional HEW office in Denver, all so far without success.

Our plan for the section (Section 4) for the educationally disadvantaged in General Biology is to provide two hours/week for recitation-discussion (to groups of 25) 1/wk for lecture (to the entire section) and 4/week for laboratory work (open, 25/lab capacity). The lectures will be handled exclusively by the person in charge. The recitation-discussion sections will be handled by the same person plus invited participants drawn from the some 250 faculty members of this university who have biological interests. Additional study sections will be scheduled as the need arises. The person in charge will be available at all times for consultation. Graduate student assistants will be assigned to each laboratory section. All staffing needs are thus provided except for the faculty member in charge.

The number of students we plan to handle, at least the first year, is 175. We will have about 1000 minority students added to the University student body this fall. All must fulfill a "Natural Science" requirement (as do other students) wherein four semesters of courses in any of several sciences must be taken. A large proportion take General Biology for two semesters of credit toward this requirement. The mechanism for selection of enrollees in Sect. 4 has already been established. Those having no Biology background in High School, and who exhibit no pronounced science aptitude, plus even those who do have a Biology background but perform poorly on the Placement Examination all entering freshmen take, will be directed into Section 4 if they elect to take Biology at all. There will be more than enough eligible for Sect. 4, and interested in Biology, to fill that Section. Indeed the expectation is that after our guidelines have been worked out the first year, we will need to expand enrollment in Sect. 4, gradually over several years, to about 350, the capacity of our other sections.

The expected minority representation among the 175 enrollees the first year is approximately 50-65% Chicano, 30-35% Black, and 5% American Indian, based upon the proportions evident among minority admissions to the University. Since the selection procedures emphasize educational disadvantage, however, not racial origin, a few nordics are expected as well as racial minorities.

All planning stages for Sect. 4 have been shared widely by representatives from the Black Education Program, from UMAS, from EOP, from several biological departments, and from Physics (Instructor of the course for EDS). The committee for selection of the new faculty member to be in charge is the same; it has advertised for applicants and we have documents now for about 50. The minorities offices of this University fully endorse the project, and indeed have pleaded with us for several years to move in this direction. The Administration has given us enthusiastic support for the project; failure to finance the instructional position is strictly a product of the financial bind that requires it to cut back severely its faculty replacements and provides no possibility of creating new positions. Our Dean of Arts and Sciences has assured us that the project must be inaugurated this fall even if the University has to resort to part-time, temporary employment - the best it could now do. To initiate the project with such marginal help would, however, really jeopardize the success of the project; success requires a full-time, highly qualified person in charge, and anything less is likely to render the effort ineffective.

The project at this stage is strictly experimental. If, as we earnestly hope and believe, our initial efforts are successful, we have every reason to expect that the University will adopt it as a permanent part of its program. We

should have more than one year, and properly about three to assess the value of the project. Even if we could now get but one year of support, we would expect this fall to submit applications for support for an additional two or three years while the project is in its experimental stages.

We would like to appoint the Director of Sect. 4 as soon as possible, this summer, so that the complexities of arrangements can be tackled well in advance of the Aug. 26 beginning of the fall semester. The Director should also participate in the summer school offering, started this year, of a pre-science orientation course organized jointly by the minorities offices of the University, for minorities pre-freshmen. Indeed, the position should be established on a 12-mo. basis (with one month of vacation) because of the year-round continuation of obligation to success of the program for the educationally-disadvantaged student.

We therefore propose that a salary of \$16,000 per year, on a 12-mo. basis, would be appropriate. The only other support we hope for, but can survive without if necessary, is for a half-time graduate student (expectedly a minority representative) to be appointed during the academic year of two semesters as a Senior Teaching Assistant, at \$6800 for the two semesters, to help coordinate laboratory and examination procedures, supervising the laboratory assistants and helping to integrate the whole project, which will involve as many as a dozen instructors of various ranks and responsibilities.

Our financial needs are otherwise covered by the University. Outside support needed is thus:

Director	-----	\$16,000	annual salary
Sr. T.A.	-----	6,800	" "
		<u>\$22,800/yr.</u>	

If any part must be sacrificed, it would be the T.A.

Dr. Rogers Copy

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental
Population and Organismic Biology

October 29, 1973

To: Development Committee
From: DJR
Subject: Procedures for presentation of
Departmental Needs
Place: Hale 109
Time: Wed. Oct. 31, at 4:30 p.m.

Short Meeting: ca 1/2 Hour

C. Bock
E. Bonde
J. Bushnell
R. Jones
R. Pennak
W. Segal
P. Winston

October 19, 1973

File w/ Development Committee
NOV 6 1973

Program Plan for Ramaley Renovation

Preliminary Report of Ramaley Program Planning Committee

Members of Committee: Lewis Sawin, Assoc. Dean, A&S; Carl Bock and William Segal, EPOB; Mel Cundiff, Bio. Sci. Integrated Studies; Peter Kuempel, MCDB, and Carl Borgmann.

