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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.

TO: EPO Biology Faculty and Earl Byron

FROM: D. W. Crumpacker

SUBJECT: Ramaley Building Addition and Renovation

DATE: September 20, 1977

Attached to this memo are an Executive Summary of the Ramaley Plan and a copy of the Boulder Campus's 1978-79 Capital Construction Request. You may note that the $3,998,500 on the Capital Construction Request is Phase I of a 2-phase request totaling $6,496,100, as noted on page 2 of the Executive Summary.

A detailed copy of the Program Plan on which the Executive Summary is based is available for your inspection in Ramaley 110. Bill Lewis is the chief architect of the Program Plan and he wrote the Executive Summary. He spent much time on this and everyone in the Administration that I have talked with considers it to be a highly professional product. I understand that it has been approved by the Governor's Office of State Planning and Budget. (We have never gotten this far before.)

We have already begun our lobbying compaign with permission of President Rautenstraus and Chancellor Nelson. Several members of the Joint Budget Committee of the Legislature were on campus Friday. Bill Lewis took them through parts of Ramaley and gave a short talk. Chancellor Nelson said the tour went well and that the incoming chairman, Arthur Herzberger from Colorado Springs, indicated that he understood our problem and was sympathetic. Bill and I met today with Representative William Hilsmeyer from Longmont for 2½ hours. We have 5 more similar meetings with our other local legislators (Lee Jones, Gwen Hums, Chuck Howe, Ron Stewart and Al Meiklejohn) scheduled between now and October 10. We have already met several times with Les Fowler and he is thoroughly supportive. We are presently trying to arrange similar visits with Ted Strickland, the present chairman of the JBC, and Fred Anderson from Loveland who is President of the Senate. Chancellor Nelson is planning to arrange a tour of Ramaley for the Board of Regents in December and individual visits for several key regents (Bein, Schmidt, Johnson and Bernick) in October and November.

We are asking for a lot of money and it is going to be an uphill battle. To put this in perspective, only about $30,000,000 will probably be available state-wide for capital construction this next year and the prison at Canon City will take at least $10,000,000. The total Ramaley request is over twice the total amount the Boulder Campus has received on an annual average for capital construction in recent years. I believe we will get something. The main problem is to ensure that we get our total request, since we are cutting things very closely and there is absolutely no fat in the budget.

Please contact either Bill or me if you have ideas for lobbying and/or questions about the project.

University of Colorado
Ramaley Program Plan

Executive Summary

1. Program Needs. The program plan outlines a project designed to provide adequate facilities for the Department of Environmental, Population, and Organismic Biology and the Biological Sciences Division of Integrated Studies. The Department of EPO Biology, one of the largest campus departments in the State, provides preprofessional training for medical, environmental and other biological sciences and service courses supporting professional programs such as nursing and pharmacy, graduate training in environmental and other biological sciences, and a large amount of elementary training in biology for Liberal Arts students at the University. In the planning year (1976-77), the Department had 944 undergraduate majors, 110 graduate students, and 31.5 faculty members. The Department generated 40,017 student contact hours per week (Fall) and taught 18 courses with enrollments over 100 (Fall and Spring). Program Facilities are crowded, widely separated spatially, and very outdated at present.

Facility requirements were computed directly (i.e., without extrapolation) from CCHE guidelines wherever possible. These can be summarized as follows (assignable square feet):

All instruction	59,392	
Research	16,817	
Offices	8,905	
Special needs	2,000	
	87,114	Total Needed

2. Summary of the Request. The request assumes the following. (1) The program will be housed in Ramaley, which will be renovated and added to in accord with program needs. Current temporary spaces in various places on campus will be vacated. (2) The request will exclude all space requirements connected with extramurally-funded research programs and some classroom space in adjoining Muenzinger that could be made available. The request can thus be summarized as follows:

Total programmed space	87,114	
Ramaley Renovation (deduct)	33,500	
Muenzinger classrooms Available (deduct)	1,982	
Extramural Faculty Research Not Requested (deduct)	10,020	
Ramaley Addition	41,612	assignable square feet

At an efficiency of 68% (CCHE guideline), this converts to 61,194 gross square feet.

Work to be accomplished is thus as follows:

1. Ramaley addition. New space of 61,194 gross square feet attached to Ramaley, @ $58.16; $3,559,000.

2. Ramaley renovation. Thorough upgrading of 51,039 gross square feet, @ $36.11; $1,843,200.

Project cost including the construction and renovation fees, landscaping, utilities, and movable equipment comes to $6,496,100 (with 6% escalation to July 1978). This is requested in two phases: Phase I, $3,998,500, including construction of Ramaley addition and associated costs except movable equipment; Phase II, $2,497,600, including renovation plus associated costs and movable equipment for the entire space. Schedule predicts occupancy of the Ramaley addition in August 1980 and of the renovated old building in August 1981.

University of Colorado at Boulder

Capital Construction Request FY 1978-79

Priority	Project Title	1978-79 Request
1	Fine Arts Building Renovation - Phase III Movable Equipment	$ 120,000
2	Ramaley Building Addition and Renovation	$ 3,998,500
3	Language Laboratory and Classroom Facilities	$ 2,500,000 (Maximum)
4	University Theatre Building Renovation	$ 855,100
5	Energy Monitoring and Control - Phase I	$ 386,700
6	Health and Safety - Building Safety	$ 178,400
7	Electrical Utility - Primary Electrical Loop	$ 307,500
8	Health and Safety - Campus Lighting	$ 125,700
9	Water Utility - Meter Relocation and Lines	$ 166,300
10	Energy Conservation - Mechanical Systems Retrofit	$ 345,900
	Total	$ 8,984,100

UNIVERSITY OF COLORADO

Interdepartmental Memorandum

TO EPOB Biology Faculty and Earl Byron

FROM D. W. Crumpacker

SUBJECT Arts and Sciences Special Budget Committee Report

DATE March 31, 1977

Please read the attached report and pay special attention to the remarks about EPO Biology. If you have comments, please get them to me as soon as possible. Any reply from me must be transmitted to the Committee by the middle of next week.

P.S. Our next faculty meeting in Hale 302 on Wed. April 6 will begin at 7:30 p.m. and may last until 10:30 p.m. We will rank our Entomology finalists and then decide on General Biology Coordinator vs Entomologist.

Dr. David Rogers
Hale 114

UNIVERSITY OF COLORADO
College of Arts and Sciences
BOULDER, COLORADO 80309

Department of Integrated Studies
Ketchum 128

March 21, 1977

Prof. Crumpacker

To: Chairpersons of departments or Directors of programs

From: Aaron Sayvetz, Chairman, Arts and Sciences Special Budget Committee

Aaron Sayvetz

in duplicate to you please. Thank you
Aaron

The committee respectfully requests your response, if you think one would be appropriate or helpful, to the enclosed portion of our report that involves your department or program.

The report and your response will constitute part of the record to be studied by the all-campus Committee on Resource Allocation, chaired by Vice Chancellor Lipetz.

We are fully aware that anything that the committee may say that is "evaluative" will touch sensitive nerves. It is our hope and belief, nevertheless, that the open and responsible discussion of problems will lead to solutions that enhance the political health and educational effectiveness of the College. It is our firm recommendation that proposed changes in academic organization and/or educational policy be considered and acted on by the College Faculty in accord with the usual procedures.

AS:mle

The Committee regards these materials as "in process" and therefore not for publication.

Special Budget Committee Report for the College of Arts and Sciences

Section - Sciences

Items requiring attention:

1. Computer Sciences Department: (a) the relation of service course offerings to needs of the College of Engineering and of the University in general should be studied; (b) relations with the College of Engineering should be improved.

2. Geological Sciences: this department should be given support to revitalize itself. The Department should first decide upon leadership areas and then if appropriate make new appointments in geophysics, economic geology or other areas in which it can achieve excellence.

3. EPO Biology: the size of the introductory course should be limited by raising standards to those used in pre-professional courses (as in chemistry).

4. Physics and Astrophysics and Astro-Geophysics: evaluate the need for, and the gains to be made by, consolidation of all astronomers into a single department.

5. Physics and Astrophysics: determine the advisability of using senior faculty to teach lower division recitations and laboratories.

6. Psychology, EPOB and MCDB: improve facilities for animal care.

7. General: the role of TA's as graduate students and as teaching assistants should be examined.

8. General: delivery of services, i.e., business, personnel, supplies, library and computing, especially in the sciences, should be improved.

Special Budget Committee Report for the College of Arts and Sciences

Section: Sciences

The departments covered in this section are the following:

Astro-Geophysics
EPO Biology
MCD Biology
Chemistry
Computer Sciences
Geological Sciences
Mathematics
Physics and Astrophysics
Psychology

The review that the committee undertook of the activities and programs of the science departments was somewhat sketchy because statistical data were not readily accessible early enough for comparison purposes, and the time available did not permit a study in depth of all the issues or problems. The Unit Goals statements for these departments were used as the basis for interviews with department chairs. Numerical data on productivit measures are often quite misleading and lead into an impossible morass of conflicting indicators because the reporting bases are different for each department.

After some discussion of these problems it was concluded that our review should focus on the following points:

A. calling attention to problems, anomalies, or other matters which require more careful study.

B. determination of the self-image of the departments, as a measure of overall strength.

C. identification of a few cases where obvious conclusions can be drawn leading to specific recommendations.

With only minimal initial knowledge about the departments, the subcommittee generated a worksheet (appended) which served to focus discussion. The questions were directed at the chairperson of each department, with the assumption that this individual would be reasonably knowledgeable about the various aspects of the department. This was not always true. The committee was also aware of skeletons in each department's closet, and in some cases these were discussed frankly.

Before discussion of individual departments, it appears appropriate to concentrate upon some factors common to all science departments concerning service functions provided by the central administration.

Library service is a centralized function essential for every department. Most science departments believe that library service is insufficien to meet the needs of their research activities. These departments generate the major part of the University's outside research support, for which overhead is collected, among other things, specifically to provide library service; these departments believe that this service is not being delivered in sufficient quality or quantity.

Other services needed by these departments are far from adequate. The problems of business and personnel services are well known (e.g. the inordinate time lags), and should be examined if they have not been. Less well known are problems of central stores, equipment maintenance and repair and supply of specialized materials. Chemical stores have by historical precedent been accepted as a supply service necessary for Chemistry. The University has never directly faced the issue of how it would provide for electronics stores or for maintenance of the vast array of electronic and electrical equipment used not only in research laboratories but also in teaching laboratories. The computing services have problems, well known to science departments, with respect to both research and teaching functions. Finally, three departments, EPO Biology, MCD Biology and Psychology have a great need for proper facilities for animals used in research.

A general observation concerns T.A. or Instructor support and the graduate programs. In the sciences, as well as in the social sciences and humanities, the graduate programs of departments are supported to a great extent by assistantships. Departments with a large number of TA positions have large graduate programs: e.g., English, Chemistry, Mathematics, Physics and Psychology. Those with few such positions have graduate programs which are at best small and possibly weak. Many science departments buttress the graduate program with research assistantships, whenever outside funds permit.

There is a need for coordination between the supply of T.A.'s for the teaching functions and the sustenance of graduate programs in particular departments. Admission of qualified graduate students is determined by the Graduate School and by the departments usually long before budgets for T.A. support are allocated.

The role of the T.A. in the University is two-fold. The TA is first a graduate student, and secondarily an active assistant in teaching. A study of how to manage the T.A. allocations so as to enhance both the graduate program and the teaching program needs to be made. It is not reasonable "to pick up T.A.'s off the street when needed", as was once said by a University administrator.

Remarks and observations regarding specific departments follows:

Astro-Geophysics

The AG Department, since it has no undergraduate major program, provides only service teaching at the undergraduate level, with responsibility for the large beginning astronomy course shared with Physics. Since several members of the department have joint appointments in Physics there is considerable coordination in teaching, particularly of astrophysics courses. The normal teaching load is one course per semester.

This Department is almost unique in its mix of disciplines. It can only be compared with other astronomy, physics, earth sciences or engineering departments. Generally it ranks among the top 10 or 20 departments in the country with which it can be compared. The excellence in the AG or Physics Departments relates to LASP, JILA and, to some extent, CIRES, all of which rank in their fields as among the best in this country.

Problems facing AG are space, and decline in budgets for supplies, capital equipment, T.A. support, and the library.

Space is currently provided in Duane and in the Observatory. The large increase in enrollment in introductory astronomy courses and the lack of space for laboratories as well as for T.A.'s are the pressing problems. Eventually additional space in an addition to Duane or in the HAO building will be required.

Generally speaking the Department is strong and productive, and it has realistic goals. It has very strong ties with NCAR, as well as with JILA, LASP and CIRES. It is an essential component of the total "Astronomy in Boulder" program, which is one of perhaps four such centers in the country.

EPO Biology

EPO Biology appears to be an active department which has successfully pulled itself out of the doldrums which plagued it a decade or so ago. The old weakness of the Department, its failure to engage in modern biological research, has been eliminated, and it appears to be fully in the realm of modern biology. Its faculty is young, its research output is good, and the ability of its faculty to obtain research grants is high.

The problems which it currently experiences are, for the most part, associated with its recent growth. The laboratory facilities for both teaching and research are grossly inadequate. Ramaley needs to be remodeled and an addition is required. The faculty is presently scattered around the campus in five buildings, and needs to be brought together in one modern facility.

Although EPO Biology and MCD Biology are close physical and professional neighbors, there remains to this day an unfortunate sense of restraint on cooperative work between the two Departments. The antagonisms which existed in the past have been replaced by a "live and let live" attitude, which, while an improvement, does not encourage active research interactions. The cause of biology at CU would clearly be advanced by more healthy research interaction between the two departments.

The introductory biology course taught by EPO Biology is experiencing large student demand, and the Department would like to add a faculty member to coordinate the course. The growth of the course is partly the result of increased interest in the health-related professions. Recently, the Department has introduced a non-labboratory option for the introductory course, to make it presumably more palatable for non-science majors. We question the wisdom of such a step, since it may have the effect of increasing enrollment in a course which is already too large. Moreover, it is doubtful that biology can be taught adequately without a lab. The University faces the general problem of responding to changing student interests, and the present level of interest in health-related fields causes unique problems both for introductory biology and for introductory chemistry No student should be prevented from starting on a course sequence leading to a degree in the medical sciences; however, students for whom medical science is not an appropriate profession should not be encouraged to continue in those course sequences. Consequently, we propose that introductory biology courses be used to screen students for biological or health related fields in a manner similar to that used by the chemistry department. The introductory chemistry course, Chem 103, maintains a grading system such that approximately 30% of the students who enroll either drop or receive a D or F, and only those who receive a grade of C or better are allowed to continue along the major track.

We propose that the EPO Biology department initiate a screening policy in its introductory pre-professional biology course and reinstitute a laboratory requirement in the course. Members of the MCD Biology department have the impression that the standards in their introductory biology course are higher than those in the EPO Biology course; if the standards are indeed different, then changes should be made to bring them into agreement. The existence of two introductory biology courses on the Boulder Campus is justifiable on the basis of the different orientations of the two biology departments; a difference in the standards of the two courses is not justifiable.

A stiffening of the standards of the EPO Biology department may have the effect of decreasing enrollment in their introductory course, eliminating thereby the need for an additional FTE to coordinate the course. We also encourage the EPO Biology department to avoid an open curriculum, and to require successful completion of EPO Biology 101-102 as a prerequisite for more advanced courses in the Department. Those non-science majors who do not wish to enroll in either EPO Biology or MCD Biology should consider the Integrated Sciences biology course, which is specifically designed for non-science majors.

MCD Biology

Since its establishment in 1968, the MCD Biology department has been among the strongest research departments on the campus, attaining international prominence in a number of fields of experimental biology. Its graduate program compares favorably with such established leaders in the field as Harvard and Caltech. Its undergraduate program, with 500 majors, appears healthy.

The Department has attained a level of excellence and quality which should be encouraged and supported by the University. It has developed a plan for well-balanced growth from its present faculty of 19 to an ultimate size of 25. We believe that if candidates of comparable quality are not proposed by other departments, the University administration should view favorably the requests for new appointments in MCD Biology. There may be some concern that by following a policy of increasing the strength of an already outstanding department, we may be turning the University into a scientific or technical institute. While that concern has legitimate features, it should have less priority than a concern for high quality among new appointments in the University, irrespective of department.

The Department has a need for increased state-funded staff support. Many of the staff members who should be supported by the University are currently funded by research grants.

Chemistry

The Chemistry Department may have been the first science department at CU to achieve national status; this was particularly in the field of organic chemistry. It ranks itself with Ohio State, Wisconsin, Michigan and Indiana; it can be considered as very good but not among the very top rated departments. Though strong in organic and physical chemistry, it has a need to strengthen itself or to rebuild in organic, biophysical and analytical chemistry.

The introductory chemistry courses are apparently used as a device to screen students from further chemistry courses by imposition of grade performance requirements. This has been deemed advisable because of the large number of students who require a variety of advanced chemistry courses because of their career goals. It appears that relatively few students are enrolled in chemistry courses for satisfaction of college science requirements or out of general interest.

To accommodate the large enrollments a rather substantial contingent of T.A.'s is used. As is true in several other science departments, the average faculty teaching load in chemistry is about one course per semester.

Computer Sciences

This department offers a graduate program only with service courses at the undergraduate level. Faculty members believe the program is quite strong, comparable in fact to Michigan, Purdue and Illinois; this impression may be a little exaggerated.

A problem with the service courses offered by this department is that the College of Engineering provides much of its own introductory programming courses, and there has been some general dissatisfaction within the University with the courses provided by Computer Sciences. This is one aspect of friction between this Department and the College of Engineering. The Department occupies less than 3000 square feet in the Engineering complex. To add to the difficulties, the relations with the Dean of Engineering are not the best, because of differences about the service programming courses and the space allocation. A general problem regarding the nature of the service is the discrepancy in their perception by this department and by the departments presumably being served.

Another general problem has to do with the relationship of the Department to the Computing Center. Rather than have funds allocated for service from the Center, small stand-alone hardware units and terminals for access to a variety of distant updated computation centers are needed. For these needs budget allocations should be changed and suitable space should be made available in the Engineering complex.

In general, it appears that there are some issues regarding the role of the department relative to service functions, its aspirations regarding an undergraduate program, and its interaction with the College of Engineering that need to be clarified, and for which definite agreements need to be reached. Restricted space and limited operating funds are serious problems.

Geological Sciences

Because it was denied a role in the proposal for the NSF Science Development Funding in the late 1960s, the Department of Geological Sciences is lagging behind the other science departments in the College of Arts and Sciences. While other departments received additions to their faculty and physical facilities by NSF seed money, the Department was cut from 15 to 14 members, i.e., below the pre-SDP level. The Department now lacks well-defined goals for future expansion. Despite the lack of University support, it has notable strengths and national recognition in the areas of Glacial and Quaternary Geology, Geophysics, Geochemistry and

Paleontology. However, it lacks a youthful tier of faculty and it has been denied the resources to become a truly outstanding department. Among the science departments, Geological Sciences has one of the lowest publication rates per faculty member and the lowest faculty salary scale. Enrollments in non-major introductory classes have declined since 1970, possibly because the department maintains high standards in its system of grading. Since 1970 the Department has experienced consistent growth in its enrollment of declared majors. Although the future of the State of Colorado certainly involves large activity in the area of utilization of natural resources, the Department has not been allowed to become a leader in economic geology. It is now hoping to add an economic geologist this year.

The Geology Department should be encouraged to continue in those areas in which it has always been a national leader and it should be supported in the pursuit of those goals. More effort appears necessary in its introductory courses to make them more intellectually exciting and attractive to undergraduates.

One of the strongest research areas of the Department is that of geophysics, for which the members of the Department connected with CIRES are largely responsible. The Department was instrumental in establishing CIRES and continues to support it. The Department suffers from the physical separation of its own faculty from those associated with CIRES. In this regard the movement of CIRES onto the main campus would have a beneficial effect.

The Department of Geological Sciences has had consistent success in placing its graduates and views this success as an affirmative assessment of its program. While we do not minimize the importance of successful student placement, we feel that departments should also judge themselves on the basis of professional leadership in active or newly developing fields which have high potential for research or creative work. Because of the possibility of new appointments the field of solid earth geophysics is an area which the Department should consider as an appropriate opportunity through CIRES for research leadership. Other areas include sedimentation, structural geology, economic geology and mineralogy. Several additional appointments could have the effect of elevating the Department to national prominence in these fields. Appointments in economic geology would certainly fill an important gap in the program of the Department. We encourage the Department to push for more than one appointment in order to achieve substantial strength in several promising areas.

Mathematics

This Department has a generally rather high ranking, being very good in number theory, differential equations, functional analysis, probability theory, mathematical foundations and logic. It rates itself as comparable to Rice, Texas and Washington University, and better than any of the Big 8 schools. Of about 55 faculty, 30 to 35 are active in research. This Department, next to English, is probably the largest in the College.

There was a recent internal controversy regarding salary distribution, which led to a reorganization that resulted in the formation of a Personnel Committee to consider grievances. Here, as in other institutions, there is controversy regarding the prestige that attaches to pure versus applied mathematics.

While the typical teaching load is two courses per semester, few of the senior faculty teach elementary courses. These are generally handled by the T.A. or Instructor contingent and by a number of rotating short term Assistant Professors. The large allottment of T.A.'s and Instructors sustains the graduate program. However, considering the number of graduate students in math the productivity, in terms of degrees granted, is rather small.

Physics and Astrophysics

The Department of Physics and Astrophysics is one of the strongest research departments in the College. Due to the presence of the Joint Institute for Laboratory Astrophysics, the Department is an international leader in laboratory atomic physics and certain fields of stellar astrophysics. Its programs in solid state physics and nuclear structure are excellent and internationally visible. In terms of published research papers in major journals, the research output of the Department is among the highest in the College.

The teaching acitivity of the Department is broad and apparently of high quality, involving many graduate and undergraduate majors, service teaching largely for the School of Engineering, and courses offered for non-science majors in the College. The great growth in introductory courses during the past few years has required such a heavy commitment of faculty to the teaching of small recitation sections that it appears that many of the faculty are being somewhat ineffectively used. More TA support is needed, especially in view of the amount of service teaching: approximately 70% of the students in the basic introductory physics course are from the School of Engineering.