The Ramaley Program Planning Committee (RPPC) was formed to develop much-needed plans for accommodating the Department of Environmental, Population, and Organismic Biology (EPOB) and the Biological Sciences Division of Integrated Studies (BSDIS) on the Boulder campus. The need for such a plan arises since space now occupied by EPOB and BSDIS is poorly suited for their present programs, and much of that spaces is proposed to be either torn down or eventually occupied by other functions of the University.

To guide the Committee in developing a logical, justifiable plan, we have estimated the space needs of EPOB and BSDIS. These estimates are based on CCHE guidelines, and the current programs and the estimates are presented in Section I. The Committee has also determined the current holdings of EPOB and BSDIS, and these are presented in Section II. This section also gives the amount of space that will be lost due to University plans for demolition and use conversion of Denison, Hunter, and Hale.

It will be noted that the space available to EPOB and BSDIS will be considerably less than the amount recommended by the CCHE guidelines, once Denison, Hunter, and Hale have been vacated. The Committee finds that the functions of EPOB and BSDIS cannot

be accommodated in Ramaley. The Committee is anxious to write Program Plans which will accommodate EPOB and BSDIS. Since these plans will require additional space, and since there is no clear picture as to what space will be available, the Committee is submitting this preliminary report with the hope that we can be given definitive guidelines as to the feasibility of various alternatives. Two possible alternatives are presented in Section III.

I. Space Needs of EPOB and Biological Sciences 103-104.

Table 1 shows the overall space requirements of EPO Biology and Biological Sciences 103-104, based upon CCHE guidelines as they apply to Fall 1973 student enrollments, numbers of graduate students, faculty and staff.

This figure of 58,170 assignable square feet (a.s.f.) does not include:

1. green house facilities
2. lecture classroom space (presumably to be provided in buildings other than Ramaley).
3. accommodation for several badly needed and anticipated program improvements, such as the addition of a laboratory to introductory genetics.

Table 2 is a breakdown in Fall 1973 enrollments in laboratory courses and their space requirements according to CCHE guidelines. This table shows derivation of the total teaching laboratory needs given in Table 1.

Table 1. Net space needs of EPO Biology and Biological Sciences
103-104, based upon CCHE guidelines.

1. Current teaching laboratory space	27,904 square feet		
2. Faculty & academic offices (32 x 120 sq. ft. per)	3,840	"	"
3. Chairman	150	"	"
4. Secretary office (5 x 80 sq. ft. per)	400	"	"
5. Clerical support (files, supplies, etc.)	400	"	"
6. Teaching support (mimeo, xerox, audio visual)	400	"	"
7. Graduate Teaching Asst. office (50 x 60 sq.ft. per)	3,000	"	"
8. Faculty Research			
Botany: 7 x (110 sq.ft. + 100% service)	1,540	"	"
Other: 18 x (110 sq.ft. + 67% service)	3,312	"	"
9. Graduate Student Research			
Botany: 31 x (70 sq.ft. + 100% service)	4,340	"	"
Other: 79 x (70 sq.ft. + 67% service)	9,243	"	"
10. Stockrooms	1,400	"	"
11. Shop	600	"	"
12. Animal Rooms	1,000	"	"
13. Dark Room	150	"	"
14. Conference Room - Seminars	500	"	"
TOTAL (less greenhouse) =	58,179 square feet		

Table 2. FALL 1973 COURSE INVENTORY - EPO Biology and Biological
Sciences (Integrated Studies) 30 October 1973 Data

<u>Course</u>	<u>No. Students</u>	<u>No. Hrs. in Class</u>	<u>CCHE/SSPO</u>	<u>A.S.F.</u>
101 Gen. Bio.	1,297	3	2.71	10,545
210 Bot.	68	3	2.83	577
301 Bio. Micro.	121	4	3.71	1,796
311 P. Morph.	37	4.5	3.63	604
313 Comp. Anat.	114	6	4.80	3,283
321 P. Physiol.	56	6	3.63	1,220
322 A. Physiol.	157	3	7.75	3,650
323 Cel. Physiol.	21	3	3.49	220
414 Mycol.	5	4	3.63	73
430 P. Tax.	8	6	2.83	136
431 Insect. Tax.	14	6	2.71	228
438 Immun. Bio.	11	6	3.49	230
441 P. Ecol.	109	4	2.83	1,234
443 A. Ecol.	114 1/2	3	3.52	602
460 Adv. P.Tax.	4	2	2.83	23
511 Birds World	13	2	3.52	92
533 Mam.	38	4	3.52	535
612 Limn.	7	4	3.52	99
613 Benth. Bio.	8	4	3.52	113
651 Repro.P.Bio.	7	3	4.84	102
103 Intro.Bio.Sci.	469	2	2.71	2,542
405-6 Teach.Lab.	73	3	Utilizes Gen. Biol. Space	
TOTAL				27,904

II. Current Space Occupied vs. Space Available After Demolition and Remodeling.

Table 3 is a listing of current space (a.s.f.) occupied by EPOB and Biological Sciences 103-104, excluding lecture classrooms and greenhouses. This total (55,409 sq.ft.) falls below but close to our estimates of CCHE guidelines (58,179 sq.ft.; Table 1).

If plans to demolish and remodel Hale, Hunter, and Denison materialize, it is evident (Table 3) that space loss (excluding lecture classrooms) to EPOB and Biological Sciences 103-104 will be about 24,400 a.s.f.

Total space which could be gained via remodeling of Ramaley (i.e., conversion of all lecture classroom space, including room 104, to other uses) would not exceed 6,445 a.s.f. (Table 4), leaving a deficit of 17,955 a.s.f. compared to present holdings and a deficit of about 20,755 a.s.f. under CCHE guidelines. Again, space for program improvements and greenhouses is not included in these deficits.

Table 3. Current holdings of EPOB and Biological Sciences 103-104, excluding lecture classrooms and greenhouses.

<u>Building</u>	<u>A.S.F.</u>		
Ramaley	28,320 square feet		
Hale	14,601	"	} 24,406*
Hunter	6,442	"	
Denison	3,363	"	
L.S.R.B.	1,838	"	
I.B.G.	845	"	"
TOTAL =		55,409 square feet	

* to be demolished or remodeled for other uses.

Table 4. Space obtainable via Ramaley Remodeling

<u>Building</u>	<u>Space</u>
1. Ramaley classrooms except 104	1,771 square feet
2. Ramaley 104, converted to <u>two</u> floors (gross square feet)	<u>4,674</u> square feet
TOTAL	6,445 square feet

III. Additional Space.

Following are two possible alternatives which would meet the additional space needs of EPOB and BSDIS:

1. The alternative which would best solve the space needs of EPOB and BSDIS, and which would impose least upon other University programs, is the construction, as an addition to a remodeled Ramaley, of about 20,000 a.s.f., of new space plus greenhouse replacement space.

2. Since the purpose of the Ekeley/East renovation is described in the Capital Construction Request Budget as to "provide a completely refurbished wet lab facility," and since it had been suggested to the Committee that unfinished portions of Muenzinger Addition (I-C) might be considered as a re-location for elements of EPOB, the Committee worked out as a second alternative the plan shown in Table 5. A major reason for the submission of this preliminary report is that the Committee subsequently became aware that (a) the Department of Chemistry objects to the "wet lab" plan for Ekeley/East, and (b) the Psychology Department has planned uses for the undeveloped space in Muenzinger Addition (I-C).

Table 5.

<u>Building</u>	<u>A.S.F.</u>	<u>Use</u>
Ramaley	20,000	Faculty office & research
	1,350	Dept. office
	500	Conference
	3,000	T.A. office
	9,900	Teaching Labs
Ekeley/East, 3 floors	11,500	101-102 labs, 103-104 labs, Support
I-C 4th floor	4,213	Microbiology (all now in Denison)
I-C basement	4,700	Fish labs, stockroom, animal rooms, dark room, shop, storage
L.S.R.B.	1,838	Faculty & Graduate research & office
TOTAL	57,016	

not including greenhouses & lecture
classrooms

Conclusions

The Committee is submitting this preliminary report to determine the viability of either general plan (Section III) and to learn of other space possibilities which it might consider.

Several points are worthy of mention at this stage:

1. New construction (alternative 1) has the great advantage of consolidating all Biological Sciences into one building complex.
2. Extensive use of Ekeley and Muenzinger Addition (I-C) would be less costly than an addition to Ramaley, but would intrude on the Departments of Chemistry and Psychology.

3. The use of I-C 4th floor for microbiology would expedite demolition of Denison, since this move could be accomplished prior to Ramaley renovation.

4. The use of additional East Campus space for EPOB is highly undesirable, since the important teaching function of the Department would be badly damaged as a result. The prospect of faculty and staff having to "commute" between their research and their teaching, to say nothing of the inconvenience to students, is a grim picture indeed.

5. If no way of providing the required 20,000 additional square feet and greenhouses can be found, it is clearly impossible to carry through the demolition and use conversion of Denison, Hunter, and Hale which is proposed in other portions of the Centennial Development Projects.

Dr. Rogers Copy

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental,
Population and Organismic Biology

October 8, 1973

TO: Members of Development Committee
FROM: David J. Rogers
PLACE: Meeting to be held in Hale Hall, Room 109

There will be a short meeting of the Development Committee at 4:30 p.m. Wednesday. The meeting is to concern replacements of faculty. (Löve permanently and Rogers 2 years temporarily) in areas of concern to the faculty.

C. Bock
E. Bonde
J. Bushnell
R. Jones
R. Pennak
W. Segal
P. Winston

Sept. 28, 1973

Dean John Carnes
Hollans 152
Campus

Dear Dean Carnes:

In response to your comments at the chairman's meeting last week, and to your delightfully sparkling, live memo this week (it is always nice to chase bitter pills with a few hollow laughs), we would like to summarize our recruitment proposals, as follows:

1. Love replacement. This was orally promised for us by Dean Briggs, effective for the fall of 1974. We will expect to seek someone who will handle one section of EPOB 101-102 for one semester, as well as providing help in some specialty area yet to be decided; we have a number of weak spots that badly need strengthening. Dean Briggs initially agreed that we could seek either an advanced-level incumbent, or a fresh Ph.D., but that if we chose the first the likelihood of getting any new FTE's in the near future would be remote, whereas if we chose the second at least a possibility for additional help exists. You may wish to restrict our freedom of choice, and if so we should know soon. I remember the admonition in your memo that replacements of senior faculty should as a rule be at a junior level, but in view of earlier discussions with Dean Briggs the application of that rule to this instance ought to be clarified.