The Department is clearly concerned with the quality of its teaching. An active in-house evaluation program is maintained, and a teaching committee has the power to move faculty out of courses for which they appear unsuited. The Department has been a leader in the teaching of science to educationally disadvantaged students, and in addition to a university level course, has offered a summer institute for minority high school students.

The Department is proposing to the NSF that it host a National Theoretical Physics Institute. This Institute would be a major program in the United States, and would draw to Boulder leaders in this field. Since it would be a non-academic program requiring no commitment from the University for new FTEs, the University should view this opportunity with enthusiasm.

A new area in which the Department is beginning to develop research activity is space astronomy. This area promises to be the most fertile field for new discoveries in astronomy during the next decade, and it is one in which the University is uniquely well qualified, because of the presence of the Laboratory of Atmospheric and Space Physics, which already has extensive successful experience in space programs. The con-

tinued growth of this field should be encouraged by the University.

There is a long-standing problem connected with the scattering of astronomers among a number of different departments and institutions. In terms of simple numbers, Boulder has one of the largest collections of astronomers in the world; however the reputation in national and international circles is somewhat reduced because of the complicated array of cooperating departments and institutes. It has been argued that the quality of astronomy in Boulder could be significantly improved if a majority of the astronomers were gathered together in a single, easily identifiable department. At present there are 6 to 8 astronomers in the Department and an approximately equal number in the Department of Astro-Geophysics.

The fields other than atomic physics in which the Department of Physics and Astrophysics is outstanding, namely solid state and nuclear structure, do not particularly lend themselves to cross-fertilization with astrophysics. There is a sense in which the Department of Astro-Geophysics, with its interests in the physics of plasmas and fluids, has a stronger tie with the research interests of the astrophysicists of the Department of Physics and Astrophysics. The issue needs to be thoroughly discussed by the astronomers and the departments involved. It is doubtful that the formation of a new department of astronomy would be in the best interests of either the University or the astronomical community.

Psychology

This Department is one of the best on the campus in terms of national ranking. It contains a number of very strong faculty members, and, overall, rates itself as comparable to Berkeley, Northwestern, U. of Cal. at San Diego, or Ohio State. It has a number of interdisciplinary ties with MCDB, Linguistics, Philosophy and other departments. Generally teaching loads consist of two courses per semester.

A problem is the lack of adequate animal care facilities, noted earlier. Further, departmental salaries are also woefully low, in comparison with those prevalent at comparable institutions, and in comparison with the salaries of other members of the Arts and Sciences faculty of a national and international stature comparable to that of most of the faculty in the psychology department.

Note

The interview and analysis of the Department of Communication Disorder and Speech Science has not been completed at this time.

Worksheet

Department: _____

1. What appears to be the self-image of the department, i.e., in what areas does the department excel and attain leadership, either locally or nationally?

2. What plans does the department have for improving its stature?

3. In what new areas does the department wish to grow?

4. What appear to be the major problems and challenges facing the department in the next few years?

5. What evidence is there for a serious commitment to teaching on the part of the department?

6. How well does the department interact with the University community, e.g., interdisciplinary programs, cross listed courses, teaching in Honors or Sewall Hall Programs, University service?

NATURAL SCIENCES

Numerical Data — Astro-Geophysics, EPO Biology, MCD Biology, Chemistry, Communication Disorders and Speech Science, Computer Science, Geological Sciences, Mathematics, Physics, Psychology.

Departments	Fac. FTE	TA* FTE	Clerical FTE	FAC Cler.	Code 5	Hourly	Majors UG	Majors G	SCH** UG	SCH** G
A-G	14	4.46	3.00	4.5	$10,100	$1,087	----	61	9,517	661
EPOB	29	14.10	5.00		52,400	1,440	975	93	20,800	1,654
MCDB	19	5.89	7.37	2.58	75,000	2,800	451	49	7,061	695
Chem	29	21.4	6.5	4.46	96,000	2,000	216	110	18,546	1,122
CDSS	7.25	1.88	1.0	7.25	5,750	360	130	108	2,513	774
Comp. Sci.	9.5	2.81	2.0	4.75	5,200	360	----	98	3,867	952
Geol. Sci.	14	4.4	1.75	8.0	10,200	840	215	103	7,149	1,308
Math	47	21.0	6.0	7.83	13,620	200	372	95	34,616	1,331
Physics	43	8.6	5.0	8.6	34,000	1,200	229	99	17,262	1,571
Psych	42.25	17.2	11.13	3.82	77,960	1,200	908	178	33,569	2,602
Totals	254.0	101.74	48.75	Aver 5.2	380,230	11,487	3,496	994	147,166	12,670
Percentages	40%	48%	45%		65%	23%	43%	46%	39%	50%
A & S***	628.75	211.37	107.46	Aver 5.85	$584,595	$49,377	8,063	2,141	379,184	25,314

All figures Fall'76 unless otherwise stated.

*Total F89 and F99

**'75-76. Does not include "Thesis SCH."

***Excluding A & S administration: Fac. FTE 4
Clerical 17.12

TO: EPO Faculty and Earl Byron

FROM: D.W. Crumpacker

RE: Teaching Equipment Request for the Next Four Years

DATE: March 23, 1977

Most of the attached communication to Dean Briggs is self-explanatory. The Executive Committee, Dave Norris and I spent quite a bit of time on it. However, I assigned most of the priorities. Undoubtedly, there are sins of both commission and omission. Please let me know about them, preferably in writing. The list is by no means immutable. I simply felt that further deliberations at this point as to priorities, etc., would be too time consuming. It is urgent that we get our request in writing to the administration while there is still time for it to be considered by Chancellor Berry's resource reallocation committee. Frankly, I am appalled by the magnitude of our needs. Why did we ever allow (and I'm as guilty as you) a situation like this to develop?

Att.

Dr. David Rogers
Hale 114

UNIVERSITY OF COLORADO
AT
BOULDER, COLORADO 80309

Department of Environmental,
Population and Organismic Biology

March 31, 1977

Dean William E. Briggs
College of Arts and Sciences
HLMS 159
Campus

Dear Bill:

For many years EPO Biology has taught its laboratory courses without proper equipment. This has created a situation in some courses, such as General Biology, where the lack of equipment has dictated the type of laboratory exercises that can be offered! This is simply intolerable. Last fall I requested that every member of our teaching faculty send me a list of his or her needs for laboratory course equipment. With the help of Dave Norris and our Executive Committee, I have used this information to prioritize our teaching equipment needs. The resulting list is presented below. While some corrections or additions may be subsequently made, I believe it to be an accurate reflection of the situation. Note that I have attempted to prioritize items both within and between years, with 1977-78 being highest priority, 1978-79 second highest, etc. Because of the long period over which this situation has been allowed to develop, our needs are enormous. But they are just needs. Furthermore, satisfaction of these needs would produce a quantum improvement in the quality of laboratory science teaching on this campus, since we are dealing with approximately 1000 majors out of a student body of 18,600 students during the regular academic year, plus large numbers of students from other departments.

The magnitude of our equipment problem is such that it cannot be solved through the normal budgetary channels which are open to departments. Therefore, I am requesting that a special attempt be made to attain funds from the highest administrative levels of the university system in order to solve this problem. Certainly, the needs generated by our pre-health students indicate that at least some of the solution must be sought outside the Boulder Campus.

I will describe the rationale used to construct the equipment list. Top priority was given to General Biology. I consider this to be the most important course we offer in EPO Biology. It is our window to the campus. It is the one course which any student on campus should be able to take for general interest, and it is the first course taken by most of our own majors and prospective majors. The first point of our recently submitted departmental master plan calls for making this two-semester sequence the best available on any campus in the Rocky Mountain and Great Plains regions. Occupancy of a newly remodeled General Biology laboratory facility in Ekeley East in September and hiring a permanent faculty Coordinator for the laboratory program are important steps towards this goal. So, also, is the complete revision of the laboratory exercises which is presently being accomplished. In order to make these improvements meaningful, we must obtain the proper equipment, as listed

Equipment for our large pre-health courses - Microbiology, Physiology and Anatomy - has been given a close second in priority. The pre-health students are one of our major service responsibilities. I believe that we should offer them a quality education in laboratory biology or get out of the business. I strongly prefer the first alternative.

Third priority has been given to the upgrading of our laboratory offerings in the botanical sciences, most of which are offered in Hale Science Building. Last year we hired two plant scientists, Mike Grant and Bob Bye, to augment our nucleus of botanists, and Dave Rogers has just returned to full time teaching. We have a large request pending in NSF which would provide us with great improvement in our controlled environment facilities for plants. We are presently developing a major course sequence for students who wish to concentrate in various aspects of plant science. Even so, we simply cannot provide our botanically oriented students with a high quality education unless we effect a major improvement in the teaching equipment in Hale.

Fourth priority has been given to several of the newer upper division laboratory courses being taught by our younger faculty. Examples are the courses in Biometry, Techniques in Aquatic Ecology, Animal Behavioral Laboratory, and Laboratory Genetics. Even though our younger faculty have been carefully screened for their research potential, we have expected them to be quality teachers and we have not been disappointed. However, in most cases, their teaching potential is being seriously limited by lack of the proper, and often sophisticated, equipment needed to teach modern laboratory biology.

As you look through the equipment list, you will note certain items which do not fit neatly into the above scheme of priorities. For example, I have requested 10 cases next year to house our present animal specimens in Ornithology and Mammalogy. This is urgent because they are beginning to undergo rapid deterioration. Note also, for example, that I have requested all the materials needed to equip Vertebrate Embryology in 1978-79 under the assumption that we will begin teaching that course then. You may also note that microscopes of various sorts are among our most serious deficiencies and that I have given relatively detailed justifications for those needs. Careful considerations have been made with regard to numbers of microscopes of a certain type that will be simultaneously needed. The numbers requested are based on multiple use by staggered sections of various courses in our different buildings. In several cases we were able to keep the numbers down by assuming the scopes could be moved from one building to another in different semesters.

There may be some mistakes in the equipment list and, undoubtedly, some changes in priorities will have to be made at a later time. Spreading the impact of this request over four years represents a compromise between urgency and the average size of the yearly requests. Although our faculty are dedicated to offering the highest possible quality of courses, we are severely limited by lack of adequate

equipment. I sincerely hope the University will be able to help us solve this important problem.

Sincerely yours,

David W. Crumpacker
Professor and Chairman

cc: Sam Ramsey

DWC:ds

Summary by Years for Subject Matter Areas

Year	Gen. Biology	Microbiology	An. Physiology	Anatomy	Other	Total
1977-78	$45568	$10000	$ 42050	$ 6431	$ 51647	$155696
78-79	17070	---	39595	22059	$3160	171884
79-80	12835	3766	27050	2678	112139	158468
80-81	---	27695	21330	---	48541	97586
Total	$75473	$41461	$130043	$31168	$305507	$583654
% of Total	12.9%	7.1%	22.3%	5.6%	52.3%	= 100%

Summary by Years for Microscopic Equipment

Year	Cost	% of total
1977-78	$ 45160	29%
78-79	67540	39%
79-80	58150	37%
80-81	6000	6%
Total	$176850	30%

EPO Biology Code 8 Request for Teaching of Laboratory Science Course Sections

I. 1977-1978

1. Microbiology (EPOB 301-4); 200 students per year, of which 100 are new nursing students; all sections in one semester to permit teaching of other courses in Microbiology the alternate semester; 10 lab sections of 20 students per section; space limitations require sections to be offered simultaneously in pairs, producing need for 40 compound microscopes (1 per student station). 14 microscopes are already available in Denison and 14 can be obtained which are being used in alternate semesters for Vertebrate Embryology; 12 additional microscopes in Denison must be repaired.

Repair parts for 12 compound microscopes	$4000.00	
1 incubator	2150.00	
1 agar sterilizer and dispenser	1850.00	
Renovation of Denison 102 to provide additional laboratory facilities	2000.00	
Sub-total		$10,000.00

2. General Biology Laboratories (EPOB 110-1, 111-1); 1200 students per year (includes summer sessions); to be taught in Ekeley East beginning Sept. 1, 1977; 4 simultaneous sections of 16 students each producing need for 64 dissecting/compound microscopes (1 each per student station). and 64

50 binocular dissecting microscopes (14 already available)	$24,000.00	
50 bases for dissecting microscopes (14 already available)	2,400.00	
70 illuminators for dissecting microscopes (64 plus 6 extra)	3,400.00	
50 base stage plates for dissecting microscopes (14 already available)	100.00	
70 illuminators for compound microscopes (64 plus 6 extra)	840.00	
8 microscope cabinets	3,400.00	
	$34,140.00	
½ of above-listed needs in order to provide 1 of each type of microscope per 2 student stations; remaining ½ to be acquired in 1978-1979		$17,070.00
10 sliding door storage cabinets	1,465.00	
15 swing door storage cabinets	2,805.00	
20 extra shelves	365.00	
20 spectrophotometers	5,855.00	
2 marine aquarium systems with stands & transfer tank	2,400.00	
1 top loading mettler balance	1,526.00	
1 interval timer	100.00	
8 centrifuges with accessories	3,559.00	
16 waterbath controls	1,600.00	
Models of cells, tissues, organs, etc.	3,717.00	
Skeletons of various animals	3,126.00	
		$28,498.00
Sub-total		$45,568.00

3. Animal Physiology Courses

Human Physiology (EPOB 325-4); 240 students per year; taught both semesters in sections of 20 students each.
Comparative Animal Physiology (EPOB 322-4); 360 students per year; to be taught both semesters in sections of 20 students each.
Vertebrate Physiology Laboratory (EPOB 459/559-2); 10 students per year.
Invertebrate Physiology (EPOB 404/504-3); 10 students per year.
Comparative Endocrinology Laboratory (EPOB 556-2); 10 students per year.

10 Harvard physiographs (20-student sections of EPOB 325 and 322 taught concurrently in pairs produces need for 10 physiographs each of which will serve 4 student stations).	$50,000.00	
½ of above physiographs to provide 1 per 8 student stations; remaining ½ to be acquired in 1978-1979.		$25,000.00
8 spectrophotometers		4,800.00
10 binocular dissecting microscopes (for 400 and 500-level courses)		6,000.00
1 oxygen analyzer (for EPOB 459/559)		4,000.00
1 analytical balance (for EPOB 404/504)		1,250.00
1 spectrophotometer (for EPOB 556)		1,000.00
	Sub-total	$42,050.00

4. Anatomy Courses

Human Anatomy (EPOB 219-3); 320 students per year; to be taught both semesters in sections of 32 students each.

Comparative Vertebrate Anatomy and C.V.A. Laboratory (EPOB 408-3 and 409-2); 120 students per year; all sections of 32 students each to be taught in one semester.

EPOB 219:		
5 human skeletons with cabinet	$2159.00	
12 human skeletons, disarticulated	1680.00	
6 human half skulls	404.00	
2 muscular Beauchenne skulls	555.00	$4808.00
Installation of 1 heavy duty garbage disposal (unit already available)		250.00
EPOB 408, 409:		
7 each of 5 skeletal preparations of various animals		1373.00
	Sub-total	$6431.00

5. Laboratory Courses taught on second floor of Hale Science Building
(Several of the smaller courses are offered in alternate years)

Morphology of Vascular and Non-Vascular Plants (EPOB 311-4, 312-4); 80 students per year; one course taught each semester in sections of 20 to 25 students.

Entomology (EPOB 303-3); 25 students per year in 1 section.

Parasitology (EPOB 302-3); 20 students per year in 1 section.

Insect Taxonomy (EPOB 431-4); 20 students per year in 1 section.

Mycology (EPOB 414-4); 10 students per year in 1 section.

Ethnoecology (EPOB 402/502-3); 25 students per year in 1 section.

Ecology and Evolution of Domesticated Plants (EPOB 403/503-3); 25 students per year in 1 section.

Invertebrate Zoology (EPOB 411/526-3); 25 students per year in 1 section.

Lichenology (EPOB 555-3); 10 students per year in 1 section.

Attempt will be made to schedule above courses so that a maximum of 30 students (i.e. 2 25-student sections) will be taught simultaneously. This produces a requirement for 50 binocular dissecting microscopes (1 per student station) and 17 monocular compound microscopes (1 per 3 student stations).

42 binocular dissecting microscopes (8 already available)	$20390.00
17 monocular compound microscope with oil immersion lenses (present scopes are of low quality and have no oil lenses)	10230.00
60 illuminators for dissecting microscopes (50 plus 10 extra)	3600.00
	$34,180.00

½ of above-listed needs in order to provide 1 binocular dissecting microscope per 2 student stations and 1 monocular compound microscope per 6 student stations in 1977-1978; remaining ½ to be acquired in 1978-1979. Sub-total $17,090.00

6. Laboratory Courses taught on first and basement floors of Hale Science Building (smaller courses offered in alternate years)

Plant Physiology (EPOB 321-4); 40 students per year; taught 1 semester in 2 sections of 20 students each.

Classification of Flowering Plants (EPOB 430-4); 60 students per year; to be taught both semesters in sections of 20 students each.

6. Laboratory Courses on first and basement floors of Hale (cont.)

Plant Ecology (EPOB 441/541-4); 50 students per year; taught in 1 semester in 2 sections of 25 students each.

Advanced Classification of Flowering Plants (EPOB 460/560-2); 10 students per year in 1 section.

Advanced Plant Physiology (EPOB 551-3); 10 students per year in 1 section.

Above courses will be scheduled so that a maximum of 30 students (i.e., 1 20-student and 1 10-student section) will be taught simultaneously. This produces a need for 30 binocular dissecting microscopes (1 per student station).

16 binocular dissecting microscopes (14 already available)	$9000.00	
16 illuminators for dissecting microscopes (14 already available)	1000.00	
		$10,000.00
½ of above listed needs in order to provide 1 binocular dissecting microscope per 2 student stations in 1977-1978; remaining ½ to be acquired in 1978-1979.		$5,000.00
6 pH meters (EPOB 321-4, 551-3)		1,770.00
2 spectrophotometers (EPOB 321-4, 551-3)		1,190.00
Sub-total		$7,960.00

7. Ornithology and Mammalogy
Ornithology (EPOB 434-4); 50 students per year in 1 semester.
Mammalogy (EPOB 437/533-4); 50 students per year in alternate semester.

6 Bushnell spotting scopes with accessories		$336.00
4 specimen cases, large, 8 trays each		1,864.00
6 specimen cases, small, 30 trays each		4,710.00
Sub-total		$6,910.00

8. Biometry Courses
Introduction to Biostatistics (EPOB 238-3); 25 students per year in 1 semester.
Biometry (EPOB 438/538-3); 25 students per year in 1 semester.

25 student calculators (present ones are borrowed)	Sub-total	$2400.00

9. Techniques in Aquatic Ecology (EPOB 512-2):
10 students per year in 1 semester.

1 uv-visible spectrophotometer		$3,000.00
1 balance		700.00
1 pH meter		300.00
	Sub-total	$4,000.00

10. Animal Behavioral Laboratory (EPOB 428/528-2); 10 students per year in 1 semester.

2 SSR System Keyboards	Sub-total	$1,200.00

11. Miscellaneous Small Requests of High Priority

Animal Ecology (EPOB 443/542-4)		
1 refrigerator		$ 400.00
Ethnoecology (EPOB 402/502-3)		
1 storage cabinet	$195.00	
1 herbarium case	317.00	$ 512.00
Laboratory Genetics (EPOB 483-4)		
1 environmental chamber		$ 500.00
Invertebrate Zoology (EPOB 411/526-5)		
1 balance	$100.00	
1 pH meter	$325.00	
		$ 425.00
Plant Ecology (EPOB 441/541-4)		
1 herbarium case	$325.00	
Morphology of Vascular and Non-Vascular Plants (EPOB 311-4, 312-4)		
2 storage cabinets	$360.00	
Classification of Flowering Plants (EPOB 430-4)		
1 herbarium case	$350.00	
Stream Biology (EPOB 429/529-3)		
1 current meter	$182.00	
1 mini spectrophotometer	200.00	
	$382.00	
Sub-total		$3,274.00
Total		$146,883.00
6% inflation during period Sept. 1, 1976 to Sept. 1, 1977		8,813.00
Grand Total for 1977-1978		$155,696.00

EPO Biology Code 8 Request for Teaching of Laboratory Science Course Sections

II. 1978-1979

1. General Biology Laboratories (EPOB 110-1, 111-1)

Remaining ½ of: binocular dissecting microscopes, bases, illuminators and mechanical stages; compound microscope illuminators; microscope cabinets (to provide 1 of each type of microscope per student station).

Sub-total $17,070.00

2. Animal Physiology Courses (EPOB 325-4, 322-4, 459/559-2, 404/504-3, 556-2).

Remaining ½ of Harvard physiographs (to provide 1 physiograph per 4 student stations for EPOB 325 and 322).	$25,000.00	
10 binocular dissecting microscopes (to provide 1 microscope per 4 student stations).	4,800.00	
5 centrifuges	1,000.00	
4 pH meters	2,500.00	
1 Mettler balance (EPOB 556-2)	1,700.00	
1 spectrophotometer (EPOB 556-2)	595.00	
2 analytical balances	4,000.00	
Sub-total		39,595.00

3. Anatomy Courses (EPOB 219-3, 408-3, 409-2)

8 human trunk models	8,760.00	
8 human muscle models	10,164.00	
2 each of 10 human organ models	2,352.00	
1 human skeleton	470.00	
skeletal preparations of various animals	313.00	
Sub-total		22,059.00

4. Laboratory Courses taught on second floor of Hale Science Building (EPOB 311-4, 312-4, 309-3, 302-3, 431-4, 414-4, 402/502-3, 403/503-3, 411/526-5, 555-3).