2. Rogers replacement. Dave Rogers expects to be offered a 2-yr. job in Rome, working for the Food and Agricultural Organization, an agency of the United Nations paralleling UNESCO etc., beginning in January, 1974. Notice will be received in November if this is to come to pass. Dean Briggs has agreed to grant him leave for two years on that short notice. It seems a virtual certainty, and Dave is planning as though it were just that.

We shall need a temporary, 2-yr. replacement for him, if his offer comes. It would, we understand, have to be at the junior level. Our faculty cannot absorb his load, and therefore we request assurance that indeed replacement will be permitted for the duration of his leave.

3. EPOB-101-102. We this year have temporary (teaching associate or staff) instruction for two sections of General Biology each semester. Windell is on leave this year, so will take up one of those sections one semester next year; we thus must account for three semester-sections next year. Our faculty cannot absorb these; they are fully needed in other areas. We can plan on the Rogers replacement taking one section, the Love replacement taking another, leaving us one short.

In addition, Cruz is carrying an intolerable load of two semester-sections - our only faculty member so encumbered. We promised that we would try to relieve him of one semester of that load, getting a new FTE to handle it, as soon as possible - at least in 2-3 years. No other faculty member handles more than one semester, and one section (300 students), because it is wholly consuming, leaving no time for research. The latter must be provided in the "off" semester, when one more advanced course is given. To load anyone with General Biology both semesters is to assure that we lose him or that he does little research. Maintenance of our status as something more than a teacher's college necessitates provision of time for research, and the load we have adopted is the maximum possible if research is to be served.

Therefore we need to think of two additional faculty in General Biology, just maintaining our present 5-section/semester offering. Of course the aid for Cruz can be postponed a year or two, but the need is there and should be attended as soon as possible.

There is another aspect to considerations of General Biology, however, and that is that we should add another section each semester, and that necessitates at least one other addition, and preferably two.

In summary, we urgently need at least one new position to handle one section of General Biology next year, and to staff the course properly we ought to have four.

4. Genetics. Biology at CU will remain sub-standard until we have a laboratory course in Genetics. Our lecture course (EP08-393) gets an enrollment of some 900/year, even as given both semesters (and two sections one semester) and in summer. MCDB gives a course in molecular genetics also (ours is population), but there is a void in both our offerings in laboratory genetics. Both departments strongly endorse the proposition. To effect it, however, we need another person in genetics, for our present faculty is loaded with essential coursework to the point that it cannot absorb that course or any of others. We should start the course next fall. Space for it we can find if we get a new faculty member, a preparator and some money for equipment will be necessary to make the program operable. We thus ask for one new FTE for a junior faculty at this time, to become effective next fall.

5. Preparator. One new FTE in a staff position is mandatory to effect the genetics laboratory course. Cultures of bacteria, protozoans, flies and other organisms for laboratory experiment must be maintained year-round; we envision giving the course both semesters. It is impossible for our current staff or faculty to handle this job.

6. Other New Programs. There are several outstanding areas wherein our Biology offerings need to be strengthened to meet student demand and to effect the stature expected of a University of the size and prestige of CU. Our vertebrate physiologists and our microbiologists are swamped with large-enrollment courses, and cannot give the balanced offerings in these areas that this volume of students should have. We should add at least one faculty member in each of these areas.

Likewise our botany courses are woefully deficient; even after replacing Love and Rogers we shall be short one or two. We have introduced a basic course in botany in a bootstrap operation this year, because a truly biological training for our students requires it; without such a course most of our students drift into zoological fields, making us really a department of zoology with a smattering of botany rather than the balanced organization it should be. Students do not have a chance to sample the sort of challenges that exist in botanical fields. If our efforts are successful, and we have every reason to think they will be (we have full MCDB support), we will have even more of a need for additional faculty in botany.

Another area sorely neglected to the explicit detriment of all of our graduate students is in microtechnique. Our students now learn basic essentials of microtechnique only by exercise of extraordinary personal determination and enterprise, with grossly inadequate equipment and with inadequate breadth of survey and limited supervision. They have repeatedly petitioned for inauguration of a course in this area, and our faculty consistently has endorsed these petitions, but without result since our present faculty cannot absorb this additional load.

As a bootstrap operation, again, we propose that our new geneticist (4 above) assume responsibility for that course as well as for laboratory genetics, since they are related; and that our new preparator (5 above) assist as microtechnique preparator as well as a genetics preparator. We need both persons to be involved, since maintenance of slides and microtechnique equipment for this course and for other related ones is an essential adjunct of the courses. It will have to be a course covering the rudiments of histology as well as techniques of histological preparation and therefore slide collections broadly representative of plant and animal tissue structure must be created and maintained.