Remaining ½ of: binocular dissecting microscopes and illuminators; monocular compound microscopes (to provide 1 dissecting microscope per student station and 1 compound microscope per 3 student stations

Sub-total 17,090.00

5. Laboratory Courses taught on first and basement floors of Hale Science Building (EPOB 321-4, 430-4, 441/541-4, 460/560-2, 551-3)

Remaining ½ of: binocular dissecting microscopes and illuminators (to provide 1 microscope per student station)		
Sub-total		$5000.00

6. Plant Physiology Courses (EPOB 321-4, 551-3)

2 spectrophotometers	$1190.00	
1 growth chamber	1500.00	
1 sterile transfer hood	1500.00	
Sub-total		$4190.00

7. Vertebrate Embryology (EPOB 461-4); 120 students per year in one semester, 8 sections of 15 students each.

6 binocular dissecting microscopes (to be combined with 9 presently available to provide 1 microscope per student station)	3900.00	
11 substage illuminators for dissecting microscopes	1180.00	
2 wild compound microscopes for demonstration	8000.00	
1 20°C refrigerator incubator	900.00	
1 refrigerator	400.00	
1 analytical balance	1300.00	
1 top loading balance	800.00	
4 storage cabinets	100.00	
1 file cabinet	100.00	
Sub-total		$16680.00

8. Techniques in Aquatic Ecology (EPOB 519-2) and Ethnoecology (EPOB 402/502-3) 20 students per year in each course in alternate semesters; sections of 10 students each.

3 binocular dissecting microscopes (to provide 1 microscope per 3 1/3 student sections; remainder to be obtained in 1979-1980)	6000.00	
3 binocular compound microscopes (to provide 1 microscope per 3 1/3 student stations; remainder to be obtained in 1979-80)	4500.00	
1 uv-visible spectrophotometer (EPOB 519)	3000.00	
1 balance (EPOB 519)	700.00	
1 pH meter (EPOB 519)	300.00	
Sub-total		$14500.00

9. Animal Behavioral Laboratory (EPOB 428/428-2)

1 portable vidaotape unit	$2,500.00	
1 super-8 movie camera	1,200.00	
assorted cages	800.00	
1 super-8 projector	500.00	
2 field binoculars	300.00	
2 spotting scopes with accessories	500.00	
2 portable cassette tape recorders	300.00	
Sub-total		$6,100.00

10. Animal Ecology (EPOB 443/542-4)

1 refrigerator	400.00	
2 growth chambers	3,000.00	
Sub-total		3,400.00

11. Ethnoecology (EPOB 402/502-3)

1 growth chamber	1,500.00	
1 Mettler balance	1,526.00	
1 drying oven	450.00	
2 herbarium cases	633.00	
Sub-total		4,109.00

12. Invertebrate Zoology (EPOB 411/526-5)

1 pH meter	325.00	
1 conductivity meter	515.00	
1 water bath	195.00	
1 muffle furnace	230.00	
Sub-total		1,265.00

13. Stream Biology (EPOB 429/529-3)

1 turbidimeter	500.00	
3 storage cabinets	300.00	
Sub-total		800.00

14. Morphology of Vascular and Non-Vascular Plants (EPOB 311-4, 312-4)

1 plant press drying cabinet	$ 150.00	
2 herbarium cases	350.00	
Sub-total		$ 500.00

15. Plant Ecology (EPOB 441/541-4)

1 herbarium case	$ 325.00	
1 balance	100.00	
1 soil sample splitter	135.00	
1 soil pH meter	300.00	
Sub-total		$ 860.00

16. Ornithology and Mammalogy (EPOB 434-4, 437/533-4)

1 2x2 carousel projector	$ 250.00	
Sub-total		$ 250.00

Total	$153,468.00
12% inflation during period Sept. 1, 1976 to Sept. 1, 1978	18,416.00
Grand Total for 1978-1979	$171,884.00

EPO Biology Code 8 Request for Teaching of Laboratory Science Courses Sections

III. 1979-1980

1. General Biology Laboratories (EPOB 110-1, 111-1)

2 stereomicroscopes and tables for demonstration	$2,000.00	
10 mechanical stages with illuminators for demonstration	5,400.00	
1 photomicrographic camera for demonstration	100.00	
20 kymograph sets with stimulators and pens	5,335.00	
Sub-total		$12,835.00

2. Animal Physiology Courses (EPOB 325-4, 322-4, 459/559-2, 404/504-3, 556-2)

20 binocular dissecting microscopes (to provide 1 microscope per 2 student stations)	$4,800.00	
1 osmometer (EPOB 459/559)	4,000.00	
1 polygraph (EPOB 459/559)	14,000.00	
1 flame microphotometer (EPOB 404/504)	2,850.00	
1 12-channel thermistor bridge	600.00	
2 constant temperature baths (EPOB 556)	800.00	
Sub-total		$27,050.00

3. Human Anatomy (EPOB 219-3)

12 small, lockable steel tanks for human organs	$1,560.00	
6 large, lockable steel tanks for human organs	1,118.00	
Sub-total		$ 2,678.00

4. Plant Physiology Courses (EPOB 321-4, 551-3)

1 grinding mill	$1,213.00	
3 shakers and carriers	3,030.00	
Sub-total		$ 4,243.00

5. Techniques in Aquatic Ecology (EPOB 519-2) and Ethnoecology (EPOB 402/502-3)

7 binocular dissecting microscopes (to provide 1 microscope per student station)	$14,000.00	
7 binocular compound microscopes (to provide 1 microscope per student station)	10,500.00	
1 forced draft oven (EPOB 519)	450.00	
1 refrigerator (EPOB 519)	450.00	
2 conductance meters (EPOB 519)	750.00	
1 thermistor (EPOB 519)	600.00	
1 filter manifold, holders and pump (EPOB 519)	700.00	
2 Van Dorn samplers (EPOB 519)	500.00	
1 current meter (EPOB 519)	500.00	
1 pyrheliometer (EPOB 519)	450.00	
Sub-total		$28,900.00

6. Neurobiological Bases of Behavior (EPOB 416/516-3); 20 students per year in 2 sections of 10 students each in alternate years.

5 binocular dissecting microscopes (to provide 1 microscope per 2 student stations)	$ 5,000.00	
5 baseplates for dissecting microscopes	1,000.00	
5 illuminators for dissecting microscopes	250.00	
10 micromanipulators	2,500.00	
5 dual-beam oscilloscopes	6,500.00	
10 preamplifiers	2,000.00	
5 stimulators	2,500.00	
Sub-total		$19,750.00

7. Comparative Vertebrate Anatomy and C.V.A. Laboratory (EPOB 408-3, 409-2)

4 binocular dissecting microscopes (to provide 1 microscope per 8 student stations) Sub-total	$ 4,000.00

8. Laboratory Genetics (EPOB 483-4) and Animal Ecology (EPOB 443/542-4)
To be taught in various, non-simultaneous sections of 10 to 20 students each.

10 binocular dissecting microscopes (to provide 1 microscope per 1 to 2 student stations)	$ 6,000.00	
10 compound microscopes (to provide 1 per student station in EPOB 483-4)	6,000.00	
5 power supplies (EPOB 483-4)	2,700.00	
3 starch gel electrophoresis units	1,500.00	
3 acrylamide electrophoresis units	1,500.00	
Sub-total		$17,700.00

9. Morphology of Vascular and Non-Vascular Plants EPOB 311-4, 312-4)

1 growth chamber	$1,500.00	
1 incubator	2,150.00	
1 autoclave	445.00	
1 refrigerator	400.00	
1 paper chromatography set	350.00	
Sub-total		$4,845.00

10. Invertebrate Zoology (EPOB 411/526-5)

2 phase contrast microscopes (for demonstration)	$2,000.00	
1 mechanical sieve	100.00	
1 portable refrigeration system	395.00	
1 bottom sampler	100.00	
4 core samplers	400.00	
Sub-total		$2995.00

11. Vertebrate Zoology (EPOB-411/526-5)

Mounted specimens of various species	$1,000.00	
Skeletons of various species	2,500.00	
10 storage cabinets	1,650.00	
Sub-total		$5,150.00

12. Stream Biology (EPOB 429/529-3)

4 Surber samplers	400.00	
Sub-total		400.00

13. Microbiology Courses (EPOB 301-4, 436-4, 549-3, 550-2)

1 millipore poroscope with recorder	$3,766.00	
Sub-total		$3,766.00
Total		$134,312.00
18% inflation during period Sept. 1, 1976 to Sept. 1, 1979		24,176.00
Grand Total for 1979-1980		$158,488.00

EPOB Biology Code 8 Request for Teaching of Laboratory Science Course Sections

IV. 1980-1981

1. Animal Physiology Courses (EPOB 459/559-2, 404/504-3, 556-2)

1 spectrophotometer (EPOB 459/559)	$8,000.00	
6 telethermometers (EPOB 459/559)	200.00	
1 oxygen probe (EPOB 459/559)	2,000.00	
25 animal cages (EPOB 459/559)	2,500.00	
2 circulating cooling systems (EPOB 404/504)	1,100.00	
1 hygrometer (EPOB 404/504)	400.00	
2 water tables (EPOB 404/504)	300.00	
8 cryoscopes (EPOB 404/504)	1,600.00	
1 centrifuge (EPOb 404/504)	500.00	
6 micromanipulators (EPOB 404/504)	1,200.00	
3 pH meters (EPOB 404/504)	750.00	
2 mixers (EPOB 556)	200.00	
1 culture oven (EPOB 556)	1,000.00	
1 magnetic stirrer-hotplate (EPOB 556)	150.00	
1 cold temperature incubator (EPOB 556)	1,400.00	
Sub-total		$11,350.00

2. Laboratory Genetics (EPOB 484-4) and Animal Ecology (EPOB 443, 542-4)

10 binocular dissecting microscopes (to provide 1 microscope per student station)	$6,000.00	
2 spectrophotometers (EPOB 484)	1,000.00	
2 shaking water baths (EPOB 484)	900.00	
1 bacterial colony counter (EPOB 484)	350.00	
2 combination hot plates and stirrers (EPOB 484)	300.00	
Sub-total		$8,550.00

3. Quantitative Biology Courses
Biometry (EPOB 438/538-3),
Population Genetics (EPOB 579-3)
Evolution (EPOB 692-2)

1 programmable calculator	$16,000.00	
1 population sampler	2,500.00	
Sub-total		$18,500.00

4. Plant Physiology Courses (EPOB 321-4, 551-3)

2 vacuum pumps	$ 404.00	
6 balances	600.00	
1 cork borer	100.00	
1 thermogradient plate	1,500.00	
Sub-total		$ 2,604.00

5. Microbiology Courses (EPOB 301-4) etc. - see p. 3 of preceding section

1 flow-through scanner for spectrophotometer	$ 1,800.00	
1 Brunswick G26 Incubator Shaker	5,000.00	
1 Sorvall centrifuge	9,000.00	
1 Forma freezer, to - 75°C	2,650.00	
1 Sartorius electronic balance	2,245.00	
1 LKB fraction collector and gradient maker	7,000.00	
Sub-total		$27,695.00

Total	78,699.00
24% inflation during period Sept. 1, 1976 to Sept. 1, 1981	18,887.00
Grand Total for 1980-1981	97,586.00
Grand Total for 1977-1981	$583,654.00

TO: All EPOB Faculty and Graduate Students

FROM: Graduate Program Committee

The results of the votes on the standardization of requirements for the MA II degree and on the standardization of exam procedures for MA I and Ph.D. prelims were almost unanimously in favor of adopting the following rules:

Requirements for M.A.II degree:

(1) 3 person committee
(2) a 2-day exam, 4 hours each day
(3) an optional oral, left to the choice of the 3 person committee
(4) of the 30 semster hours required for the degree, 4 must be for independent research culminating in a paper directly related to the research project.

M.A. I and Ph.D. Prelims:

All students should be asked to write on 3 of 5 essay questions in each of his or her chosen topics.

EFFECTIVE SPRING 1977

UNDERGRADUATE MAJOR IN ENVIRONMENTAL, POPULATION AND ORGANISMIC BIOLOGY

Department of Environmental, Population and Organismic Biology

I. Undergraduate Degree Programs in EPO Biology (EPOB)

The undergraduate major in EPOB may be obtained through several programs leading to the B.A. degree in the College of Arts and Sciences. Candidates for the B.A. degree in EPOB must fulfill certain basic courses in EPOB and additional requirements which are described in Section II. Thirty-five semester hours are required in EPO Biology except as indicated under section II. B.

A. SPECIFIC PROGRAMS

1. Environmental Biology: This program stresses interactions between living things and their environments. Students may specialize in animal, microbial, plant or theoretical ecology. Attention is focused upon how organisms, species, populations, and communities interact with their physical and/or biological environments over time.

2. Population Studies: This program focuses on consideration of living things as populations. Attention is directed toward evolution, genetic, biogeographic, and theoretical biology at all levels of complexity within the population. Of special concern are those attributes which enable populations effectively to maintain themselves in their specific environments.

3. Organismic Biology: This program emphasizes consideration of living things as individuals. Attention is directed toward morphological and physiological biology at all levels of complexity within the organism. Of special concern are those attributes of living things which enable them effectively to maintain themselves and to reproduce in their specific environments.

4. Distributed Studies with EPOB as the primary area: This program is designed to allow a student to develop a broad special major over two or more subject matter fields. Each student must satisfy the basic EPOB course requirements (see II., Sec. A.) plus additional coursework determined in consultation with a departmental advisor sufficient for a minimum of 35 hrs. as well as appropriate courses in secondary subjects in accordance with the Rules of the College. Requirements in II., Sections B, C, D, and E do not apply to Distributed Studies.

5. Distributed Studies with EPOB as the secondary area: No specific course requirements apply if EPOB is a secondary area of a Distributed Studies major. Requirements in II., Sections B, C, D, and E do not apply to Distributed Studies.

6. Biological Sciences with Education: This program is a special selection of courses designed to best prepare students for teaching biology in secondary schools. A summary of this program may be obtained in the EPOB office. (Ramaley 110).

B. ADVISING

Each student is to consult with the Undergraduate Advising Coordinator (see Ramaley 110) for assignment to an advisor who will assist the student in developing the program of his or her choice. This advisor will aid the student throughout his or her undergraduate career and will prepare the State of Major Completion for the College prior to graduation. Because there are many kinds of careers open to students in the biological sciences, curricula in the programs are flexible. Advisor assignments may be changed at any time with permission of the Undergraduate Advising Coordinator.

C. PASS/FAIL Grades

No courses taken for pass/fail grades may be used to fulfill any of the requirements for an EPOB major. Courses taken P/F in the ancillary sciences are not acceptable.

II. Required Courses

A. Basic EPOB Courses (15 hrs.)

All students majoring in EPOB must complete the following requirements. Students are urged to complete these courses as early as possible in their undergraduate program.

1. General Biology EPOB 101, EPOB 110, EPOB 102, and EPOB 111 -- 8 hrs.

   (MCDB 105-106 may be substituted for the above. BSCI 103 and 104 will not carry credit toward the 35 hrs. required for the EPOB major, but will fulfill the requirement of completing general biology. EPOB 202 will substitute for EPOB 102 and EPOB 111.)

   Students with transfer credits in general biology or other biology courses must have their transfer credit evaluated to determine if they have indeed fulfilled this or other requirements. (see EPOB office, Ramaley 110)

2. Genetics, EPOB 383 4 hrs.

3. Principles of Ecology (EPOB 341) 3 hrs.

4. After consultation with his or her adviser, each student must also enroll in a series of courses dealing with aspects of evolution, physiology, morphology and taxonomy which will satisfy the requirements of his or her area of specialization.

B. Courses in Other Departments Counting Toward EPOB Major.

Certain courses taken in Departments of Anthropology, Chemistry, Geography, MCD Biology, and Psychology with approval of the advisor may be counted toward the 35 hrs required for the EPOB major. Such courses should be strongly related to the student's vocational goals. No more than 12 semester hours of courses taken in other departments may be presented.

C. Required Courses in Ancillary Sciences

All majors are required to complete one year each of college chemistry, physics and mathematics in addition to the 35 hrs. of EPOB courses. A grade of C or better is required for each course. Any of the sequences listed for each area below may be used to satisfy these requirements. Asterisk sequences are preferred.

1. College Chemistry

*a. CHEM 103 and CHEM 104
*b. CHEM 103 and CHEM 106 (leads to organic chemistry)
c. CHEM 107 and CHEM 108 (leads to organic chemistry)

2. College Physics

*a. PHYS 201 and PHYS 202
b. PHYS 111 and PHYS 112 + PHYS 114

3. Mathematics

*a. MATH 181 and MATH 182
b. MATH 110 and MATH 130 (Note MATH 110 is equivalent to MATH 101 + 102)
c. MATH 110 or MATH 130 plus statistics (e.g. PSY 210, EPOB 438)
d. MATH 130 plus one advanced math course approved by advisor.

UNIVERSITY OF COLORADO
AT
BOULDER, COLORADO 80309

Department of Environmental,
Population and Organismic Biology

April 6, 1977

Professor Aaron Sayvetz, Chairman
Arts & Sciences Special Budget Committee
314 Ketchum
Campus

Dr. David Rogers
Hale 114

Dear Aaron:

The work that has and is being done by your committee should be appreciated by all faculty in the College. Few, if any, of us would want to spend the large amount of time needed for the task. On behalf of EPO Biology I want to thank you and your committee for spending the time and coming up with various well-meaning and constructive suggestions. We greatly appreciate the recognition you have given us for our research accomplishments. I also wish to thank you for permitting us to reply to your report. Please don't be shocked by the nature of my reply. Most of all, I hope you will not consider it an overreaction to your report which, as you indicated, is a preliminary one. Maybe my reply is a bit strong, but it is sincerely meant to be constructive.

I want first of all to stress several points which, because of their omission, seem not to be adequately appreciated. Perhaps this was due to some failure on my part at our earlier meeting.

(1) Need for a steady-state faculty size of 37 FTE's by 1980. This has been a published and well-documented goal of EPO Biology since development of the Ramaley Building Plan in July, 1975. It is an integral part of the Master Plan statement compiled last fall at Chancellor Berry's request. The justification for 37 faculty is based on two completely independent aspects of our teaching responsibilities: (a) the need to reduce size in our classes, particularly at the upper division levels (300 level and above), and (b) the need to offer an array of courses that will cover our domain of Biology.

Point (a) can be emphasized by calculations made from the table of statistics at the end of your report. Please note especially the comparison of EPO Biology to the other major laboratory science departments, viz. MCD Biology, Chemistry, and Physics and Astrophysics. Our undergrsduate SCH production per total FTE (Faculty + TA) is 483 compared with 284, 368 and 335, respectively, for the other three. Our graduate SCH production per faculty FTE is 57 compared with 37, 39 and 37 for the other three. Our total number of majors (UG+G) is 1068 compared with 500, 326 and 328 for the other three. Point (b) can be brought into perspective by noting that on many large, state university campuses there are separate departments of Botany, Zoology, Entomology, Microbiology, Physiology, Anatomy, Genetics, Ecology, Systematics, Evolution, Biostatistics, etc. We combine all of these and more. Our domain is very large. Student and citizen interest in matters relevant to our type of Biology should not be expected to wane during the remainder of this century.

These matters involve world population, world food supply, environmental quality, limited natural resources, preservation of genetic resources, ecosystem management, evolution, sociobiology, etc.

Please note that I have purposely not mentioned the health sciences. I did this to stress some of the many other things that EPO Biology is. A number of our courses obviously have enormous relevance to the health sciences. Several of our faculty are actively engaged in basic research of considerable import to health (e.g., endocrine control of ovarian function, cancer immunotherapy, inheritance of alcohol and nicotene related behaviors in humans, and aerial dispersal of allergens and radioactive wastes.) Even so, we consider an important aspect of our teaching in this regard to be a service function to the allied health community. We are not actively seeking health science students, but we do feel a major responsiblity to provide them with the best possible education.

There is nothing magical or dreamy about our need for 37 faculty. We believe it the minimum we can get by with and provide a top quality education. In fact, we fear the problems that might arise with a larger faculty. Our faculty, which has probably the youngest age structure of any science department in the College, is very close-knit and highly interactive. All of us are strongly oriented towards problems of adaptation and evolution. Increasing our faculty size above 37 might endanger our ability to work together on commonly defined problems of mutual interest. This, by the way, is the major argument against combining EPO and MCD Biology. However, no one can argue with your point about the desirability of increased interaction between the two departments. If such increased interaction is to be meaningful, it will have to evolve naturally because of shared interests. I believe it fair to say that we would like to see this happen.

One last point about our need for additional faculty in order to achieve our gosl of 37. Today's market is a buyer's market. We have participated actively in this market, having acquired 11 of our present faculty in the past five years. I urge you to compare their research and teaching records with those of their peers anywhere in the University of Colorado system. I anticipate absolutely no difficulty in continuing to acquire new faculty of this quality in the next few years.

(2) Need for increases in Code 3, 5 and 8 funds. EPO Biology has reached its present level of active and very successful emphasis on biological research without benefit of the extensive NSF Science Development funding that came to several of our departments in the late 1960's. We did this by hiring the best possible young biologists. Our approach was to acquire faculty on the basis of their research potential but, simultaneously, to require that they project interest and expertise in teaching. We have not been disappointed in either regard. However, we cannot be expected even to maintain present programs of research and teaching unless we can quickly obtain the necessary support funds. Our needs are very great.

Code 3: Over the past 10 years our pool of office personnel has remained constant at 4 clerical workers and 1 administrative assistant. During this same period our graduate and undergraduate majors have risen constantly to over 1000 (finally appearing to have leveled off in the last two years) and our rostered faculty has increased from 15 to 29! Our SCH production has,

of course, also risen dramatically, as has our research program in terms of extramural grants, publication, research assistants, manuscripts, etc. The statistics in your table can again be used to tell the story. Our number of faculty per clerical FTE is 5.8 compared with 2.6, 4.5 and 8.6 for MCD Biology, Chemistry and Physics-Astrophysics, respectively. Our total number of majors per clerical FTE is 214 compared with 68, 50 and 66 for the other three departments. I could go on like this with any statistic in the table.

We also have great needs for additional, non-clerical staff, something which your table failed to document. I will mention only two situations, the General Biology teaching laboratories and animal care. We have one full-time staff preparator for the approximately 600 students who are now enrolling in our General ("Introductory") Biology laboratories each semester. (There are also approximately 200 students each summer.) This situation was even worse before we created our present non-laboratory option for approximately 200 students per semester. Our preparator has struggled mightily, being aided only by a few work-study students who are somewhat undependable from day to day and certainly from semester to semester. He obviously has great need for a full-time staff assistant. Our present animal caretaker works 2/3-time. The need to increase his contribution to full-time is only exceeded by our desperate need for better animal facilities. The latter was well documented in your report.

Code 5: The statistics in your table can be used to calculate that our supply and expense budget is funded at $2.33 per SCH (UG+G), compared with $9.67, $4.88 and $1.81 for MCD Biology, Chemistry and Physics-Astrophysics, respectively. The supplies needed to teach modern, challenging, wet-laboratory courses in General Biology, Animal and Plant Physiology, Comparative Anatomy, Microbiology, Aquatic Ecology, Genetics, etc. are extensive and expensive. The result is, of course, that our laboratories have not been nearly so modern nor challenging as we would have liked.

Code 8: Our need for teaching equipment can only be described as desperate. I can understand that it would have been extremely difficult for you to document this in your report, since an extensive assessment of inventories would have been required. To give you a feeling for the magnitude of this problem, I recently submitted a prioritized request to the administration of our College for $583,654 to be provided over the next four years. Thirty percent of this alone was for standard compound and dissecting microscopes -- necessary items for any decent teaching laboratory in many EPO Biology courses. A copy of this request is enclosed for the information of your Committee.

(3) Need for botanical facilities. Ten of our 29 rostered faculty are engaged in botanical research and many of our departmental courses deal with botanical topics. Four of our youngest and most capable faculty are working on botanical problems. Our present plant science facilities are so inadequate that our botanists simply cannot conduct many of the experiments which they should. We have access to two old greenhouses located on different parts of the campus. They total about 1560 sq. ft., half of which is used for teaching purposes. In addition, we have 2 large growth chambers and 7 smaller ones, some of which are either old or home made apparatuses with relatively low utility. Because of this situation, we submitted a proposal to NSF last fall which requests a set of 3 modern greenhouses with supporting growth chamber facilities to be constructed in the vicinity of Ramaley. This controlled environment facility would benefit plant scientists in MCD Biology and Chemistry in addition to those in EPO Biology. If our NSF request is not granted (notification is expected very soon), then we will have to ask the University and hence the State of Colorado for the necessary capital construction funds. The time lag associated with this process could be serious and we will have to request a high priority on the capital construction agenda.

I mention the above problem to stress that we have serious needs for other kinds of facilities in addition to the more generally obvious ones of a new building to house our students and faculty, and the animal care situation which was well documented in your report.

(4) Need for increased faculty salaries. Faculty salaries in EPO Biology are considerably lower than those in the other major science departments, as well as on the Boulder Campus in general. This is obviously a bargain for the University, but it is simply not just. Data which I obtained from Assistant Vice Chancellor Harpel's office for 1975-76 indicate a cost per SCH of $27 for EPO Biology compared with $46, $31 and $49 for MCD Biology, Chemistry and Physics-Astrophysics, respectively. Part of this problem is an historical one. However, it is my impression that this differential, undoubtedly largely due to salary differences, is to some extent being maintained in the newer appointments. If this is continued, the University may well begin to lose its recent investments in EPO Biology faculty.

This matter of average salary differences between deserving departments is very serious and one of the most difficult to correct. I have felt a great deal of personal frustration in this regard since coming to Boulder in 1968. That frustration has intensified since I have become department chairman and been attempting to improve the situation for my colleagues. The only real solution lies at the higher administrative levels. I suspect that only the Vice Chancellor for Academic Affairs or the Chancellor could act effectively in this respect. I believe that your report to the Campus Committee on Resource Allocation should address this topic because faculty salaries are probably the most important resource there is in a university.

Your report deals in some detail with our introductory year of "General Biology" and makes several tentative recommendations. One of these is that we should stiffen the standards and thereby eliminate the need for a new faculty member to coordinate the course. This conclusion is apparently based on the statement from your report that "Members of the MCD Biology Department have the impression that the standards in their introductory biology course are higher than those in the EPO Biology course; if the standards are indeed different, then changes should be made to bring them into agreement." I would suggest that, before a recommendation of this sort is included in your final report, the situation should be investigated in more detail. For example, what are the "standards" which are referred to? What is the factual evidence? I believe that the current grading standards in General Biology may well not be too lax. For instance, EPOB 101 enrolled 744 students (excluding our special section for disadvantaged students) in fall of 1976. Fifty-three dropped, mostly after the first exam. The eventual grade distribution of the remainder was approximately 12% A, 33% B, 34 %C, 13 % D, 8 % F. As for the subject matter and exams, I do not believe in the last few years that General Biology has been considered an easy course. Nevertheless, if good evidence should be produced that the two courses have different standards and, more importantly, different effects with regard to the biological expertise of students who complete them, then I agree that the problem should be addressed.

Meanwhile, I would like to restate the first goal of our recently developed Master Plan: "Development of a 2-semester, introductory course sequence in General Biology that will be the best offered in the Rocky Mountains-Great Plains region." Last spring we began a general reorganization and revitalization of both the lectures and laboratories in General Biology. We are presently in the

midst of that change which is unavoidably causing some problems for our students. We hope that the "new" course sequence will be functioning much more smoothly by next September. Please remember also that a very important part of our earlier stated needs for supply and expense funds and equipment is associated with our General Biology courses.

You completely misunderstood the function of the "General Biology Coordinator" position. While it is probable that this new faculty member would serve as chairman of a rotating committee within the Department whose mission would be to oversee the yearly conduct of the General Biology lectures, that mission would be largely or entirely administrative. That is, there will be a continuing need to assure that the annual pool of lecturers pays reasonable attention to the course outlines, that there are similar standards of grading in all lecture sections, etc. However, the faculty as a whole will make policy with regard to the material to be presented in the General Biology lecture courses and the general teaching approach to be used. The main function of the General Biology Coordinator will be the laboratories. This faculty member will have major departmental responsibility for all aspects of the laboratory courses. (The new structure of General Biology consists of two lecture courses for majors and others planning to take upper division courses in EPO Biology, viz. EPOB 101-3 and 102-3; two laboratory courses for the same types of students, EPOB 110-1 and 111-1; and two lecture courses for educationally disadvantaged students, EPOB 107-3 and 108-3. These latter two courses will be intensive and specifically designed to meet student needs; they must, in most cases, be followed by EPOB 101-3 and 102-3). The Coordinator's responsibilities will include design of all laboratory exercises; coordination of laboratory material with the lectures; supervision of the staff preparator and a group of approximately 12.5 teaching assistants; determination of grades for all students plus those obtaining teaching assistant-type experience through enrollment in courses EPOB 405, 406 and 507; continuous monitoring and evaluation of the success of the laboratory courses; and future modifications of course content, teaching methods, and teaching materials. This position of General Biology Coordinator is viewed as extremely important within our department and it is not one which we wish to delegate to staff personnel or even to some type of "instructor" in a non-tenure track position. The General Biology Coordinator will be expected to spend approximately half of his or her time on basic research. However, the teaching responsibilities of this person, besides the ones associated with the General Biology laboratories, will be considerably less than those of our other faculty members. You might be interested to know that, during this year of reorganization of General Biology, we were very fortunate in being able to hire a Visiting Professor, Dr. William Hall, to serve as Coordinator. Dr. Hall is a broadly trained evolutionary biologist with a great deal of varied teaching experience in Biology. He has served us very well and has done an excellent job of instituting challenging and interesting laboratory exercises which will provide an important starting point for a new, permanent Coordinator. The comment in your report about the elimination of an additional FTE to coordinate General Biology, which I referred to earlier, doesn't agree at all with your suggestion that we eliminate our present non-laboratory option in General Biology. Presumably, that is due to your misunderstanding about the nature of the Coordinator position which is, as just discussed, primarily associated with the laboratory parts of General Biology.

Your report suggested that we discountinue the non-laboratory option in General Biology since it may have the effect of increasing enrollment in a course that is already too large. You also doubted Biology could be taught adequately without a lab. Hopefully, I made it clear earlier in this letter, when discussing our needs for greatly increased funding in codes 1,3,5 and 8, that we are in no position to encourage any additional students to enroll in EPO Biology courses. We have never to my knowledge actively recruited students or majors. We instituted the non-laboratory sequence (i.e., students who want a broad survey of all aspects of Biology but do not plan to take upper division EPO Biology courses can take the EPOB 101-3, 102-3 sequence without concurrent enrollment in EPOB 110-1, 111-1) to relieve pressure on grossly inadequate supply, expense and equipment budgets and to convart some code 2 TA resources into codel faculty FTE's. (Adequate teaching space was also a serious problem.) The latter action was designed to improve our student faculty ratio (1975-76 statistics from Rich Harpel's office indicate 22.2 to 1 for EPOB Biology compared with 18.5, 19.1 and 14.6 to 1 for MCD Biology, Chemistry and Physics-Astrophysics, respectively) and to reduce class size in our upper division courses (additional 1975-76 statistics from Harpel show that EPO Biology had 29 classes with a student enrollment greater than 100 compared with 6, 21 and 0 for MCD Biology, Chemistry, and Physics-Astrophysics. We are in the ridiculous situation of graduating students in our own major who have seldom experienced the pleasures of a lecture class with an enrollment of less than 50! Perhaps "ominous" would be a better description than "ridiculous" because of the implications this may have with respect to how Colorado citizens view the educational process at C.U.

We are not sure why so many students choose the EPO Biology sequence of introductory biology courses. This is certainly a valid matter for future discussion. If, however, as your report suggests, non-science majors should be encouraged to enroll in the Integrated Studies Biology sequence, that course may need to be redesigned. I understand from students, faculty and the catalog description that this course sequence is "man-oriented" with an environmental emphasis, and it does not attempt to provine a complete survey of the field of Biology.

As for your Committee's doubts about whether Biology can be taught adequately without a lab - you may be right. Certainly, none of our faculty prefers this situation. It is purely a matter of inadequate resources. I should add that if we were to reinstate the laboratory requirement for all students presently enrolled in EPO Biology, we would have simultaneously to reinstate a claim for the code 2 support (TA's) which we gave up to create this option.

Your report argued that EPO Biology should be encouraged "to avoid an open curriculum, and to require successful completion of EPO Biology 101-102 as a prerequisite for more advanced courses in the Department." I don't understand what this means. As far as I know, the General Biology sequence has always been a prerequisite to our upper division courses (300 and above) and even to some of our 200 level courses (please see the Boulder Campus catalog). Copies of our recent and present requirements for the major in EPO Biology are enclosed for your additional information.

Your report proposed that, in order to discourage students for whom medical science is not an appropriate profession, "introductory biology courses be used to screen students for biological or health related fields in a manner similar to that used by the chemistry department. The introductory chemistry course, Chem 103, maintains a grading system such that approximately 30% of the students who enroll either drop or receive a D or F, and only those who receive a grade of C or better are allowed to continue along the major track." This proposal has important implications for the philosophy of higher education and is certainly worthy of future consideration. However, I believe that most, if not all, of our faculty would prefer a more positive approach to this problem, with less of a preconceived notion about the number of students who will do poorly. We do not believe we are in business to flunk or otherwise discourage students in a wholesale manner, even though decisions of that sort are obviously necessary on an individual basis. What about the possibility of requiring a certain minimal grade in General Biology before permitting students to take our upper division courses? No doubt there are other possibilities which could also be considered.

Well, I have said what I wanted to. Presumably, other chairpersons will do the same. In fact, the replies coming in to you at this stage may well provide you with the really essential information needed for your assessments and recommendations.

There are a number of important, constructive, and more general statements in your report which I have not commented on. For example, your preception about the inadequacy of library support for science departments is very accurate. This is a serious problem which affects the research mission of our campus.

Thank you again for providing an opportunity for this reply. I hope it may also be possible to receive copies of your revised report before it is finalized and transmitted to the administration.

Sincerely yours,

Wilson

David W. Crumpacker
Professor and Chairman

cc: Dean Wm. E. Briggs
Vice Chancellor James N. Corbridge, Jr.
Vice Chancellor Milton E. Lipetz (Chairman, Boulder Campus Resource Allocation Committee)
George Pilcher, Chairman, Resource Allocation Subcommittee 3 (Chairman, History Dept., Hellems 204)

TO: EPO Biology Faculty and Ron Duke

FROM: D. W. Crumpacker

SUBJECT: Upper Division Curriculum

DATE: Jan. 18, 1977

Dr. David Rogers
Hale 114

Certain important decisions concerning the upper division curriculum were made at the Dec. 13 faculty meeting (minutes enclosed) which should be considered further before implementation. The essence of these decisions is diagrammed in item no. 17 of the minutes. Nine course offerings with certain plant and animal alternatives were established as the sophomore course listings and also as prerequisites for their respective advanced courses. To reiterate:

Microbiology
Principles of Ecology
Physiology: Plant or Animal
Behavior
Systematics and Taxonomy: Plant or Animal
Genetics
Morphology - Anatomy: Plant or Animal
Invertebrate Zoology
Vertebrate Zoology

The implications of this action are considerable. For example, it is not clear if Invertebrate and Vertebrate Zoology are intended as required courses and as prerequisites for other courses. If they are, we simply do not have enough faculty to teach them. Furthermore, it seems rather unbalanced to list these two courses and not similar courses in Botany of Vascular and Non-Vascular Plants. The relationship of Systematics and Taxonomy to the Special Taxa courses and to courses such as Classification of Flowering Plants is not clear. It seems to me that this list of sophomore courses should be considered only as a statement of <u>some</u> of the things we would like to do. We are clearly not in a position to implement this until more consideration has been given to finding additional faculty and/or extensively rearranging and revising our 400 to 600 level courses.

The other action taken on Dec. 13 to choose a particular sequence of Ecology offerings (see item 6 of those minutes) is easier to understand and implement. It does imply, however, that if our present Plant and Animal Ecology courses are retained, they will have to be revised to some extent and taught at a higher level, since Principles of Ecology will be a prerequisite to all other Ecology courses. The relationship of courses in "Applied Topics" to those in "Advanced Ecology" is, however, not clear. For example, is it really implied that one or more "Advanced Ecology" courses will be prerequisites to courses in "Applied Topics"?

It would be nice to continue our curriculum discussion for some time. Unfortunately, Dave Norris needs to determine our teaching responsibilities for the next two or three years before Feb. 10; also promotion and tenure recommendations are due in the Dean's office by February 18, we will be deciding on and interviewing candidates for two positions in February, etc, etc.

Because of these various concerns the Executive Committee met yesterday and decided unanimously on the following course of action with respect to the curriculum:

(1) We sould like this motion to be acted on at our Wed., Jan. 19 meeting from 12 noon to 1 p.m. in Hale 302:

"The core curriculum of the EPO Biology Department should be described as follows :

Required courses for all EPO Biology Majors:

General Biology (EPOB 101, 110, 102, 111)
Genetics (EPOB 383)
Principles of Ecology (EPOB 341)

After consultation with his or her adviser, each student must also enroll in a series of courses dealing with aspects of evolution, physiology, morphology and taxonomy which will satisfy the requirements of his or her area of specialization."

This "core" avoids the burden of too many department-wide requirements and, even more important, is one which we can implement with our present faculty resources. Only those courses are included which a consensus of faculty agrees can impartially and comfortably treat a diverse array of plants, animals and microorganisms. The statement about other courses dealing with evolution, etc. does not mean that a particular student must take courses entitled "Evolution", etc. It simply means that he or she should choose an array of courses which will deal in important ways with these topics. A considerable amount of responsibility is, therefore, placed on the advisor.

Advisor's biases produce heavy weighting not always best for student.

(2) As soon as action has been taken on the above motion or some related substitute motion, each subject matter area should meet and construct a curricular plan for circulation by mail to the faculty. Each plan must be one for which faculty resources are presently available.

The meeting on Wed., Jan. 26 can then be used to discuss some or all of these plans. If necessary, one more meeting no later than Wed., Feb. 2 can be held to finish this. Chairpersons and graduate student members of the ad hoc curricular committees (see Ex. Com. minutes of 9/20/76) are:

Committee	Chairperson	Grad. Student Members
Botany	Rogers	Maggie Lindeberg, Charles Olmsted
Microbiology	Segal	Bruce Edwards
Ecology	Windell	Earl Byron, Melody Serena
Animal Physiology	D. Norris	Kevin Fitzgerald
Genetics	Y. Linhart	Charlie Fuenzalida, Joe Beckman
Behavioral Biology	M. Bekoff	Bruce Byers
Special Animal Taxa	Smith	George Angehr, Steve Telleen
Taxonomy	Rogers	?
Others????		

Whenever possible, each committee's report should suggest teaching responsibilities as well as courses to be offered.

(3) Dave Norris can then meet with individual faculty members to prepare a "master plan" for submission to the College of Arts and Sciences before Feb. 10.

TO: EPO Biology Faculty, Ron Duke, and Elizabeth Owen

FROM: D. W. Crumpacker DWC

SUBJECT: Additions to EPO Biology Faculty

Dr. David Rogers
Hale 114

DATE: January 13, 1977

At present we have 31½ regular faculty members. This includes Pat Webber, Harvey Nichols and Jim Wilson (½ time) who are financially rostered in INSTAAR and IBG through the Graduate School. We are on record with the Administration as needing a "steady-state" faculty size of 37 in order to (a) reduce our number of student contact hours to a level nearer that of other major science departments on campus, (b) reduce the student-teacher ratio in our upper division courses, and (c) offer the array of courses we believe necessary to cover the domain of EPO Biology.

We are currently advertising two positions, a General Biology Coordinator (closing date Jan. 31) and an Entomologist (closing date Feb. 21). We have been given permission to hire at least one of these. I believe we can make a strong case for both, but as usual time is short and critical. As soon as it is clear that we have a good list of quality candidates for both positions (by Tues., Jan., 25?), we should press Dean Briggs and the upper echelon for interviewing and hiring permission. This means the two search committees must maintain almost a daily assessment of the situation. Perhaps we can go to the Dean before Jan. 25.

We are also on record with the Administration as needing a Phycologist. If we are allowed to hire both the General Biology Coordinator and the Entomologist this semester, I will press for permission to advertise the Phycology position in September.

Our former course in Vertebrate Embryology is now cross-listed with MCD Biology and taught by Meredith Runner. When Meredith and eventually Bruce Criley left our Department, we effectively lost the FTE designed to take care of Embryology. Meredith no longer wishes to teach Vertebrate Embryology. In a recent meeting of Meredith, Howard Berg (Chairman of MCDB), Anne Bekoff, Dean Briggs and me it was noted that MCDB believed the FTE associated with Embryology belonged in EPOB and that we should be encouraged to seek such a person. This problem cannot be delayed because Meredith will be on sabbatical next year. The most efficient thing would be to hire a new EPOB faculty member to teach Embryology beginning next year. However, Anne Bekoff would be willing to assume this responsibility, since it is the area of her Ph.D. training and an important aspect of her current research interests. Obviously, she would then like to be relieved of her teaching duties in Comparative Vertebrate Anatomy. Considering all of this, I suggest we ask Dean Briggs for permission to do one of the following:

1. (a) Advertise in Sept., 1977 for a Phycologist and an Anatomist, Embryologist or etc. (i.e., some one who can give us the added resources to teach both Comparative Anatomy and Vertebrate Embryology, the eventual arrangement depending on the desires and capabilities of Anne and the new person), both to join the Department in Sept., 1978.

(b) Advertise immediately for a temporary person who will give us the resources to teach both Comparative Anatomy and Vertebrate Embryology in 1977-78 while Meredith Runner is on leave.

OR

2. (a) Advertise in Sept., 1977 for a Phycologist to joint the Department in Sept., 1978.

(b) Advertise immediately for a temporary person who will give us the resources to teach both Comparative Anatomy and Vertebrate Embryology in 1977-78 while Meredith Runner is on leave.

(c) Advertise in Sept., 1978 for an Anatomist, Embryologist or etc. who can give us the added resources to teach both Comparative Anatomy and Vertebrate Embryology beginning in Sept., 1979. (Meredith has said he would be willing to teach Embryology one more year, viz., in 1978-79, if he has to.)

(Note: By adding new positions to our faculty in General Biology, Phycology and Anatomy, Embryology or etc., we will have moved to a total of 34½ FTE's, only 2½ from out steady-state goal of 37.

If the University permits us to hire only one person this spring, we will then have to decide on the General Biology Coordinator or the Entomologist. The one that is not chosen would then have to be fitted into our remaining sequence of priorities which I would suggest as:

(1) General Biology Coordinator or Entomologist
(2) Phycologist
(3) Anatomist, Embryologist or etc.

I agreed at the previously mentioned meeting with Briggs, Berg, Runner, and Bekoff to bring some sort of plan concerning the Embryology situation to Dean Briggs by Feb. 1. Since we have other pressing matters to concern ourselves with as soon as school starts (promotions to Full Professor; upper division curriculum, core curriculum, and next year's teaching assignments; summer session visitor assignments; decisions on Gen. Biol. Coordinator and Entomologist applicants followed by interviews; and space for the new faculty), I suggest we make an attempt to settle the issues in this memo by mail.

Please phone in your comments, suggestions, criticisms, etc., to Mrs. Owen no later than 5 pm on Tues, Jan. 18. If your responses are overwhelmingly supportive of the plan suggested in this memo, I will transmit it to Dean Briggs. If there is not strong support, we will have to schedule a meeting to settle things. That meeting will be held from 12 noon to 1:00 p.m. on Wed., Jan. 19 in Hale 302.

If our new FTE business is settled by mail, the noon meeting on Wed., Jan. 19 will deal either with the curriculum or promotions to Full Professor. Under any circumstances, it will be necessary to meet again from 3:30 to 5:00 p.m. on Fri., Jan. 21 in Ramaley 216 to continue the curriculum and promotion items.

Hope you had a good vacation. You are going to need it. 10-4

EPO Biology Faculty Meeting
December 13, 1976

Present: A. Bekoff, Bernstein, Bonde, Bye, Carey, Crumpacker, Cruz, Grant, Gregg, Hall, Jones, Lewis, Linhart, Mitton, C. Norris, D. Norris, Pollock, Rogers, Segal, Shushan, Smith, Snyder, Webber, Windell, Winston

Absent: M. Bekoff, Bushnell, Marr, Nichols, Shulls, Williams, Duke (graduate student representative); on leave: C. Bock, J. Bock, J. Wilson.