Thus the microtechnique deficiency in our present capacity will be met if we can receive the requested FTE's of nos. 4 and 5 above. We shall still, if enrollments remain stable, need strengthening in other areas to bring us up to par. By par I mean a level consistent with that of other universities of equal rank, and consistent with our current enrollment in Biology. It is essential to recognize in this context that over the past 10 years enrollment in Biology has quadrupled, whereas our staff, faculty and equipment have lagged far behind. We are in serious need of catching up with the level of sufficiency we had 10 years ago; calling a halt now, because enrollment has stabilized, merely crystallizes us in a state of inadequacy that is a severe disservice to our students and a discredit to the University.

Fears that enrollment emphasis will shift from biology to something else despite stabilization of total University enrollment have, I am sure, been a factor in hesitance to supply EPOB needs, but these are, I am confident, ill-founded. Clearly the issue for a long time will be plain survival of man and his environment; Biology will remain at the core of such considerations for as long as these problems exist. Man's attention has perforce been turned in large part to fundamentals, and biological survival is the most fundamental of fundamentals.

Equipment, space, faculty and staff are all severely inadequate for the job we now have and that faces us in the future. Please know that I do not so state in a desire simply to see the department grow, or for any other self-serving purpose. EPOB has arrived at a grave position of jeopardy to which attention has not been given in the past, primarily because the inadequacy grew silently as we strived to accommodate student demand that continued to increase unabated and is still doing so despite total University enrollment stabilization. Unfortunately funds for growth accommodation have been curtailed simultaneously with the total enrollment, leaving us to face forever our inadequacy to meet demands - unless the situation is noted, recognized and rectified. That is what we now ask, at least for initiation of a program to carry on for a period of years until we can truthfully say we have the faculty, staff, space and equipment to perform our duties competently and without short-changing our students or the reputation and image of this University as an eminent institution of scholarship and not as a minor teacher's college.

Sincerely,

Dr. Hobart M. Smith
Chairman

HMS:eo

Development Committee - Summary of Sept 28, 73 meeting:

Met with Norman Richardson to hear his problems in getting space & equipment to teach his new ecology courses.

Uncovered the following problems:

1. No communication routes available to find what equipment and/or space available.
2. No budget for equipment for new faculty or for department.
3. Little coordination of efforts to support requirements either within or in higher administration echelons.
4. Apparent opposition and no cooperation from MCDB - quite the opposite. Also apparent ignorance
5. on part of Porter as to accomplishments of EPO Biology faculty - statement of Porter "EPOB hasn't done anything in last five years".
6. Report from conversation with Savin - seemingly, desire on part of higher administration to phase out all but small part of present EPO Biology, place most of functions in MCDB, and leave only "environmental" part of present functions alive.

Observations and conclusions drawn by DTR -

1. Need further intense efforts to aid all faculty in all lines of communication - a designed means to assure close cooperation internally + externally.

2. Need to "educate" others of important functions of all aspects of Departmental functions -
3. Need to discover what plans (if any) there are being hatched at Provost level with respect to the future of Department.
4. Concurrent with 3, need to indicate fundamental role of biology in future to prevent erosion of present faculty; and to indicate that the philosophy of science espoused by Porter et al is incompatible with the functions of this Department.

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental,
Population and Organismic Biology

September 26, 1973

TO: Members of the Development Committee

FROM: D. J. Rogers



RE: Vital Meeting called for Friday, October 28, 1973, at 5 P.M.
in Hale 109.

One of our most impressive and important problems revolves around the needs for new course materials and equipment for Dr. Norman Richardson.

This subject is a direct problem for the Development Committee and is one which must be faced immediately.

Since all of you have indicated that there is no one free time during the week, that is why I have called this extraordinary session at 5 P.M. in Hale 109.

I have asked Dr. Richardson to join us for this session. Please make every effort to be there.

Dr. Hobart Smith is especially invited to attend this meeting.

Dr. John Bushnell

September 10, 1973

Date

Dr. David Rogers

is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

Cross out the times and days of the week when you could not attend
meeting(s), and return to the persons named above.

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	<del></del>				<del></del>
9:00	<del></del>				<del></del>
10:00	<del></del>				<del></del>
11:00	<del></del>		X		<del></del>
12:00	<del></del>	X	X		<del></del>
1:10	<del></del>	X	X		<del></del>
2:10	<del></del>		X		<del></del>
3:10	<del></del>		X		<del></del>
4:00	<del></del>		X		<del></del>

Thank you,

John Bushnell

Dr. Paul Winston

September 10, 1973

Date

Dr. David Rogers

is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

cross out the times and days of the week when you could not attend this meeting(s), and return to the persons named above.

Monday	Tuesday	Wednesday	Thursday	Friday
8:00		(part)	X	
9:00		(part)	X	
10:00	X		X	X
11:00	X		X	
12:00	X			
1:10	(9 or part)			
2:10				
3:10				X
4:10				X

(9 or part)
means meetings
every other
week -

Thank you,

Paul W. Winston
(Just to make it
official)

Dr. C. Bock

September 10, 1973

Date

Dr. David Rogers

Is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

Please cross out the times and days of the week when you could not attend (this) (these) meeting(s), and return to the persons named above.

Monday	Tuesday	Wednesday	Thursday	Friday
8:00				
9:00				
10:00				
11:00				
12:00				
1:10				
2:10				
3:10				
4:10				

Thank you,

out of town Sept 15 → 29.

Dr. William Segal

September 10, 1973

Date

Dr. David Rogers

is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

Cross out the times and days of the week when you could not attend this meeting(s), and return to the persons named above.

Monday	Tuesday	Wednesday	Thursday	Friday
8:00				
9:00				
10:00				
11:00	Free	Only as a last resort	Free	Only as a last resort
12:00				
1:10				
2:10				
3:10				
4:10				
5:10				

The only other regular meeting that may be conflicting is the EC meeting; but Hobart indicated we may meet at noon

Thank you,

Willie Segal

Dr. Robert Pennak

September 10, 1973

Date

Dr. David Rogers

is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

Cross out the times and days of the week when you could not attend (times) meeting(s), and return to the persons named above.

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	~~X~~		~~X~~		
9:00	~~X~~		~~X~~		
10:00	~~X~~		~~X~~		
11:00	~~X~~				~~X~~
12:00	~~X~~				~~X~~
1:10	~~X~~				~~X~~
2:10	~~X~~				
3:10	~~X~~				
4:00	~~X~~				

Thank you,

L.M.P.

Dr. Erik Bonde

September 10, 1973

Date

Dr. David Rogers

is trying to arrange a meeting for

Development

Name of Committee

Involving the following persons:

Please cross out the times and days of the week when you could not attend (this) (these) meeting(s), and return to the persons named above.

Monday	Tuesday	Wednesday	Thursday	Friday
8:00	~~X~~		~~X~~	
9:00	~~X~~		~~X~~	
10:00	~~X~~		~~X~~	
11:00	~~X~~		~~X~~	
12:00	~~X~~	~~X~~	~~X~~	~~X~~
1:10	~~X~~	~~X~~	~~X~~	
2:10	~~X~~	~~X~~	~~X~~	
3:10	~~X~~	~~X~~	~~X~~	
4:10	~~X~~	~~X~~	~~X~~	

Thank you,

HEW



NEWS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

FOR RELEASE
Wednesday, August 22, 1973

(National Institute of Education)
Noel Vivaldi -- (202) 755-3407
Melinda Upp -- (202) 755-3507

The National Council on Educational Research met in Washington, D. C. on August 6, and adopted a policy that HEW's National Institute of Education allocate 10 to 15 percent of its budget to a research grants program.

The Council is legislatively mandated to establish general policies for the Institute and to review its conduct.

Specific dollar amounts allocated to this program will depend upon the final Congressional appropriation for NIE and the technical quality and educational relevance of the proposals submitted.

The program will be designed to strengthen the scientific and technological foundations of education by inviting researchers to submit proposals relevant to any aspect of American education problems. The Institute also will identify priority concerns and make special efforts to seek and support research that addresses those concerns. One area of special emphasis will be the education of poor and minority children.

(MORE)

As part of the program, NIE also will work to develop a general framework for education research to help make research findings available in a form easily useable by researchers, developers, and educators.

The tentative schedule for the program calls for:

- Detailed announcements and guidelines to be issued in September.
- Prospectuses to be submitted by November.
- Proposals to be submitted by January from those whose prospectuses indicate the greatest potential for technical quality and educational relevance.
- Grants awards to be made in late spring.

#

NOTE TO EDITORS: A copy of the policy statement adopted by the Council is attached.

August 6, 1973

RESOLUTION ON RESEARCH GRANTS PROGRAM

BACKGROUND

The primary purpose of the National Institute of Education (NIE) is to improve education for all Americans through research and development activities.

There are three principal goals incorporated in that purpose: to improve the equality of opportunity for all persons to receive an education of high quality; to improve the quality of education received by persons of all ages; to improve knowledge about the processes of learning and education.

To further these goals, Congress has created four objectives for NIE:

1. To help solve or alleviate the problems and achieve the objectives of American education;
2. To advance the practice of education as an art, science and profession;
3. To strengthen the scientific and technological foundations of education;
4. To build an effective R & D system.

While the principal emphasis of NIE is on the solution of problems in educational practice and on the linkages among researchers, developers and practitioners, NIE will also support as an important task the development of new knowledge which strengthens our understanding of the scientific and technological foundations of education. In such a program, individual scholars, as well as research institutions will be invited to propose research projects which address the fullest range of educational problems relevant to American education. The Institute will identify concerns of priority interest and make special efforts to seek and support research which may yield significant results in those areas. One area of special emphasis will be the education of persons from low-income families and minority communities in the United States.

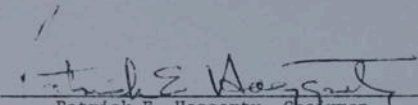
Scholars representing different disciplines and perspectives, including those of women and minority communities, will advise the Institute's staff in the process of selecting projects for funding. These scholars will be joined by practitioners, policy-makers and other experts when it is appropriate.