1. Announcements

   a. Crumpacker congratulated the Christmas Party Committee for a successful presentation.
   b. Crumpacker asked whether anyone would like to debate a Dr. Geiss from the Bible Institute on evolution versus creation at Western State College in Gunnison.
   c. Crumpacker reminded faculty of the memo on course evaluations - only new courses (including 102 & 202) and a few others will be evaluated in the spring.
   d. Cruz brought the faculty up-to-date on the Boulder Creek Cottonwood Grove property. Persons interested in the property should contact Cruz about seeing it, as the city is planning to run a water pipe just to the north of the property. Crumpacker brought the faculty up-to-date on the status of acquiring the property. The acquisition is presently bogged down by problems which have developed in dealing with the principal owner. Crumpacker said he was hopeful that the matter could be settled reasonably soon.

2. Crumpacker asked that continuation of the discussion on promotions to Full Professor be postponed until the 1st meeting after Christmas break.

3. Upper division curriculum

   Crumpacker turned the floor over to D. Norris to initiate discussion on the upper division curriculum. D. Norris suggested an outline of the curriculum as shown below. (page 4)

4. Suggested additions and changes

   a. Bernstein suggested that an elementary Statistics course at the sophomore level be included.
   b. Segal suggested adding a course in History of Biology.
   c. Segal suggested that each specialty area prepare a detailed sheet for its area to complete the general format presented at this meeting.

5. Crumpacker left to attend a monthly luncheon meeting of department chairpersons with the Chancellor. D. Norris took over as presiding officer.

6. J. Windell moved to adopt the

   Prin. Ecology → Adv. Ecology → Applied Topics

   Ecology alternative and to eliminate the other 3. (Bernstein seconded). Furthermore,
   a. Prin. Ecol. would be a large course without a lab, and
   b. Adv. Ecol. courses would be a series of small enrollment courses,

many of which would have labs.
c. Vote on Windell motion:

19 yes; 0 no; 1 abst. Motion passed.

7. Segal presented the current Microbiology offerings and proposals for future offerings. These proposed offerings will be summarized by Segal in a forthcoming document. He pointed out that it would not be possible to adopt additional courses without additional faculty.

8. Grant suggested that the second level be restricted to:
a. Prin. Microb.
b. Prin. of Ecol.
c. Genetics
d. Physiol. (Plant and Animal)
e. Behavior
f. Systematics and Taxonomy (Plant and Animal)

9. Smith suggested that Morphology - Anatomy be offered as a 7th category and that Physiol., Systematics and Taxonomy, and Morphology-Anat. each have two lines (Plant and Animal).

10. Jones suggested that Vertebrate and Invertebrate Zoology be added to the list.

11. Grant moved that the 9 course offerings (i.e., Grant's a thru f, Morphology-Anat. Vert. Zool., and Invert. Zool.; with the Plant and Animal dichotomies suggested by Smith) be established as the sophomore course listing and serve as prerequisites for their respective advanced courses (Rogers seconded).

12. C. Norris moved to amend the motion to omit Invertebrate and Vertebrate Zoology (Linhart seconded).

13. Linhart withdrew his second but then Winston seconded.
Call for question :
18 yes; 0 no; 0 abst.
Question called
Vote on C. Norris amendment:
7 yes; 9 no; 2 abst.
Amendment failed.

14. Gregg moved to amend Grant motion to delete Behavior (seconded by Shushan).
Linhart called question (A. Bekoff seconded).
Vote on question:
10 yes; 5 no; 2 abst.
Vote on Gregg amendment:
5 yes; 12 no; 0 abst.

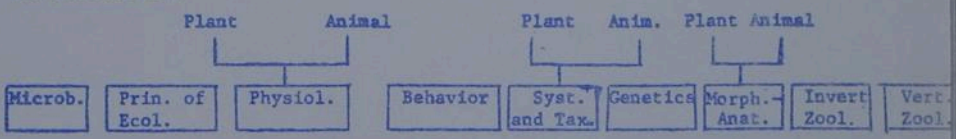
15. Carey called question on Grant motion. (Windell seconded).
D. Norris chose not to recognize the call for question.

16. Rogers moved to table the Grant motion. (Shushan seconded). The vote was: 8 yes; 9 no; 0 abst. Motion failed.

17. Jones called for question on Grant motion that there will be the 9 specified courses with certain Plant and Animal dichotomies at the sophomore level (Lewis seconded).

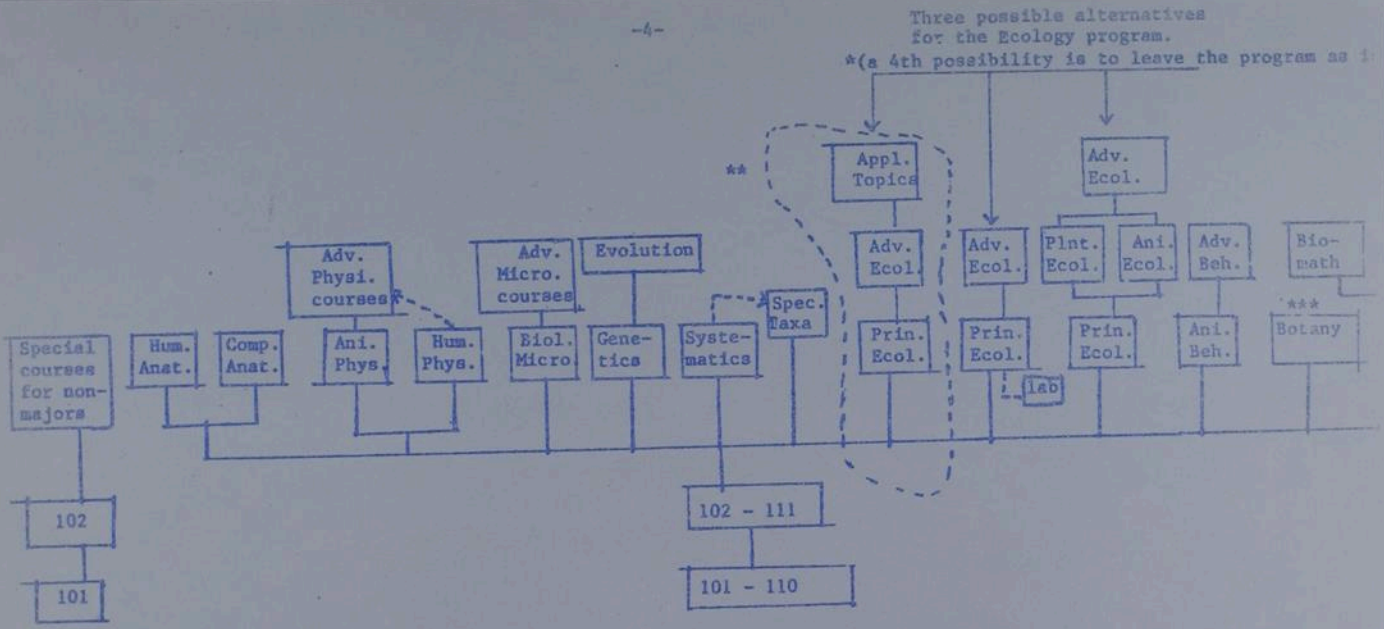
Vote on motion:
13 yes; 1 no; 0 abst.
Motion passed.

The courses are:



Respectfully submitted

G. K. Snyder



* The present Ecology sequence offers Prin. of Ecol. as a terminal course and Plant Ecol. and Animal Ecol. as the courses which lead to the advanced Ecology courses.

** This pathway was subsequently adopted to the exclusion of the other three (see the minutes).

*** Botany not detailed (Included in Botany are Plant Physiology, Plant Morphology, Plant Taxonomy and possibly other courses such as Plant Ecology).

D. Rogers

EPOB Faculty Meeting - 12/8/76

Present: A. Bekoff, Bernstein, Bonde, Bushnell, Bye, Carey, Crumpacker, Cruz, Grant, Gregg, Hall, Jones, Lewis, Linhart, Marr, Mitton, C. Norris, Pollock, Rogers, Segal, Shushan, Smith, Snyder, Williams, Windell, Winston, Duke (Graduate Student representative).

Absent: M. Bekoff, Nichols, D. Norris, Shulls, Webber; on leave: C. Bock, J. Bock, Wilson.

1. Announcements.

   a. Cruz reminded members of the General Biology Coordinator Search Committee of their meeting today at 2:00 pm in Ramaley 211.

2. Windell proposal.

   a. Crumpacker reintroduced the Windell motion made at the Dec. 6 meeting that the two General Biology lectures courses be 3 credit hours each and the two General Biology laboratory courses be 1 credit hour each.
   b. After a short discussion Jones called for the question and Grant seconded. Vote: 18 yes; 2 no; 0 abstentions.
   c. The vote on Windell's motion was then:
      21 yes; 1 no; 1 abstention
      Motion passed.

3. Hall's and Lewis' proposals for General Biology content were discussed. They are as follows:

   a. Hall's proposal

   101
   i. physical-chemical background to origin and evolution of life
   ii. molecular & cellular biology
   iii. developmental biology & cell physiology
   iv. genetics and populations genetics

   102
   i. Principles of systematics
   ii. Evolution
   iii. Anatomy & physiology of adaptations
   iv. Behavior & Plant responses
   v. Ecological cycles and energy flow
   vi. Evolution of ecosystems

   110
   i. Protozoa - cell theory - life properties
   ii. plant & animal structure and organization
   iii. enzymes
   iv. photosynthesis & respiration
   v. mitosis & meiosis

   111
   i. library
   ii. plant & animal taxonomy
   iii. muscle physiology
   iv. behavior
   v. plant hormones
   vi. "outdoor" ecology

b. Lewis' proposal.

101		102
i. Historical perspective		i. Physiology of organisms
ii. Evolution as a common theme	½ sem.	ii. Ecology
iii. Biology of molecules		iii. Behavior
iv. Biological kingdoms - overview		iv. Survey of the Biota
v. Enzymes	½ sem.	(1) Systematics
vi. Origin of life		(2) Adaptation
vii. Transport in cells		(3) Life histories
viii. Cell structure & function		
ix. Photosynthesis & respiration		
x. Mitosis & meiosis		
xi. Gametogenesis		
xii. Life cycles - general		
xiii. Genetics		
xiv. Gene regulation		
xv. Human sex		
xvi. Development - plant & animal		

110-111
The lab will follow the lecture sequence, but individual lab experiments will lag behind the lecture materials. One-half of the 111 lab would also be devoted to the survey of the biota.

c. After considerable discussion, Snyder moved to adopt the general format of the Hall sequence. Bonde seconded. Rogers called question. Jones seconded.
Vote: 17 yes; 3 no; 1 abstention
Vote on motion: 4 yes; 15 no; 2 abstentions
Motion failed.

d. Cruz moved to accept the general format of the Lewis plan. Linhart seconded. The intent of the motion was to adopt the essence of the Lewis plan not necessarily the precise order. Crumpacker requested that the question be called. There was general agreement.
Vote on question: 18 yes; 2 no; 0 abstentions
Vote on motion: 17 yes; 3 no; 1 abstention
Motion passed.

4. Crumpacker called a general faculty meeting on Monday from 3-5 pm in Ramaley 216. The agenda will probably include discussion of the Upper Division curriculum and of the candidates for promotion to Full Professor.

Respectfully submitted,

G. K. Snyder

No Executive Committee meeting was held on 11/22/76.

Executive Committee Meeting - 11/29/76

Present: M. Bekoff, Webber, Crumpacker, D. Norris, Smith, Bonde, R. Duke (Graduate Student representative)

Absent: none

(1) "Controlled-environment facility" proposal went into NSF. Amount requested was $179,570 plus a contribution of $25,000 agreed to by the University if NSF funding is obtained.

(2) Philip Wieser has unilaterally resigned his position of Professor Adjoint as of Dec. 1, 1976.

(3) The Science Librarian, Dick Morehouse, has informed us that circulation of journals to Damaley and Hale prior to their general circulation will cease at the end of this semester. Webber suggested that the library xerox tables of contents from relevant journals and circulate those to the Department in the future.

(4) Summer school offerings for 1977 will be the same as for summer 1976. We need visitors to teach EPOB 202, 341, 383, and 443/542.

(5) When outside letters are solicited for promotion we should make certain that the writer indicates whether or not he wants access to the letter to be withheld from the candidate. Our policy must be clearly stated. Candidate should be told whom we have contacted and be allowed to comment on the persons contacted.

Ideas about confidentiality should be investigated. Does the Freedom of Information Act imply that the letters have to be open unless the person to whom they pertain waives this right?

(6) Minority reports on personnel recommendations should be transmitted to chairperson before he or she sends recommendation to Dean. (The right to submit a minority report is not to be denied).

(7) Replacement for Bob Gregg was discussed.

(8) General Biology program was discussed with respect to Bill Hall's memo.

(9) We need to determine General Biology curriculum before considering the upper division curriculum. After these decisions we can project our teaching responsibilities for several years. All of this has to be finished soon.

(10) Howard Berg, Chairman of MCDB, has sent Crumpacker 2 memos as follows:

(1) M. Runner has requested sabbatical leave 1977-8. We (and MCDB) will need someone to teach Embryology in spring, 1978. Anne Bekoff was designated to confer with Howard Berg about the choice of a replacement who will represent EPOB's interests in the course.

(2) MCDB is interested in reviving at least some aspects of the Division of Biological Sciences. Executive Committee agreed that this should be encouraged. Crumpacker will visit with Berg about this.

(11) Continuing Education has requested that M. Denham teach EPOB 102 in mini-college in Spring of 1977. This should be evaluated and approved by our faculty.

Respectfully submitted

Marc Bekoff

Executive Committee Meeting - 11/15/76

Present: M. Bekoff, Crumpacker, Webber, Duke (Graduate Student representative), Smith, Bonde, D. Norris

Absent: None

(1) Graduate student enrollment was discussed. Future TAs, limitations on numbers, etc. will be considered by the Graduate Program Committee. The Graduate Committee will also consider exam procedures, criteria for admission, and other procedural matters.

(2) The controlled-environment facility may cost $179,000 (to be requested from NSF). The University has been asked for a $25,000 contribution towards this total, if funded by NSF, plus one full-time staff person and one 1/4-time hourly helper to maintain the facility.

(3) Renovation of Ekeley East will cost about $95,000, and bids are being prepared for $70,000 of this.

(4) Council on Research and Creative Work is requesting nominees for the two 1977-78 University Faculty Research Lectureships.

(5) College of Environmental Design has 2 biologists and they may be hiring more. The associated problem of their new Algologist and her teaching desires was discussed. Crumpacker will discuss the matter further with Dean Briggs and Spencer Havelick of Environmental Design.

(6) Summer school offerings for 1977 have to be organized and submitted to Dean Sawin for approval.

(7) Bill Hall asked for a temporary General Biology Advisory Committee on which to try out some of his reorganization ideas. Crumpacker appointed Carey, Bye, Linhart, Crum, and D. Norris for this purpose.

(8) Graduate students need a typewriter and a phone for their use in Ramaley. M. Bekoff moved that the Department provide a room in Ramaley for graduate students with a typewriter and 1 phone. Webber seconded.

a. Discussion on motion: Typewriters and phones in Ramaley office should not be used by graduate students or undergraduates. Faculty should use typewriters only if one is not in use and with secretary's permission. Use of phones should be limited.
b. Phi Sigma library should be re-located to Ramaley since Hale 302 is presently used for faculty meetings and as a general purpose classroom.
c. There is a need for a lounge for faculty and graduate students.
d. Our departmental funds are very limited.

Bekoff's motion passed by a vote of 5 yes to 0 no. The matter will now be taken to the faculty

(9) Question of whether graduate student representative should be at faculty meetings in which discussions on personnel decisions are held was discussed.

(10) Bonde suggested that EPOB charter be brought to each meeting so as to be available as a reference if needed.

(11) Olwen Williams' letter concerning promotion, tenure, etc. was discussed. Discussion followed. Crumpacker will send out Chancellor Berry's memo concerning promotion etc. to all faculty.

Respectfully submitted,

Marc Bekoff

TO: Faculty of EPOB
FROM: Charles Norris
SUBJECT: New calculator & computer capabilities

June 27, 1975 JUN 27 1975

Professor David Rogers was able to persuade administrative officers to utilize a part of his lapsed salary (since he is being paid thru FAO-UN) to provide 3 excellent statistical calculators and two computer terminals. One calculator is located in Hale 108 and two in Ramaley 18. Computer terminals will be installed in those two rooms a little later.

The calculators are programmed for quick statistical calculations - standard deviation, mean, standard error of mean, Chi^2, Poisson distributions, etc, etc. A manual is available in each room.

Next week, Room 18 of Ramaley will have its lock changed so that the key for Ramaley 111 (which all Ramaley faculty have) will fit. When using the Ramaley machines, if you open windows, be sure to close them when leaving. The machine cost $615.00 each!

Of course your grad students may use these, but be sure they understand the need for security and for care of the machines. They don't need them for simple arithmetic.

Dr. David Roger
Hale 114

JUL 07 1975

MEMO TO EPO FACULTY

From: D.J. Rogers, Olwen Williams, Bill Lewis and Jeff Mitton.

Subject Faculty/student needs for computing services in teaching/research.

1. A committee was appointed by Dr. Norris to contact each faculty member to determine needs for computer-aided work in their courses and unsponsored research related to teaching.

2. The Computing Center CDC 6400 and the IBM 370-145 administrative machine may both be used where needed (though the latter machine on a more restricted basis) for purposes that are shown to be related to the teaching function of the Department, both undergraduate and graduate, for courses now in the schedule, or other proposed, or being taught in an experimental mode. The type of computing services can vary from time on the machine to advice on program development, and restricted amounts of assistance from the Computing Center in teaching classes.

3. The Department must submit a request for these funds (the exact amount to be later determined, but considerably enlarged over this year's allotment). The members of the committee, named above, will be contacting you for your needs. Please be as specific as possible as to the type of use you expect, or would like, whether computer-aided instruction simulation, or analysis techniques, in ecology, or physiology, taxonomy, etc. For example, "an analysis of environmental niche breadth" or "development of keys for taxonomic purposes," or "simulation of animal behavior patterns", or "cluster analysis of taxonomic or ecological data", or any other requirement that you can specify. We prefer that you write down a description of your needs.

4. We have a golden opportunity here, and your responses form the back-bone of our request. You must have your replies in by the end of July. Thanks for your cooperation. Call me or any member of the committee for any further details.

Rogers

MAY 22 1975

FACULTY	CURRENT GRAD STUDENTS			NEW 1975 GRAD STUDENTS	
	Name	Date Enter	Degree	Name	Degree
BEKOFF	DIAMOND	1974	MA-PHD	BERGER	PHD
	VINCENT	1973	MA	PFEIFER	PHD
BERNSTEIN	DUKE (.5)	1973	MA-PHD	SERENA	MA-PHD
BOCK, C	CROCKETT (.5)	1972	PHD Sp 75		
	HADOW	1969	PHD		
	HUBBARD	1971	PHD 75		
	KIRVIN	1973	PHD		
	LEPTHIEN	1969	PHD 75		
	McKNIGHT	1970	PHD		
	PETERSON, T.	1974	MA-PHD		
	STACEY	1973	PHD		
	THOMPSON	1974	MA-PHD		
BOCK, J	DART	1974	MA-PHD	JOLIS	MA-PHD
	ECKERT	1970	PHD 75		
	LUPO	1974	MA		
	MATSUSHITA	1973	MAII 75		
	PETERSON, S.	1970	PHD		
BONDE	LINDEBERG	1974	MA	LARKIN	MA-PHD
	MIELINIS	1974	MA	PEARD	MA-PHD
BUSHNELL	BRYCE	1961	PHD 75?		
	BURFORD	1965	PHD 75?		
	ELLSWORTH	1970	PHD		
	ELRICK	1965	PHD 75?		
	KASTER	1975	PHD		
	KODADEK	1971	PHD		
	WEEKS	1969	PHD		
	WILLIAMS	1971	PHD		
CRUMPACKER	ANDERSON (.5)	1971	PHD Sp 75	MERCER	MA
	BYERS	1975	MA-PHD		
	BYRON, P	1974	MA-PHD		
	FAIN	1974	PHD		
	GARFINKLE	1973	MA-PHD		
	HATCHELL	1969	PHD 75?		
	SPUHLER	1970	PHD		
CRUZ	CONRY	1974	MA-PHD	McCALLUM	MA
	JOHNSON	1974	MA	WESTLYE	MA
	MITCHELL	1974	MAII		
GRANT				KNOWLES	MA
				HALFPENNY	PHD

FACULTY	CURRENT GRAD STUDENTS			NEW GRAD STUDENTS	
GREGG	CONWAY	1966	PHD 75?		
JONES	FITZGERALD	1973	MA	PAUL	MA
	LACREEK	1970	PHD Sp 75		
	ROTH	1970	PHD Sp 75		
	SEDGELY	1969	PHD 75?		
	SPENCER	1973	PHD		
	TOKARZ	1974	PHD		
LINHART	ANDEHR	1974	MA		
	DUKE (.5)	1973	MA-PhD		
	MENDENHALL	1972	PHD		
LEWIS	BYRON, E	1974	MA-PHD	SAUNDERS	PHD
				UNDER	MA
MARR	BOYCE	1972	PHD		
	BUCKNER	1973	PHD		
	BUNIN	1970	PHD Sp 75		
	GIESE	1970	PHD		
	JOHNSON,D	1971	MA		
	MoARTHUR	1972	PHD		
	OLMSTEAD	1973	PHD		
	RIGOS	1969	PHD		
	STEWARD	1975	MA-PHD		
	TRAMMEL	1964	PHD		
MITTON				HECKMAN	MA
NICHOLS					
NORRIS, C.	ATHEY	1974	MAII		
NORRIS, D.	CARL	1973	PHD		
	GERN	1973	PHD		
	SNOW	1970	PHD		
ROGERS	ABBOTT	1974	PHD		

FACULTY	CURRENT GRAD STUDENTS			NEW GRAD STUDENTS	
WINDELL	FOLTZ	1974	PHD	HAMANN	MA
	SAROKON	1971	PHD Sp 75		
WINSTON	EPP	1973	PHD	BEIDAS	MA
	HEPPE	1974	MA	BUCHANAN	PHD
	HOFFMAN	1973	MA	TRAINOR	MA-PHD
	KOSAREK	1974	MA-PHD		
	SIMON	1974	PHD		
	SPANGLER	1975	MA		
	SUDMAN	1970	PHD		
WEISER	O'DONNELL	1974	MA		
	PHILLIPS	1974	MA		
	SMITH	1974	MA II		
	STAMPER	1974	MA		
	ZIMMERMAN	1974	PHD		
MISC. FACULTY					
COLLINS	PANTER	1972	PHD		
HANNON	DEBEAUBIEN	1971	MA		
	GRAY	1969	PHD 75		
KREBS	GROENEVELD	1974	MA		
PENNAK	COHEN, D.	1969	PhD 75		
	MYCHENER	1970	PHD		
WEBER	KUNKEL	1973	MA		
???	HEAD	1973	MA-PHD		
	GALLAND	1973	?		