In addition to supporting research projects, the Institute will also work to develop a general framework which may guide and coordinate research and facilitate the dissemination of significant research findings to educators who may utilize them.

COUNCIL ACTION

To carry out the foregoing purpose, the Council adopts the following policy: Be it resolved that the National Council on Educational Research adopts the general policy that the Institute shall conduct a program of research grants to which 10 to 15% of the Institute's resources may be allocated. This allocation of funds is based on the best judgment of the Council at this time upon consideration of the following:

1. Opportunities and plans for such a program described in the document prepared for the Council on Research Grants Programs;
2. The factors relating to overall allocation of funds:
 - . The legislative objectives to strengthen the scientific and technological foundations of education as a purpose of the Institute and the legislative intent to establish a clear mandate for a stable investment in activities to carry out this purpose
 - . Regardless of the resource allocation figure stated above, the Director will not approve any project which fails to meet high standards of quality and relevance;
3. The factors relating to expansion of the program over fiscal year 1973:
 - . Review panel findings that among the approximately \$1/4 billion in research proposals received for fiscal year 1973 about \$18 million in projects were "approvable" on the basis of technical quality and relevance
 - . Experience of other agencies which indicates that higher quality proposals and a larger number of proposals will be received in the second year
 - . Special attention to review of larger research proposals in the future to assure that the review system does not reject such proposals
 - . A sub-objective to build research competence in greater depth in individual institutions and in more institutions than was possible with 1973 funding.


Patrick E. Haggerty, Chairman
National Council
on
Educational Research

AUG 29 1974

28 August, 1974

TO: EPO Botany Faculty

From: N. Richardson

Re: Presentation of EPO Biology 331 (Field Botany)

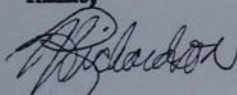
Last spring the dilemma was raised concerning possible duplication of the content of EPOB 331 with that of EPOB 430 (Classification of flowering plants, taught by Dr. Bonde) and EPOB 441 (Plant ecology, taught by Dr. Marr). As an immediate solution to this problem, I am teaching 331 this fall as a course that might be better titled "Principles of Plant Taxonomy" rather than a Colorado flora course that would duplicate Dr. Bonde's offering or a plant ecosystems coverage that would duplicate Dr. Marr's.

I would appreciate and solicit comments from the botany faculty regarding this proposal. My extension is -6378. Attached is an outline of 331.

For those who might wonder why a phycologist is teaching a higher plants course, I would point out that I commenced my graduate training under Peter Raven, then of Stanford University (now director of the Missouri Botanical Gardens) and was assistant curator of the Dudley Herbarium of Stanford University under the direction of Drs. Ira Whiggins and John Thomas. I have also worked with Mildred Mathias, Roxanna Ferris and C. Leo Hitchcock. In all I have completed over 30 graduate hours in higher plant systematics.

I hope that this proposal alleviates some fears of course duplication and contributes to diversification of undergraduate offerings in botany at Colorado University.

Thanks,



Norm Richardson

E.P.O. Biology 331 Field Botany

Fall, 1974-75

Dr. Richardson, Ramaley 115, ex-6378

<u>Date</u>	<u>Topic</u>
September 5	The roots of plant taxonomy: dichotomies and divergences
10	Plant systematics after Darwin
12	Contemporary plant systematics
17	The units of classification
19	Vocabulary of flowering plant characteristics I: roots & stems
24	Vocabulary of flowering plant characteristics II: flowers
26	Vocabulary of flowering plant characteristics III: fruits & seeds
October 1	The concept of characters: analytic, synthetic, quant. & qualitative
3	Evolutionary interpretation of characters
8	Correlation and discrimination of characters: numerical taxonomy
10	Taxonomic evidence I: anatomy and morphology
15	Taxonomic evidence II: cytology and cytogenetics
17	Taxonomic evidence III: phytochemistry
22	The evolutionary basis for classification I: origin of gymnosperms
24	The evolutionary basis for classification II: origin of angiosperms
29	Phenotypic modification
31	Variation within populations
November 5	Populations and environment
7	Hybridization
12	Speciation
14	The herbarium
19	Data: monographs, revisions, etc.
21	Systems of angiosperm classification I: Linnaeus
26	Systems of angiosperm classification II: De Candolle - Engler & Prantl
December 3	Systems of angiosperm classification III: Hutchinson & Bessey
5	Systems of angiosperm classification IV: Lawrence and contemporaries
10	Final Lab exam (all afternoon)
12	Final lecture exam

N.B. There will be a field trip each and every Tuesday (until it snows).

There will be a lab quiz once every two weeks. (You may not miss more than one.)

Floral formulae for major Colorado families will be distributed for memorization each week.

A collection of 50 Colorado plants, all properly identified, is required for completion of the course. (Collected and identified by you.)

Optional Saturday field trips will be arranged.