To Carl Bock (copy to Wilson Crumpacker)

From: Dave Rogers

TO: MPOB Faculty

FROM: Ad Hoc Performance Evaluation Committee (C. Bock, Chm.)

SUBJECT: Criteria for Evaluation (PLEASE RESPOND!)

Only 3 faculty responded to our first call for opinion and evaluation criteria. Results of the three important questions are as follows:

1. Time Period: 1 year plus exceptional circumstances.

2. Weighting: Teaching - about 2/5
Research - " 2/5
Service - " 1/5

3. Should Impact statement work - be service or Research?

Research: 1
Service: 7

On the following pages are the criteria for merit which we and you came up with. Please indicate for each criteria whether you think it is 1) very important, 2) important, 3) only slightly important, or 4) not important.

See attached comments.

I. Criteria for Research & Scholarly work: (order of items is random)

Separate # from quality

1. Number and quality of scientific publications
2. Number and quality of books published or partially written (documented)
3. Number and quality of book reviews written
4. Number and quality of papers presented at meetings
5. Number and quality of invited papers at symposia
6. Quantity and Quality of Ongoing research projects (documented)
7. Quantity and Quality of current grants & contracts
8. Development of instructional innovations
9. Curatorial work (documented)
10. Letters from colleagues outside university
11. Chaired meetings, symposia, etc.
12. Collecting and field surveys
13. Extensive travel -

Computer programs for biological application.

Applications of (or team) individual R+D by others
a) colleagues in university
b) state institutions and individuals
c) national organizations
d) international organizations

II. Criteria for Evaluation of Service

A. Departmental
1. Number of advisees
2. Dept. Committees (listed) - How many chairmanships
3. Guest Lectures in other's courses
4. Departmental Administration

Add → Assistance to Departmental Faculty + Students

See comments

B. University
1. University Committees (Chairman?)
2. Faculty council, Senate, etc.
3. Representation of Dept. at University Functions
4. University Administration (e.g. Director of an Institute)

→ or ofa

C. Outside Service

1. Number of Impact Statements and other consulting - related documents
2. Lectures or talks given to the public
3. Editorial work
   reviewing
   editing
4. Committee work (e.g., NSF, Science Fairs, etc.)
5. Number and quality of articles in non-professional magazines, etc.

III. Criteria for Evaluation of Teaching

We received no clear or concensus opinion from the people who bothered to reply to our first offering. Since the University requires undergraduate evaluations, the questions, then, are:

1. How important should these evaluations be for merit?
2. Should we accpet the current form (perhaps suggesting modifications to the administration), or should we develop our own form?

Next, what other forms of teaching evaluation should be use?

	Yes	No
1. By the Chairman		
2. By the Faculty*		
3. By the T.A.'s		

*Perhaps a (nigh) committee to visit classes, etc.?

Dear Carl:

Here are some comments that probably should have been delivered to you sooner, but I hope they can still be considered. Under Category I--Criteria for Research and Scholarly work. I suggest that there be an addition in the title itself, "development" to read Research, Development and Scholarly work. This is true because much of the work of computer-aided efforts for biology come under the heading of development, after a research effort has been made, there is still much work to be done to develop that research into practical, operating programs that actually carry out the desires of the user. Much of my effort is in this area, but without research, the development would be sterile, and vice versa.

Another good criterion for judging the scientist's efforts is in the category of application. Very hard to judge in certain aspects, quite simple in others. The question to be answered is "Who uses it?" One way to find out is to use those publications that print citation indices for published work. Another way is to find out whether allied disciplines as well as the individual's own make use of the individual's efforts. One can categorize such as applications by (a) one's colleagues in the University, (b) in the state (both individuals and institutions) (c) national, and (d) international.

In the service area, II. Criteria, the only comment that I make is that the service category quickly bleeds over into both research and teaching, and therefore to give it less emphasis than research and teaching is to do a disservice to the individual. Example from my own experience come to

primarily concerns itself with the curriculum that the Department will be teaching--without good knowledge of the teaching functions and requirements within and outside the department, such a function is sterile.

I note that II. A. 3. (guest lectures) is considered as a service, and perhaps one-shot jobs may be so considered, but is it not as well a teaching function? Further, and more significant, if I (or members of my research team ~~under my instructions~~) provide assistance ~~in~~ to faculty and students in making both teaching and research more efficient, or more modern, and hopefully both, is this not considered as teaching and research? Neither faculty nor students would have the capability to carry out the work alone, and so I feel very strongly that anyone of our faculty who work this way should not be penalized by a service score that is less weighted than the other two areas.

With respect to III. Criteria for Evaluation of Teaching, there seems to me a duplication of effort (or maybe not a valid paper to be included) is made by evaluation and an annual report of doings. We fill out such a report each year, but I don't know that that paper gets any emphasis when it comes to evaluation for merit.

But there is another comment that I want to throw in, for what it's worth--many of the evaluations of the individual are made on factors that are more departmental than individual. For example--student load. I believe the effort to get every faculty member into the act with the introductory courses is representative of meaning in this context. It wasn't the fault of an individual that the contact hours were low, as long as the faculty did not organize itself to allow the

individual to participate. Likewise, it is not the faculty member's fault if the curriculum is so set up to feed lots of students in one direction, and not in another. Popularity of one course over another is a damned poor way to set up a curriculum. Again, the faculty must, as a collective body, be certain that it isn't all members fault, rather than a single member's fault.

Lastly, I think the chairman is about the only one who gets all the bits and pieces that should go into the evaluation. That is, the chairman must have gained more experient about the faculty than any other one person. Certainly the chairman is going to get as much advice from whatever resource he feels needed, but it is he who simply has to put it all together. And, he must know something about the past so that he has some context for judging the present. For example, I have received half-pay ~~xx~~ or no pay from the institution for all but two years of my presence here, and yet I have certainly participated in the department's activities in all directions more than should have been expected for that monetary committment shows. I know that such was not really considered when I was evaluated last year. But the chairman should know this, and use it as a criterion. Furthermore, my own feelings about obligations to graduate students were never given an airing, but should have been, in consultation with the chairman. It is not the problem for every other member of the faculty, who have their own interests and directions, to know about such matters and it is only the chairman who should have to carry such burdens. These can frequently only be [illegible] to the Chairman, and should be done each year. I have been in other institutions where

This was done, and is a pretty good model.

On class visits, that is so fraught with problems that I can see no means by which it can be accomplished. Just the presence of visiting faculty members with pencil in hand jotting down some point or other is enough to cause some people to completely change the style of presentation. Rather than talking to the student, the observed faculty member may try to pitch his discussions to the faculty observer, and then, when the visitor departs, revert to an entirely different style. I once proposed that a dean visit my classes to give me feedback to help improve my teaching, but that dean (who was one of the finest administrators I have ever had the pleasure to know) was so shocked that I should ask for that that he threw up his hands saying that there is no way to evaluate a teacher, except maybe ten years after the teacher was dead.

- With respect to scoring of each of the items under each criterion, it may sound objective to weight them, but I suggest that this is as subjective (or, better, non-objective) as any other means.
- One may use the items as a check sheet, but hardly as a score card. Remember, this isn't a game of golf.
- Under I - Criteria for R+D -
  Should today consider also computer program development.
  Recall that you cannot copyright a computer program, and anyone may slightly modify it and call it his own - This happened to me, right here at the U. of C.!

Memo to: Wilson Crumpacker

From: D. J. Rogers, Jan. 29, 1976

Subject: File Cabinet

I have exhausted the capacity of my file cabinets (purchased for me in 1967), and need one new one--standard, 4-drawer, 8½ x 11, locked.

Let me know the fate of this request, please.

MAY 19 1975

Minutes from Faculty Meeting held at 5 p.m., May 13, 1975

Present: Drs. C. Morris, D. Morris, Windell, Crum, C. Bock, Marr, Bonde, Lewis, Winston, Williams, Bekoff, Linhart, Jones, Crumpacker, Segal, Wilson, Mitton.

Dr. C. Morris opened the meeting by explaining, in detail, forms that had to be returned by the faculty.

Dr. Windell suggested that we request a fleet (3) of International 4 wheel drive vehicles to serve all of the courses scheduling field trips. This point was discussed briefly, was met with some opposition, and was dropped until more information was acquired.

Nominations for the executive committee were as follows:

Jones	Bonde
Lewis	Bushnell
J. Bock	Bekoff
C. Bock	Linhart
Cruz	Mitton
Shushan	

Chosen from this list of nominations were Drs. C. Bock, Jones, Lewis, and Linhart.

The remainder of the meeting was occupied by Dr. Windell's presentation and explanation of the content and objectives of Biology 101 and 102.

The meeting adjourned at 6:25 p.m.

Respectfully submitted,

Jeff Mitton.

Dr. David Rogers
Hale 114

Rogers MAY 14 1975

To: The Faculty of EPOB

Report of the Cirriculum Synthesis Subcommittee of the Development Committee
Rogers, Segal, Windell, Winston

This is a preliminary report in a way because we are writing up more material for the Proposal for the new building. Here are the proposed course changes and substitutions, the new courses, and those we recommend to be dropped. This last category is probably too small, and we feel strongly that the department should begin to look at the total number of courses offered with an eye to pruning. More about this later.

In the list of proposed courses we have done some juggling - partly for P.R. purposes, especially in terms of what substitutes for what. First, please don't begin by berating us - it will do no good. Second, try to look at the overall picture and try to see how things fit or don't fit into a picture. All of this is open for discussion and change, and we hope the criticism will be constructive.

The big thing still to come is working out some logical "streams" as guides for students and advisors. If you have any suggestions give them to Paul Winston.

The committee has tried to do some revising and some reorganization on the Dept. Cirriculum without making really drastic changes. We have all felt under the gun for a long time to have more of a plan and we are going to have to make some decisions soon to get us out from under, at least partially. Also, we are not going to get enough space and faculty to do it all and we must decide where to cut and prune. In the main no sweeping changes are suggested but we are going to point out places where we feel that the Dept. must do some heavy thinking about what we can and can't afford to do.

First, the major changes will be explained and then we will present other aspects which must be discussed and decided on by the Dept. These are points that have come up from all over and then hashed over by the Committee, sometimes ad nauseum. In the suggested new courses we have not worked out all the details and ask that you not get sidetracked by small points. Let's look at the forest and hold the trees until later. We are going to need agreement (or not) on the broad philosophy of these changes first.

The first big change is to substitute a different course for Biology 102 for the Majors. This would be called 202 (or something else) and be a team-taught survey (possibly 5 hours) of the animals, microbes, and plants. There are several goals for this: (1) to get the students familiar with the major groups of organisms, (2) to give them a feel for the morphological bases of our understanding Evolution, and (3) to give them an introduction to the bases for Systematics. Majors would take 101 and then go into 202. Those who "pass" out of 101 would still take 202. Non-majors would take 102 as a terminal course. An anticipated objection is that those coming in to take courses without being majors would be at a disadvantage, but it seems that this just can't be helped. A student deciding to major after 102 would still have to take 202. There is such a strong feeling in the Dept. that the students need to be exposed to a strong dose of these subjects that this seemed to be the only solution. It is a compromise in that everyone feels that his or her own area surely needs a full semester (or 2) for a full and adequate treatment. It is our feeling that some of this is better than none and that the Principles involved are basically the same no matter what groups are being considered; that it is better given to majors alone rather than to the mixed groups of 102; that more detailed, intensive treatment should be reserved for advanced courses after the kids have had more background in Biology, which would point up to them the needs for this knowledge; and that we cannot require all majors to spend more time on specific areas than this. The advanced courses should then be available for those who need and want them. No one can say we don't have plenty of them.

The course would be team-taught by representatives from all sides of the fence. It is our feeling that this is the best solution to a big problem for us.

THE CORE REQUIREMENTS

The required core for Majors would be much like the present one: General Biology--101 and 202, Principles of Ecology--341, Essentials of Physiology--322, and Introductory Genetics--383. With the change to 202, the students would be introduced to four major fields of Biology, on which the advanced courses can build. See below for the changes in 341 and 322.

Ecology and Populations Biology

The Ecologists and many other interested people got together in the early Spring to try to work out some application of the plan that Carl Bock and others presented for the undergraduate instruction in this field. As four non-ecologists (almost) your committee suggests that there could be more agreement as to what should be done, but we have accepted the compromise that came out of that meeting. It is far from ideal and we would like to suggest that more time be spent profitably by those who are or will be teaching undergraduate courses in Ecology and Populations trying to work out the best pattern and techniques for teaching the undergraduates. For something so important, precious little time has been given to discussion by the group as a whole and we feel that this is necessary. It should not be "wasted time". We are far too large for each person to do just what he wants to do at the undergraduate level.

You all have received Carl's preliminary writeup on this but the final decisions of the group will be given here. A 4-hour course in Principles of Environmental Biology (2 hours of lecture, recitation, and a 3-hour lab). This is to be team-taught with lectures under 200 and labs at 20. The object here would be to present most of the basic principles to the students and "get it out of the way." At this time there is strong criticism that there is too much repetition of these principles from one course to another. Everyone knows that students need repetition, but ecological principles are deceptive in their complexity and it takes a long time for some people to realize this. A large number of small advanced courses has been proposed to get around this problem. These are divided into two groups--Advanced Environmental Biology I which would include the basic subjects and Advanced E.B. II to include the more Applied and technique-oriented areas. These would have a maximum of 20 students, one section, and would allow for real interchange between faculty and students. There would be 1 lecture and 2 labs, illustrating the philosophy that, after the students have been given the Principles, they most need to get into the lab and field and do something. There is agreement among many faculty members that they would be most willing to spend more contact hours this way than in courses with 60-100 students where there is still inadequate contact with the students. There would be no TA's for these small classes but adequate (?) permanent staff to take care of lab preps and the organizational details for field trips. There would be 8 of these courses taught each semester with a listing in the Schedule of the title and instructor. At present, the following have been suggested for these courses with a surplus from which 8 would be picked. This arrangement will make it flexible; faculty will not be locked into one subject but will be able to have some variety in the field.

In addition, Plant Ecology and Limnology will be taught separately with 60 students and 3 lab sections in each.

Advanced Environmental Biology I

Forest Ecology
Grassland Ecology
Tundra Ecology
Vertebrated Ecology
Insect Ecology
Ecology of Flowering Plants
Arctic and Alpine Environments
Microbial Ecology
Stream Biology
Palynology and Environmental History
Ecology of Arid Lands

Advanced Environmental Biology II

Ecology of Water Pollution (with help from Civil Engineering)
Environmental Law (with help from the Law School)
Pesticides and Ecology
Ecology of Natural Resource Management
Environmental Assessment (with help from Engineering)
Ecology of wildlife management systems (possibly with help from CSU)
Biology of fish populations
Applied Environmental Microbiology
Soil microbiology
Aquatic microbiology

Physiology

The proposed changes are less radical than the Ecologists' but there are some. First, the core course would be "Essentials of Physiology." This will be part plant, part animal, and part microbial. This is a large order, of course, but we feel that it can be done effectively. Plant and animal areas will be separated and taught by different people. They are so different that they come together only at the cellular level and this is where the students will get one dose of cell physiology. The cellular aspects will be worked in when they are needed rather than devoting a special section to the subject. An additional lot of cell physiology will come in with the microbial portion, especially certain biochemical aspects.

In this way students can be given a broad slug of Physiology which is not limited to "Plant or "Animal" or "Cell" in their first course. It is the kind of broad approach needed by those for whom it will be the only physiology course. We feel that it would be the best exposure to the subject for the ecologists who need a broader picture of the field than we are giving them now. The Principles and concepts of Physiology, and especially the attitudes of the physiologist can be presented in this way as well as in the more specialized framework we use now.

With this change we would have a separate course in Human Physiology (the name might have to be changed to keep down the numbers of premeds and such). This would be a service course primarily but one still open to selected majors to substitute for the core course.

The Physiology group has attempted to set things up to increase the offerings at the 400-level but in smaller, more restricted classes than are possible now. Cell Physiology would be dropped as such with the idea that the necessary cellular concepts will be introduced into the organismic Physiology

courses as the need for such treatment arises. It will have the added attraction of removing one glaring point that someone reviewing the Program might grasp and belabor, to the detriment of other, more important things. We can give our students what they need without having a course labelled with one of the titles of our sister Dept.

We are suggesting two new courses to contribute to the training of majors for jobs. One would be Techniques in Physiology and Anatomy and would be designed to give the background for working in a research lab. It would include for example, an introduction to Microtechnique. Many students want to go out to work in research labs and such; a basic course like this could cut down considerably on their on-the-job training and thus enhance their chances of getting the job in the first place. A second new course would be called Environmental Physiology and would be designed to help those going into areas where the physiological and medical effects of pollutants, drugs, additives, and such have to be evaluated. The people who have been and will be hired by Industry EPA, and other agencies are not going to have Ph.D.'s, (the two men working for the EPA out of Denver on this sort of thing have only B.A.'s) and we can help by giving our undergraduates and M.A.'s some practical background.

Microbiology Cirriculum

The proposed microbiology cirriculum is designed to broaden and integrate course offerings in this area of biological science in such a way as to reinforce the various other disciplines in the Department of EPO Biology. The following proposals are intended to accomplish this goal.

Procaryotic and Eucaryotic Microbiology

1. Expansion of the scope of microbiology by inclusion of all of the unicellular, microscopic organisms, i.e. both procaryotic and eucaryotic microorganisms. Following an introductory survey in the 202 course, it is proposed that the study of these two main groups be divided into a 2 semester sequence. The justification for this proposal is that a common methodology and ecology underlies both groups. Furthermore in recent years there is growing acceptance of the proposal to unite them in a third kingdom, the Protista. The first semester, involving the study of procaryotic microorganisms, would include the following orders: (a) the blue-green"algae", recently given the name Cyanobacteria; (b) the bacteria; (c) the ricketsia, the mycoplasma and the chlamydia, the smallest and simplest of living cells; (d) and the non-cellular viruses, the simplest of biological entities. The second semester would include the study of eucaryotic microorganisms: algae, protozoa and fungi. The present course offerings dealing separately with each of these special tasca would continue to be taught at an advanced level.

Aquatic and Soil Microbiology

2. Integration of microbiology with our expanded ecological program by including in the latter the sub-disciplines of aquatic and soil microbiology. Microbiology has an as yet unfulfilled contribution to make in the development of ecological science.

Infectious Diseases of man, other animals, and plants

3. Integration of the study of infectious diseases so as to include microbial diseases of plants, animals and man. The central theme of this proposed course would be a study of the host-parasite relationship as a unifying

concept, with equal emphasis being placed on the diverse manifestations of this phenomenon. As in the case of the other proposals in microbiology, this course would have to be team-taught. The present courses in Pathogenic Microbiology and Parasitology could be continued at an advanced level. However cnnsideration should be given to the possibility of offering them as separate course sections of a broad course in infectious diseases.

4. Continuation of courses in Microbial Physiology and Immunobiology both to satisfy the needs of majors in microbiology and of majors in related biological disciplines.

5. Expansion of the offerings of advanced seminars in specialized aspects of the field of microbiology.

Quantitative Biology

It has long been obvious that the Dept. needs more mathematical and statistical material for the students (and faculty?). Several new courses have been proposed and we would like to suggest that a required course be set up at the 200 or 300 level comparable to Quantitative Methods in Biology. This could include Statistics, Research Design, Data Storage, and Data Manipulation.

A list of the proposed courses follows with the changes, substitutions and some explanations. If we have left your favorites out, please let us know. Cross-listed courses and those taught elsewhere (e.g. Embryology) are not included, for the most part.