SEP 9 1974

MEMORANDUM

September 5, 1974

TO: Botany Faculty of EPO Biology and C. Norris, D. Norris, O. Williams
FROM: Pat Webber
RE: EPO Biology 210 The Plant Kingdom

This note is to inform you on the state of EPOB 210. In my opinion, the course is not filling its conceived role in our teaching program, and I find that I am not using my teaching skills or time effectively. I am writing this note so that, at least, the botanists can discuss the problem, and hopefully our advising and syllabus committee can make more effective use of the course; otherwise, the course should be dropped from our offerings.

The purpose of the course as I perceive it is to give a survey of the plant kingdom at an introductory level so that students can go on to other botany and also ecology courses with more understanding than they have had in the recent past. This course is the Botany or Biology 2 of many schools; we hoped that at some time it would be complemented by an Animal Kingdom equivalent.

Last Fall the course had an enrollment of 130 students. This year it has 29. The reasons for this drop are that the course is not discussed in any of our biology major programs and the resurrected EPOB 331 (Field Botany) has, with its more attractive title (i.e. "field"), taken many students.

Here is a synopsis of the present enrollment:

16 Majors in Biology

13 Non-biology students

--

15 Students with EPOB 101 & 102

14 Students with no previous biology

--

4 Students with or concurrently doing higher level Biology courses such as Morphology and Field Botany

Oddly enough, there are three Pre-Vet students in the class? Apparently, a plant course is required in a veterinary degree.

I would appreciate any comments you may have on this dilemma of mine.

Thank you.

PW/cb

E.P.O. Biology 210
The Plant Kingdom

University of Colorado
Boulder, Colorado

Course Outline for Fall 1974

Professor Patrick Webber will give this course. His office is in PSRB #1 on the East Campus (Room 213); he is a plant ecologist who works in tundra regions.

Lectures will be held in Room 103, Hale Science, on Tuesdays and Thursdays at 8:00 a.m. Laboratories will be scheduled 3 times a week; a student, however, will attend only one laboratory session per week. Laboratories will be held in Hale Science, Room 205 at 8:00 a.m. and 12:00 noon on Wednesdays and at 1:00 pm on Thursdays. Laboratories will be 2 hours and 50 minutes in duration. Students will be assigned to a specific laboratory time in the first week of the semester; they may only attend laboratories at that time. Each laboratory period will have two parts, an experimental part which provides plant material for examination and manipulation, and a demonstration part which provides material for comparison by way of display specimens and illustrations.

Biology 210 is called The Plant Kingdom and will provide an introduction to the structure, function, diversity, and evolution of plants. It will be a valuable course for all biologists even though it is an elective. It is strongly recommended to students anticipating further botanical studies. The course provides a survey of plant types with an emphasis on the diagnostic features of plants in general and major taxa in specific. Each taxon will be treated from the following points of view: identity, morphology, anatomy, reproduction, ecology, geography, evolution, fossil record and economic uses. A general survey of elementary plant physiology, plant genetics and ecosystem producer studies will be made to provide perspective for more advanced study.

The recommended textbook for this course will be Introductory Botany (2nd Edition) by Arthur Cronquist, published by Harper and Row, New York. The course will adhere to the classification and nomenclature scheme followed in this book. Other texts will be recommended, for at least library use, from time to time.

PJW:cw

Lecture Outline for Fall 1974

<u>Date</u>	<u>Topic</u>
September 5 (TH)	Course introduction
September 10 (TU)	The generalized plant
September 12 (TH)	The prokaryotes
September 17 (TU)	Chlorophyta and green algae
September 19 (TH)	Other algae
September 24 (TU)	Fungi
September 26 (TH)	Guest lecture: Microbial Ecology
October 1 (TU)	Marchantiopsida
October 3 (TH)	Bryopsida
October 8 (TU)	EXAMINATION
October 10 (TH)	Psilotophyta
October 15 (TU)	Lycopodiophyta
October 17 (TH)	Equisetophyta
October 22 (TU)	Polypodiophyta
October 24 (TH)	Guest Lecture: The Herbarium
October 29 (TU)	Pinophyta
October 31 (TH)	Monocotyledons
November 5 (TU)	Dicotyledons
November 7 (TH)	EXAMINATION
November 12 (TU)	Water relations
November 14 (TH)	Mineral nutrition
November 19 (TU)	Photosynthesis and respiration
November 21 (TH)	Reproduction and growth
November 26 (TU)	Plant communities
November 28 (TH)	THANKSGIVING
December 3 (TU)	Plant Evolution
December 5 (TH)	The future - man's impact
December 10 (TU)	Review Week
December 12 (TH)	Review Week
December 13 (FR)	FINAL EXAMINATION -- 12:30-2:30 pm

E.P.O.B.-210

Laboratory Outline for Fall 1974

<u>Date</u>	<u>Topic</u>
September 11 & 12	Plant structure and function
September 18 & 19	Microscope and algae
September 25 & 26	Fungi
October 2 & 3	Bryophytes
October 9 & 10	Psilophytes & EXAMINATION
October 16 & 17	Pteridophytes
October 23 & 24	Pinophytes
October 30 & 31	Magnoliophyta
November 6 & 7	Denver Botanical Garden
November 13 & 14	Community analysis
November 20 & 21	Review
November 27 & 28	THANKSGIVING
December 4 & 5	EXAMINATION