Number	Name	Remarks
101-4	General Biology	for all
102-4	General Biology	for non-majors
202-5	Advanced General Biology	for all majors
219-3	Human Anatomy	a service course
251-2	Introduction to Evolution	for non-majors
283-3	Heredity and Society	for non-majors
300-1	Applications of Medical Technology	
-4	Procaryotic Microbiology	subst. for 301-4, Aquatic Botany 523-2, Algology 554-3, Morphology of Non-Vascular Plants 311-4
-4	Eucaryotic Microbiology	
303-4	Introduction to Entomology	
312-4	Morphology of Vascular Plants	
315-3	Plants and Man	
-4	Essentials of Physiology	subst. for 322-4 (in part), 423-4 (all majors to take this), 321-4 (in part)
-3	Human Physiology	subst. for 322-4 (in part); mostly for non-majors
341-4	Principles of Environmental Biology	some subst. for 443 (in part); all majors to take this

Number	Name	Remarks
383-3	Introductury Genetics	all majors to take this
400/500-3	Teaching Modern Biology	
405-2 406-2 }	Teaching Laboratory Biology I and II	
-3	Parasitology	w/302-3
408-3	Principles of Comparative Vertebrate Anatomy - Lecture (3) and Lab (2)	
411-5 (526)	Invertebrate Zoology	
414-3	Mycology	
418/518-3	Limnology	
421/521-3	Dynamics of Mountain Ecosystems	
422-4	Vertebrate Physiology	
424-3	Introduction to Animal Behavior	
428/528-2	Laboratory in Animal Behavior	
-4	Plant Physiology	was 321-4 - same enrollment
-4	Microbial Physiology (Lecture and Lab)	was 561-3 and 568-2
-4	Comparative Invertebrate Physiology	was 543-3 and 544-3 should be 40/yr.)
-3	Animal Ecophysiology	new course - 40-60/yr.
-3	Plant Ecophysiology	was 621-3; 20-40/yr.
-4	Research Methods in Physiology and Anatomy	new course; should be 40; was 565-3
-3	Applied Environmental Physiology	new course; 40/yr.
-4	Immunobiology	was 549-3 and 550-2
430-4	Classification of Flowering Plants	
431-4	Insect Taxonomy	
432-3	Biology of Amphibians and Reptiles	
433-2	Lab - Herpitology	
434-3	Ornithology	
435-2	Ecology for Man	
436-4	Infectious Diseases of Man, other Animals and Plants	was Pathogenic Microbiology
437/533-4	Mammology	

Number	Name	Remarks
438/538-3	Biometry	
-3	Survey of Quantitative Methods in Biology	was 505-3 (sect. 1)
-3	Problems in Biomathematics	new course
441/541-4	Plant Ecology	
444/545-3	Comparative Endocrinology	
446/537-var.	Biological Field Studies	
451/579-3	Population Genetics	
460/560-2	Advanced Classification of Flowering Plants	
480/580-3	Plant Growth and Development in sterile culture	
483-4	Laboratory Genetics	
-3	Human Genetics	new course
492-1-3	Independent Research in EPOB	
499-1-3	Independent Study	
	Advanced Environmental Biology I	16 of these courses (8 from I and 8 from II) will be taught each year. Max 20 students/class. Animal Ecol. 443-4 is submitted.
	Forest Ecology	
	Grassland Ecology	
	Tundra Ecology	was 522-3
	Vertebrate Ecology	
	Insect Ecology	
	Ecology of Flowering Plants	was 331-3
	Arctic and Alpine Environments	was 345-3
	Microbial Ecology	was 425-3
	Stream Biology	was 611-3 and 429-3
	Palynology and Environmental History	was 476/576-3
	Ecology of Arid Lands	
	Advanced Environmental Biology II	
	Ecology of Water Pollution	was 523-2
	Environmental Law	
	Pesticides and Ecology	
	Ecology of Natural Resource Management	was 517-2
	Environmental Assessment	
	Ecology of Wildlife Management Systems	

Number	Name	Remarks
	Biology of Fish Populations	was 548-3
	Applied Environmental Microbiology	was 201-3
	Soil Microbiology	
	Aquatic Microbiology	
505-var.	Advanced EPO Biology	
506(1-3)	Independent Study EPOB	
507(2-3)	Teaching Advanced Biology	
509-3	Concepts in Behavioral Genetics	
510-3	Avian Communities of Colorado and New Mexico	
511-3	Birds of the World	
512-3	Animal Geography	
519-2	Techniques in Aquatic Biology	
524-3	Tropical Biology and Insular Biogeography	
531-2	Peripatetic Biology	
539(1-3)	Independent Research in Environmental Biology	
-3	Benthic and Aufwuchs Biology	was 613-3
-3	Mammalian Physiology	new course
-3	Plant Nutrition	new course
562-3	Advanced Ethology	
553-3	Developmental Plant Anatomy	
555-3	Lichenology	
564-3	History of Biology	
569(1-3)	Independent Research in Organismic Biology	
573-3	Taximetrics	
575-3	Principles and Practice of Biological Taxonomy	
-3	Simulation and Modelling	new course
582-3	Advanced topics in Populations Genetics	
583-3	Ecological Genetics	
-3	Statistical Genetics	new course
-3	Cytogenetics	new course
-3	Plant Population Biology	new course
-3	Plant Biosystematics	new course

Number	Name	Remarks
599-var.	Independent Research in Population Biology	

Listing of Seminar Courses

Quantitative Ecology	624-2
Seminar in Ecology of Fungi	625-2
Seminar in Polar Ecology	626-2
Seminar in Adv. Insect Tasc.	627-2
Seminar in Adv. Vert. Ecol.	628-2
Seminar in Ecology and Business	629-2
Seminar in Environmental Biology	633-2
Seminar in Comparative Neurophysiology	641-2
Seminar in Environmental Physiology	642-2
Seminar in Endocrinology	643-2
Seminar in Reproductive Biology	652-2
Seminar in Dev. Physiology Concepts	653-2
Seminar in Vistas in Botany	654-2
Seminar in Ecoenergetics	655-2
Seminar in Spec. Topics in Microbiology	657-2
Seminar in Organismic Biology	663-2
Seminar in Ergonomics	664-2
Seminar in Population Studies	693-2
Seminar in Evolutionary Ecology	615-2
Seminar in Ecological Plant Physiology	621-2
Seminar in Reproductive Biology of Flowering Plants	651-2
Seminar in Applied Microbiology	662-2
Seminar in Evolution and Speciation	692-2
Seminar in Ecophysiology of Arctic and Alpine Plants	6__-2
Seminar in Biology of Social Insects	6__-2
Seminar in Microbial Systematics and Evolution	6__-2
Seminar in Research Design	6__-2
Seminar in Advanced Organismic Genetics	6__-2
Seminar in Human Behavioral Genetics	6__-2
Seminar in Plant Evolution and Biogeography	6__-2
Seminar in Physiology of Special Groups	6__-2
Seminar in Advanced Ethology	6__-2

Head Count - EPOB enrollments by majors

JUN 16 1975

Code #	Name	F73	S74	Tot	%	F74	S75	Tot	%	% change (74/75-73/74)
000	?	13	-	13	0.19	0	0	0	0.00	-0.19
011	Dist. Sec. Educ	4	2	6	0.09	1	6	7	0.10	+0.01
016	Elem Educ.	5	6	11	0.16	1	4	5	0.07	-0.09
097	Teacher Certif.	0	0	0	0.00	2	0	2	0.03	+0.03
100	Afr. & Mid East Stud.	0	0	0	0.00	1	0	1	0.01	+0.01
101	Anthropology	31	27	58	0.85	23	29	52	0.74	-0.09
105	Chemistry	35	59	94	1.39	52	37	89	1.28	-0.11
106	Biol w/Educ.	7	8	15	0.22	20	19	39	0.50	+0.34
107	Envir. Conserv.	26	58	84	1.24	94	93	187	2.08	+1.44
108	Dance	4	4	8	0.12	2	4	6	0.09	-0.03
109	Distrib (General)	20	41	61	0.90	29	22	51	0.73	-0.17
110	?	0	0	0	0.00	0	1	1	0.01	+0.01
111	?	0	2	2	0.03	1	0	1	0.01	-0.02
112	Amer. Studies	0	0	0	0.00	0	1	1	0.01	+0.01
113	Economics	2	4	6	0.09	2	5	7	0.10	+0.01
115	Pre-education	38	30	68	1.00	57	29	86	1.23	+0.23
116	?	0	1	1	0.01	1	0	1	0.01	0.00
117	East Asian Stud.	5	4	9	0.13	1	0	1	0.01	-0.12
119	English	17	24	41	0.60	21	22	43	0.62	+0.02
120	EPOB	894	1339	2233	32.92	1380	1173	2553	36.64	+3.72
121										
122										
123	Fine Arts	34	36	70	1.03	61	42	103	1.49	+0.45
124										
126										
128										
125	French	1	4	5	0.07	6	8	14	0.20	0.13

Dr. David Rogers
Hale 114

Code #	Name	F73	F74	Tot	%	F73	F74	Tot	%	%Change (74/75-73/7
137	Geography	13	15	28	0.41	13	13	26	0.37	-0.04
139	Geology	14	17	31	0.46	10	11	21	0.30	-0.16
141	German	3	0	3	0.04	1	0	1	0.01	-0.03
145	History	12	20	32	0.47	24	18	42	0.60	+0.13
148	Humanities	1	2	3	0.04	4	2	6	0.09	+0.05
149	Internat. Affairs	1	4	5	0.07	4	6	10	0.14	+0.07
150	Italian	1	0	1	0.01	2	0	2	0.03	+0.02
151	Pre-journalism	6	11	17	0.25	24	17	41	0.59	+0.34
152	Pre-nursing	111	166	277	4.08	103	156	259	3.72	-0.36
153	Latin	1	0	1	0.01	0	0	0	0.00	-0.01
154	Lat. Amer. Stud.	0	0	0	0.00	1	1	2	0.03	+0.03
155	Mathematics	9	11	20	0.29	23	15	38	0.55	+0.26
156	Jap. Lang. & Lit.	0	0	0	0.00	1	1	2	0.03	+0.03
159	MCDB	89	105	194	2.86	159	118	277	3.98	+1.12
161	Philosophy	5	9	14	0.21	3	7	10	0.14	-0.07
163	Physics	5	4	9	0.13	5	5	10	0.14	+0.01
165	Phys. Educ.	25	26	51	0.75	32	38	70	1.00	+0.25
168		2	0	2	0.03	0	0	0	0.00	-0.03
169	Poli. Sci.	18	23	41	0.60	21	24	45	0.65	+0.05
170		0	0	0	0.00	3	0	3	0.04	+0.04
175	Pre-Pharmacy	36	54	90	1.33	37	50	87	1.25	-0.08
176	Recreation	15	30	45	0.66	27	21	48	0.69	+0.03
177	Psychology	120	166	286	1.22	140	95	235	3.37	-0.85
178	Russian	5	7	12	0.18	2	1	3	0.04	-0.14
179	Sociology	29	32	61	0.90	31	22	53	0.76	-0.14
170	Relig. Studies	2	3	5	0.07	3	1	4	0.06	-0.01
171	Spanish	3	8	11	0.16	16	22	38	0.55	+0.39

Code #	Name	F73	S74	Tot	%	F74	S75	Tot	%	% Change 74/75-73/74
174	Communications	0	0	0	0.00	9	6	15	0.22	+0.22
175	Speech Path. & Aud.	14	27	41	0.60	13	17	30	0.43	-0.17
176	Theater	0	2	2	0.03	4	6	10	0.14	+0.11
176	PreCh. Health Assoc.	10	11	21	0.31	7	10	17	0.24	-0.07
177	Pre-dental	13	22	34	0.50	21	24	45	0.65	+0.15
179	Pre phys. ther.	159	201	360	5.31	108	176	284	4.08	-1.23
178	Pre med tech	91	91	182	2.68	68	60	128	1.84	-0.84
180		261	11	273	4.02	149	1	150	2.15	-1.87
181		122	3	125	1.84	4	0	4	0.06	-1.78
182		12	0	12	0.18	3	0	3	0.04	-0.14
183		14	1	15	0.22	1	0	1	0.01	-0.21
184		0	0	0	0.00	1	0	1	0.01	+0.01
185		32	1	33	0.49	27	2	29	0.42	-0.07
186		11	0	11	0.16	0	0	0	0.00	-0.16
190	Ind. Stru. Maj.	6	6	12	0.18	3	3	6	0.09	-0.09
999	Undetermined	464	482	946	13.90	565	358	923	13.25	-0.65
300's	Business	18	19	37	0.55	32	24	56	0.80	+0.25
300's	Engineering	42	30	72	1.06	27	13	40	0.57	-0.49
300's	Grad (exc. 407)	25	29	54	0.94	10	31	41	0.59	-0.35
300's	Journalism	7	7	14	0.21	6	10	16	0.23	+0.02
300's	Music	6	2	8	0.12	3	4	7	0.10	-0.02
300's	Nursing	2	1	3	0.04	0	0	0	0.00	-0.04
101										
103	Pharmacy	30	66	96	1.42	13	57	70	1.00	-0.42
198										
199	Spec. Grad	20	30	50	0.74	67	48	115	1.65	+0.91
	TOTALS			6784				6967		

Minutes of the faculty meeting, May 20, 1975

JUN 0 9 1975

Faculty present: Drs. C. Norris, D. Norris, C. Bock, Williams, Shushan, Bekoff, Lewis, Grant, Mitton, Crumpacker, Bonde, Windell, Cruz, Linhart, Jones, Winston, Segal.

Dr. C. Norris opened the meeting with an announcement of an anticipated 9% salary raise. Discussion of merit increases followed.

The attention of the faculty was then turned to the consideration of 3 candidates interviewed for an anticipated position in the general field of physiology. Drs. A. Bekoff, D. Crews, and G. Snyder had recently presented seminars and met with those members of the faculty who wished to interview them personally.

Dr. Windell asked if faculty members who either did not, or could not meet with the candidates and attend their seminars would be allowed to vote to decide the first choice of the department. Dr. Shushan hastened to point out that faculty members need not be informed to vote, and indeed even those totally ignorant of the issues or candidates involved in a vote retained the privilege to voice their uneducated opinions.

After brief disucssion, it was decided that there would be a written vote, and only the first choice would be expressed. The tally of the vote was as follows:

Snyder	10
Bekoff	3
Crews	3

To clearly define the second choice of the department, a run-off washeld, with Bekoff and Crews as candidates. The tally was

Bekoff	9
Crews	7

Dr. Lewis then reported on progress of the committee chosen to select an aquatic botanist to replace Dr. Richardson. Although there was strong dissent within the committee, a majority felt that the number and quality of the applicants was low. It was the opinion of the majority that it was too late in the year to conduct a rigorous search for a worthy candidate. Dr. Lewis mantioned the possibility of offering Dr. Richardson's position to the physiologist who had been selected as the top candidate.

Dr. Linhart moved that the position vacated by Dr. Richardson by offered to a physiologist, and that the screening of candidates for a botany position begin in the fall.

Dr. Winston moved that this decision be put off till the 22 of May. The motion was defeated.

The call for question for Dr. Linhart's motion was passed, 9 for, 5 against. The motion was then passed, 8 for, 3 against.

The meeting began at 5 p.m., adjourned at 6:35 p.m.

Respectfully submitted

Jeff Mitton

Dr. David Rogers
Hale 114

Minutes from Faculty meeting, 5PM May 6, 1975

Present: Drs. C. Norris, D. Norris, Rogers, Winston, Crumpacker, Gregg, Linhart, Bekoff, Gregg, Shulls, Bonde, Lewis, Windell, Marr, Mitton, Shushan, Wilson, C. Bock, J. Bock.

Dr. C. Norris opened the meeting with announcements, and reported a pessimism, on the behalf of Dean Briggs, for prospects of a new faculty member for EPO.

Dr. Winston announced upcoming seminars by Drs. David Crews, Gregory Snyder, and John Mugaas.

The faculty then voted on a motion to award FS9 status (Part time instructor) to graduate students carrying unusual teaching loads, or bearing unusual responsibilities. The vote was tallied as 8 for, 3 opposed, and several abstentions.

Dr. J. Bock then reported on the proceedings of the Learning and Teaching Committee. Prompted by an edict from above, Dr. Windell presented the following motion.

"Moved that a 3 person teaching evaluation committee be selected to evaluate all aspects of departmental instruction and that the evaluations be submitted to the departmental chairman for strong consideration in all matters pertaining to

1)merit raises
2)promotions
3)reappointments
4)tenure.

The vote to move this motion was 6 for, 7 against, so the motion did not come to a vote.

Dr. C. Bock then moved that the Executive Committee is the primary unit responsible for determining or making recommendations to the faculty, on all matters of salary, reappointment, promotion, and tenure; that the Executive Committee must evaluate the research, teaching, and service of all faculty when making such decisions on recommendations; that the Executive Committee is enpowered to appoint such ad hoc committees as it deems necessary to perform these functions. The question was put and passed unanimously. The motion was passed unanimously.

There was general agreement that the executive committee would appoint a committee to prepare guidelines to help evaluate individual faculty teaching.

Just prior to adjournment, Dr. C. Norris asked that written nominations for executive committee be submitted to him.

The meeting adjourned at 6:30.

Respectfully submitted,

Jeff Mitton

Dr. David Rogers
Hale 114

To: Charles Norris

From: Donald Brown, Assistant Controller

MAY 0 9 1975

Subject: Overdrafts

The statements of account as of April 30, 1975 show that the following budget code(s) in accounts for which you are responsible is (are) in overdraft. Unless corrective action (BCA, IV or encumbrance correction) to cover the overdrafts is taken by May 12, 1975, expenditures in these accounts will be stopped. Failure to clear these overdrafts may result in expenditures being stopped in other departmental accounts.

Account #	Budget Code	Overdraft Amount
1708-01	5	7,619.85

UNIVERSITY OF COLORADO
College of Arts and Sciences

May 6, 1975

MEMORANDUM

TO: Arts and Sciences Department and Program Chairmen

FROM: W. E. Briggs, Dean

SUBJECT: Various Matters

1. I regret to report that in addition to the Management Improvement Tax of $75,000, I have been informed that our continuing budget will be reduced by $23,000 in order to fulfill non-A&S commitments on the Boulder Campus. In view of this it will be necessary to abandon plans for doing some of the replacements, additions, and improvements we have been discussing.

2. The Code 5 problem for this year remains acute. Many of you will be receiving letters notifying you about cutting off further expenditures in overdrawn accounts. Sam and I are working on the possibility of supplemental funding for necessary expenditures but I can't guarantee relief at this time. In the meantime I urge all of you to refrain from making any Code 5 expenditures for the rest of the fiscal year unless they are absolutely necessary.

3. On the brighter side, although the Long Bill is not out, the prospects for significant faculty salary increases are still quite good. Since the time is getting short, I would ask all of you to start working on a salary distribution for your department assuming an 8% allocation on current AY salaries for those continuing next year.

2.2.4 Non-Academic School Functions

b. Research other than course work

Interrelationship of Research, Teaching and Public Service

It is also important to realize the close interrelationship of teaching, public service and research activities even though they are separated in the Program Plan for purposes of clarity, organization and planning. Much if not all of our research activity can be considered to have public service functions, some in the long range sense but some in terms of immediate applications; so, too with the interrelationship of our teaching and research functions. In the conduct of our research programs we train both undergraduate students and graduate students. This educational spin-off of research activity results in equipping these undergraduates and graduates with investigative know-how which is essential to technological problem-solving.

The total number of undergraduate students involved directly in faculty research activities (usually by way of Independent Study credits) is: 107

The total number of graduate students (M.A. and Ph.D. candidates) involved in research is: 118

Nature and Level of Research

Despite an ever increasing number of public service functions added to a heavy teaching load carried by all EPO Biology faculty, the high level of research activity is creditable. All members of the department faculty conduct independent research in their areas of specialization, which covers the entire spectrum of biological science. It should be emphasized that our research activities are very relevent in terms of adding new knowledge and understanding in areas which can be applied to the solution of technological problems. Although the departmental research specialties can broadly be divided into environmental, population and organismic (each of which having its own subdivisions of specialization), there exists an interdisciplinary tone to the individual research programs which is ecological in its perspective. Operationally this interdisciplinary trend is manifested in increasing participation of our faculty in joint research programs. This is in part a function of housing the widely diverse subdisciplines of biological science in one department. The effect will be enhanced when we will all be housed in one building.

A content analysis of the research activities in the department as a whole is summarized in the following table, and representative examples are then cited.

	Research Areas		
	Ecology	Population	Organismic
Number of faculty involved*	18	9	10
Number of projects**	76	22	19

*Since various faculty members are engaged in more than one research area the total number of faculty involved in the 3 research areas exceeds the actual number of EEPOB faculty.

**In this category there is no overlap in listings, i.e. there is a total of 117 research projects.

Partial Listing of Ecology Research Projects:

Nutrient Movement in a Rocky Mountain Watershed

Effects of Combustion products on Colorado fresh waters
Food Productivity based on Manihot
An Ecological Study of Revegetation of Spent Oil-Shale Using Taximetric Procedures
Paleo-Ecology of Boreal Forest Ecosystems
Pollen and Spores as Vectors of Radionuclides at Rocky Flats AEC Facility
Vegetational and Climatic History of Parts of Northern North America
Study of Social Behavior and Social Organization in Coyotes in Rocky Mountain National Park
Ecology of Brook Trout in Rocky Mountain National Park
Microbial Degradation of Oil Pollutants
Grassland Insect Ecology
The Genetic and Ecological Effects of Selenium and Spent Shale
Influence of Increased Precipitation on Alpine Vegetation
Natural Post-Fire Succession in Southeastern Arizona
Computer Analysis of Audubon Society Christmas Counts
Growth and Development of Grass Ecotypes and Various Agronomic Species at Different Altitudes in the Rocky Mountains of Colorado
Selection of Ecotypes of Native Shrub Species for Oil Shale Rehabilitation
Effects of Water Fluctuations on Stream Invertebrates
Ecological Analysis of Avian Communities in the Colorado Front Range
Taxonomy and Geographic Distribution of Ants
Microbial Parameters of Waste Water Treatment and Recycling
Bacterial Aerobiology
Tundra Pipeline over Rollins Pass
Ecology of Sanitary District Area, Steamboat Springs
Ecology of Cherry Creek Floodplain Thru Denver
Epiphytic Lichen Ecology and Distribution
Ecology of Herps
Effects of Increased Snowfall on the Primary Producers of the Alpine Ecosystem
A Botanical Inventory of the Rocky Flats A.E.C. Site
Ordination, Productivity and Phenology of Tundra Vegetation
Ecology and Behavior of Birds and Small Mammals in Colorado Environments

Some examples of departmental research projects in Population Biology are:

Genetic Analysis of Reading Disabilities
Population Biology of Vernal Pool Plants
Population Genetics of Rocky Mountain Conifers
Genetics and Habitat Selection
Genetic Analysis of Tiger Salamander Populations in the Front Range
Genetic and Environmental Bases of Human Cognition
Genetic Selection for Aggression-Dominance in Mice
Inheritance of Human Smoking Behavior
Ecological Genetics of Drosophila
Ethnic Differences in Alcohol Related Behaviors

Representative Research Projects in Organismic Biology:

The Relation of Plant Hormones to Growth and Senescence in Azolla
Control of Selective Ovarian Follicular Growth
Interactions of Gonadal Steroids, Prolactin and Corticosteroids in Development of Male Secondary Sex Characters in the Tiger Salamander
Photobiology of Lower Plants
Growth Dynamics and the Cell Cycle in Mycobacteria
Immunological Interaction of Host Cell and M. tuberculosis
Characteristics of Bacterial Species Adapted to Growth at Low Temperatures

Integumentary Muscles of Snakes: Phylogenetic & Functional Significance
Synopsis of Mexican Herpetology
Digestibility of Fish Food Ingredients
Growth and Efficiency of Rainbow Trout Fed Brewers Single Cell Protein
Physiological Effects of Excell Molybdenum in the White Rat
Water Balance and Cuticular Permeability in the Cockroach

Research Funding: An appreciable number of departmental research projects are funded by Federal, State and Private agencies. The degree of funding has increased greatly in recent years, largely due to public concern over environmental problems accompanied by allocation of public monies for the purpose of supporting basic research in these areas. Recognition should be made of the fact that some of our faculty are associated with University institutes (Institute of Arctic and Alpine Research; Institute of Behavioral Genetics) or interdisciplinary projects such as the Molybdenum Project. At the same time it is significant that some members of our facult conduct research on a minimal budget, drawing on internal funds. In some cases it is a function of the nature of the research; in other cases it is a function of a self-sufficient research component which was established by funding in previous years; in still other cases it is a result of the decline in availability of research fundings in recent years. The following table summarizes the degree of funding of research activities in EPO Biology.

	Funded Research		Grants Pending	Non-funded Research
	Interdepartmental	Intradepartmental		
No. of Projects	10	41	20	56
Total dollar amount	$2,500,000	$1,518,200	$891,000	----

Projessional activities: A final aspect of research activity which has to do with communication and organization and is a necessary component of professionalism is our relationship to scientific societies in our areas of specialization. This data is summarized in the following table, as is our research productivity (number of publications):

Number of professional meetings attended in the past year: 41

Number of professional talks presented in the past year: 42

Number of publications during the past year: 79

Number of memberships in professional societies: 106

Number of officer positions held in professional societies: 8

March 11, 1975

MAR 12 1975

TO: All EPOB Faculty
FROM: Jeff Mitton
SUBJECT: Faculty meetings February 28 and March 4

Friday, February 28, 4:00 PM

Faculty meeting concerning the new building

Present: Drs. Windell, Shushan, Greg, Bonde, Williams, Bekoff, Lewis, C. Bock, J. Bock, C. Norris, D. Norris, Shulls, Winston, Bernstein, Segal, Crumpacker, Cruz, Pollock, Jones, Mitton

Drs. Jones and J. Bock called this meeting to warn the faculty of impending deadlines concerning presentation of curriculum and building plans to the Administration. Mr. S. Weinstein advised the faculty on the completion of forms that designated the types but not amounts of teaching space needed. Dr. Winston reported on progress on the plans for the curriculum. The meeting adjourned at 5:45 PM.

March 4, 5PM

Present: Drs. C. Norris, Crumpacker, Winston, Shushan, Gregg, C. Bock, Windell, Linhart, Jones, Lewis, Weiser, Segal, Bonde, Shulls, Marr, J. Bock, Bekoff, Webber, Bernstein, Williams, Cruz, D. Norris, Mitton.

Dr. Crumpacker announced adjustments of the seminar schedule.

Dr. Crumpacker reviewed the content of Jim Wilson's folder in anticipation of a vote on Dr. Wilson's tenure.

Dr. Marr moved to vote on tenure in the department for Dr. Wilson. This was subsequently amended to a vote on tenure in the university. A secret vote by tenured faculty resulted in unanimous support of the amended motion.

Dr. C. Bock moved that the department express its disapproval of a professor holding tenure in two departments. This motion was passed, 15 supporting, and 3 opposing the motion.

Dr. Crumpacker informed the faculty that they were expected to comment upon the reappointment of Dr. L. Dixon at the Denver Campus. Dr. Crumpacker moved that we report that we knew of no reason why Dr. Dixon should not be reappointed. The motion was carried unanimously.

Drs. Bekoff and Linhart moved that the next faculty meeting be devoted solely to discussion of the chairmanship. Carried.

Dr. Windell moved that we acquire the protocol for tenure consideration from the Department of Psychology, and have it distributed to the faculty. Carried.

The meeting adjourned at 6:30

Respectfully submitted

Jeffy Mitton.

Dr. David Rogers
Hale 114

MAR 17 1975

To: All Faculty and Graduate Students

From: D.O. Norris

INDEPENDENT STUDY:

1. Students may not take formal courses for independent study credit. They must enroll in the class regardless of the level (i.e. 300, 400 etc.). Graduate students may not take undergrad courses as independent study.

2. Titles can no longer be supplied for independent study courses except under very special circumstances.

3. In light of the above I have altered our independent study to the following for the purposes of finalizing next year's schedule. Although this may not be the ultimate scheme we desire, it will suffice to separate "library projects" from lab or field research as far as the student's transcript is concerned.

Undergraduate:
EPOB 499 (1-3) Independent Study
EPOB 492 (1-3) Independent Research in Biology

Graduate:
EPOB 539 (1-3) Independent Research in Environmental Biology
EPOB 569 (1-3) Independent Research in Organismic Biology
EPOB 599 (1-3) Independent Research in Population Biology

EPOB 506 (1-3) Independent Study

MAR 31 1975

Faculty Meeting - Monday, March 18, 1975

Present: Drs. Williams, Webber, Gregg, Shulls, Bekoff, Windell, Weiser, Lewis, Bonde, Nichols, Wilson, Segal, Winston, Marr, Jones, Bernstein, Mitton, C. Norris, D. Norris, C. Bock, J. Bock, Linhart, Cruz.

Dr. Marr reported on the voting for the candidates for chairman of the department. Dr. Crumpacker received 16 votes, and Dr. C. Norris received 14. Dr. Crumpacker will assume the responsibilities of the position in the fall of 1975.

Dr. J. Bock reported on the faculty departmental party to be held Saturday April 12, at 6 p.m. in the faculty club. This dinner will honor all the members of our staff. Prime rib was the choice of the majority. Dr. C. Norris was asked to preside at the dinner, and Dr. Shushan was asked to prepare and dispatch invitations.

Dr. Segal reported on the curriculum program plan.

Dr. C. Norris reported that he and Dr. Prescott had decided to award diplomas to undergraduates simultaneously. Dr. Wilson volunteered to be in charge of the planning of the ceremonies.

Dr. Winston reported on the program committee.

Dr. Windell asked about anticipated progress in attacking the critical issues facing the department, and requested that reports be given by the chairman or the executive committee. Dr. C. Norris assured him that this would be done.

Dr. Mitton requested that a bulletin be prepared to advertise the research activities of the faculty, and that this bulletin be sent to major universities turning out potential graduate students. Drs. Mitton, Bekoff, and Jones volunteered to prepare the bulletin.

The meeting began at 5:20, and adjourned at 6 p.m.

Respectfully submitted,

Jeffry B. Mitton

Dr. David Rogers
Hale 114

Minutes of the Faculty Meeting, April 1, 1975

Present: Drs. C. Norris, D. Norris, Grant, Lewis, Nichols, Winston, Marr, Windell, Shushan, Gregg, Bonde, Jones, Linhart, J. Bock, Crumpacker, Williams, Cruz, Segal.

A representative of the student employment advisory committee presented new guidelines for hiring student help, and received complaints about the reliability of work study students.

A number of reports were issued from the Executive Committee

1) In the future, courses will be listed in the graduate bulletin by number, not segregated into categories.

2) Progress is being made on the new faculty budget; we may be sanguine concerning chances of having it increased.

3) Data is being gathered to prepare a statement on salaries.

Fliers have been sent out to announce our expectations for new FTE's.

The following will be members of the building committee: Drs. C. Norris, Segal, C. Bock, Windell, Linhart, Norris, Lewis. Consultants for this committee will be MacIntosh (MCDB), Chiszar (Psych.), Linstedt (C. Eng.), Miller (Audio Visual), Groft (Physics). The faculty suggested that consultants be sought from the Health Physicists and Animal Care.

Drs. C. Norris and W. Segal reported on progress and future plans for the program plan addition and renovation.

Dr. Lewis reported on our inability to compete successfully for University Graduate Fellowships. Dr. Bekoff suggested that Dr. Lewis write a letter to Dean Lipetz to look into the problem. Unanimous approval.

The meeting began at 5:10 PM, and adjourned at 6 PM.

Respectfully submitted,

Jeffry B. Mitton

MAR 0 6 1975

March 5, 1975

SPECIAL ENVIRONMENTAL CURRICULUM MEETING

On March 12 (Wednesday) at 2PM (Rm. Ramy 116) A special meeing will be held to go over the proposed environmental curriculum. All interested faculty and graduate students are urged to attend.

Dr. David Rogers
Hale 114

Proposed Environmental Biology Curriculum

Proposal
C. Bock

100 level
Biology 101 - 102

300 level
Principles of Environmental Biology I & II

Two semesters; 3 hrs/sem; Lecture only
Topics: Ecology, Populations, Evolution

400/500 level
Applied Ecology I

Sect. 1
2
3
4
....

3 hrs / 1 semester
limit: 20 (30?) students / sect.
1 Faculty & 1 TA / sect.
Labs, Field Trips, Discussions
Basic ecology
Special groups (Taxonomic)
etc.

400/500 level
Applied Ecology II

Sect. 1.
2
3
4
....

Same as Applied Ecology I, except topics as follows
Environ. Law
H_2O Pollution
Impact statements
Pesticides
Human Ecology

Proposed Environmental Curriculum — Undergraduate

Alternate

Core

New Courses

1-3 Ecology I
1-3 Ecology II
3 Population Ecology
4 Advanced & Applied Ecology

Courses deleted

1. Ecology for man 435
2. Principles of Ecology?
3. Animal Ecology 4
4. Plant Ecology 4
5. Recent advances in Animal Ecology
6. Dynamics of Nt. Ecosystems 5
7. Ecological Genetics 58
8. Population Genetics 5
9. Population Dynamics 514

Non-Core

					Hrs
2-	Human Ecology	(3)	4—	Environ. Sci. Writing	(2)
3-	Ecological Methods	(3)	4--	Environ. Assessments	(2)
3-	Urban Ecology	(3)	4--	Environ. Law	(2)
3-	Ecology Seminar	(1)	4--	Environ. Controversy	(2)
3-	Senior Thesis Planning	(1)	4--	Environ. Seminar	(1)
			4—	Senior Thesis	(V)

10-14-68

TO: FACULTY OF THE DEPARTMENT OF PSYCHOLOGY

FROM: Gregory Kimble

Dr. David Rogers
Hale 114

SUBJECT: PROCEDURES FOR REAPPOINTMENT AND PROMOTION

MAR 0 5 1975

Over the years this department has evolved a set of procedures intended to guarantee that full information is available to the faculty regarding each action we take for reappointment and promotion. The procedures seem excellent and I have revised them only slightly.

The first step is a request to the individual involved to bring his personnel file up to date. Will you examine the materials which are now in Mary Jane's hands and supply me with anything in addition which you feel should be considered. No limits are set on the type of information to be considered relevant. Indications of success in teaching, supervising student research, service to the Department other than through teaching, scholarly publications, professional activities, participation in scientific meetings, etc. are examples of things which the committee should know about.

It would be a great help to me if you would organize the material in your personnel folder so that it will be possible to see the following:

1. A complete list of dissertations and theses directed.
2. A complete list of publications.
3. A reprint of each publication (unless unavailable, in which case a note to this effect).
4. A list of unpublished papers in press.
5. A list of unpublished papers submitted for publication, to whom and approximately when.
6. A list of studies completed and in process of being written.
7. A few sentences describing foci of research concentration at present and in the future.
8. A complete list of conferences attended and fellowships held.
9. A list of recent addresses, if any. Include colloquia given in the last two or three years.
10. A list of recent conventions attended, including program participation.
11. A complete list of honors received (scholastic, distinguished teaching awards, etc.).

12. Professional and organizational activities outside the University (A.P.A., regional, state association offices and responsibilities, research advisory groups, professional advisory groups, editorial boards, etc.).

13. If you have additional information about student reaction to your teaching, I would suggest adding this to your personnel folder also.

14. Departmental service activities (committee chairmanships, committee memberships, activities in assistance of area committees, etc.)

15. University service activities (committee chairmanships, committee memberships, etc.)

16. Names of three persons outside the Department familiar with your professional work to whom the Chairman may write for letters of recommendation.

In many cases this degree of detail will be unnecessary to the Department in making a decision. There are two justifications for following this procedure in all cases, nevertheless. The first is to impersonalize the procedure internal to the Department and thus eliminate any questions regarding all cases receiving equal and full attention. The second is to provide a basis for justification at decision-making levels outside the Department where other faculty and administrative personnel must make decisions in the absence of personal information about the individual being considered. This is where outside letters may sometimes be useful. In the event our machinery seems tedious and unnecessary to you, I hope you will keep these points in mind.

You will understand, I am sure, that this action represents only the first step in the decision-making process. Following the review by the Department it will then determine whether a recommendation for reappointment or promotion should be made. Should the decision be in the affirmative the matter will then be reviewed by the Dean of the College and his advisory council.

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental, Population and Organismic Biology

FEB 19 1975

Feb. 19, 1975

TO: Faculty, Department of EPO Biology

FROM: Charles Norris

I find the present state of our Department tremendously exciting and with great promise for the future. As a result of the exceedingly effective four years under the chairmanship of Hobart Smith, past profoundly discordant breaches were healed and a sense of unity was developed. With our new and eager faculty and increasingly healthy morale of the rest, there has been a revivication setting in. I have no doubt that this Department will achieve enhanced distinction, given the willingness on our parts to show the University Administration that the Department is faithfully and effectively performing its functions in teaching, research, and service.

If you elect me to the Chair of the Department, I promise I will do everything possible to see that we move forward. I will work with you and for you in providing the lines of communication with the Administration, so necessary if we are to succeed in providing funding for all the necessities of the Department: faculty, staff, supplies & expenses, equipment, and building. All must have increased funding if we are to achieve our goals and have our status in the University structure enhanced.

Like Professor Crumpacker I realize that we must seek to add six to eight FTE regular faculty in the next few years. I shall seek to obtain Dean Briggs' assurances of his continued support, depending on what we show him we are doing year by year and what we aim to do. I applaud Professor Crumpacker's eagerness to improve Elizabeth Owen's status. However, you must understand that the University is now hamstrung by being in the State Personnel System. That agency has not yet come up with descriptions or designations of those who are classified as Administrative Assistants in the University Personnel. Those of us who have worked closely with Elizabeth over these years know how invaluable she has been to this Department, and all possible will be done to make things better for her. One thing which will improve the conditions under which she works is to add at least one secretary to this office; I have already requested this.

Like Professor Crumpacker, I realize that the duties assigned at present to the Associate Chairman are too onerous. David Norris deserves our collective appreciation for doing an excellent job this year, as did Carl Bock before him. But some division of labor is essential.

This Department has not heretofore received adequate salary support for its Faculty, as compared with other science Departments. We must be reckoned as equal to the others which are now considered more prestigious. There are salary inequities within the Department which are deserving of correction. The younger members of the Faculty must feel confidence that if they do their work effectively, there is assurance of reward for work well done and that they will be able in the future to look forward to better things and look back with satisfaction. I will do all possible to improve the lot of the Faculty and Staff.

If elected I will continue to carry out teaching activities, of one course each term. Next year I am scheduled for a section of EPOB 101 in the fall, and will teach cell physiology in the spring. If not elected, I will add additional teaching in the spring.

I believe it is essential that the Chairperson be absent from the campus as little as is possible. I served for three-and-one-half years as Associate Chairman under a Chairman who was frequently absent for rather extended periods. This was quite unsatisfactory. I have not missed spending at least a few hours in the office every work day since August 15. (including the Christmas recess). I do not anticipate any appreciable change, except for perhaps a one week vacation each year during a slack time.

Finally, I love this Department and this University. For thirty-five plus years I've served, and I think, done so reasonably well. Regardless of what happens in this election, I will continue to do whatever I am capable of doing.

FEB 19 1975

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental, Population and Organismic Biology

February 19, 1975

Prof. David Armstrong
Prof. Jane Bock
Prof. Donald McPhail
Prof. David Rogers
Prof. Sam Shushan

ok DGR let me know when it is finally decided.

Regarding David Johnson's Ph.D. Prelim exam date, there is a complication on 13 May. Consequently, we suggest consideration of Friday 9 May at 10:00 oclock. Please let me know if this arrangement is not satisfactory.

Thanks

John Marr

cc: David Johnson

JWM:js

25 Feb. FEB 25 1975

Dave, I received no objection so plan on 9 May

Thanks,

John

Dr. David Rogers
Hale 114

Notes from the faculty meeting February 18, 1975

The meeting began at 5 p.m., and adjourned at 6:20 p.m.

Faculty members present: Drs. Bernstein, Bekoff, C. Bock, Bonde, Crumpacker, Cruz, Gregg, Jones, Lewis, Linhart, Marr, Mitton, Nichols, C. Norris, D. Norris, Rogers, Segal, Shushan, Webber, Weiser, Williams, Wilson.

Faculty members absent: Drs. Bushnell, J. Bock, Grant, Windell, Winston.

Topics discussed during the meeting:

1) Students signed up for work study are not to use that experience for credit for independent study.

2) Up to and including the meeting, only two individuals (C. Norris, W. Crumpacker) had been nominated for chairman of the department. Statements of position from these men were to be circulated, as well as open letters concerning this election. Formal discussion was tabled until the next meeting.

3) Dr. J. Bock requested that a bona fide botanist be considered for the expected faculty position reserved for teaching Bio. 101 or 102. Dr. Bonde took special notice of this request.

4) Dr. D. Norris then introduced the revised edition of the graduate regulations for review and discussion.

The following discussion came to a vote:

A) Dr. C. Bock suggested that "at least one year of college level math, chemistry, and physics be required of graduate students." Unanimous approval.

B) A consensus of opinion was reached: GRE scores should be in by Feb. 1 for consideration for entrance of prospective graduate students. Students would be notified of this by letter.

C) Dr. Shulls pointed out that no oral exam was mentioned for the MA I degree. He proposed that this be made an option of the advisory committee.
Passed.

D) Long discussion ensued concerning the number of faculty members on a Ph.D. advisory committee. A move to reduce the initial size of this committee to 3 members was not passed. It seemed to be a consensus of opinion that the head of the advisory committee oversee the initial planning of courses for a graduate student.

E) Dr. Lewis suggested that the number of graduate seminars required of a graduate student be reduced from 4 to 2. Motion was not passed.

F) Dr. Jones suggested that the revised edition of the Graduate Regulations be accepted as revised. Unanimous approval.

Respectfully submitted

Jeffry B. Mitton.

Program Plan Outline

Ramaley Building

Renovation and Addition

University of Colorado
Boulder Campus

Part I - Academic Program Plan

Part II - Facilities Program Plan

Prepared By:

Steve Weinstein
Planning Office

December 23, 1974
Revised - January 13, 1975

Rev. 1/13/75

Program Plan Outline

Ramaley Building

Renovation and Addition

Part I - Academic Program Plan

1.0 INTRODUCTION

1.1 Scope

General description of the project giving gross square feet, project costs, building type, goals, and time frame.

1.2 Overview of Needs of Biology

Number of programs to be housed in inadequate facilities produces a need for lecture, lab, discussion, coordinated studies, spaces, etc.

1.3 Project Relationship to Centennial Plan

Concepts and goals of Centennial Redevelopment Plan and relationship of this project to the plan.

1.4 Definitions of Terms and Abbreviations

This section is written at the completion of the program in order to help clarify the use of disciplinary rhetoric which may be included.

2.0 BACKGROUND INFORMATION

2.1 Historical Perspective

A brief history of the ~~School~~ Department of Biology - up to the move to Ramaley Building. A history of Ramaley Building - up to the Biology takeover - and a history of the use of the building by Biology.

2.2 Existing Functions

2.2.1 Course Listings and Description

(Description should include the academic rationalization for other than guidelines space requested later in this program plan.)

2.2.2 Course Contact Hours and FTE Enrollments

(Use CCIF and CLATBAR programs, Fall 1974.)

2.2.3 Existing Personnel List

(Department faculty/staff lists.)

2.2.4 Non-Academic School Functions

a. Public Service functions.

b. Research other than course work. (Include grant projects.)

c. Continuing Education courses using Biology facilities.

2.2.5 Functional Diagrams

a. School relationships

b. Departmental relationships

3.0 PROJECTED RESOURCE REQUIREMENTS

3.1 Projected Student Enrollment to 1980

20,000 FTE ceiling will only expand at the cost of other program reduction document projections.

3.2 Projected ~~Course-by-Course~~ Curriculum Increase or Decrease in Contact Hours

With limited enrollment, show decrease for each increase.

3.3 Faculty Requirements

Show corresponding decrease for each increase.

3.4 Staff Requirements

Based upon departmental needs.

3.5 Space Needs

Overall square footage requirements for space types based upon FTE requirements and CCHE space allocation guidelines.

3.6 Projected Functional Relationships

3.6.1 School functional diagram

3.6.2 Departmental functional diagrams

4.0 SPACE REQUIREMENTS

4.1 Space Types

- Definitions for each space included in this program.

4.2 Projected Student-FTE/Course-Contact Hours Load for Each Type of Space (or Function and Personnel Load if Applicable)

4.3 Number of Rooms Required of Each Type

Include service areas, offices, research space, storage.

5.0 FACILITIES DETAILED REQUIREMENTS

5.1 Existing Space to Remain as a Partial Solution to Required Space

5.1.1 Detailed space description of each space including

a. Size
b. Function to be served
c. Equipment required (fixed, movable)
d. Services required
e. Utilities required
f. Functional relationship to other spaces (diagrams)
g. Furniture

5.2 New Space Required

5.2.1 Detailed space description including

a. Size
b. Function to be served
c. Equipment required (fixed, movable)
d. Services required
e. Utilities required
f. Functional relationship to other spaces (diagrams)
g. Furniture

5.3 Characteristics of the Site

5.3.1 Physical properties

a. Size
b. Soil
c. Slope
d. Drainage
e. Orientation

5.3.2 Utilities and services

a. Water
b. Sewer
c. Gas
d. Steam
e. Electricity

5.3.3 Development

a. Roads
b. Walks
c. Bike access
d. Landscaping
e. Grading
f. Coordination with other areas

5.4 Functional Relationships

5.4.1 Departmental proposed functional relationship diagram.

5.4.2 School's proposed functional relationship diagram.

5.5 Applicable Building Restrictions

5.5.1 Code requirements (UCB, Handicapped)

5.5.2 Construction standards

6.0 BUDGET SW

6.1 Construction Costs

Complete Breakdown

6.2 Project Costs

Complete breakdown via Schedule 6 of State Request forms.

6.3 Operating Costs

Use Physical Plant resources.

7.0 SCHEDULE SW

7.1 Planning Phase

7.2 Construction Documents Phase

7.3 Construction Phase

7.4 Occupancy Date

7.5 Priorities for Completion and Utilization (Construction Management)

APPENDICES (as required)

Remaining Seminar Schedule - Spring, 1975

EPOB Colloquia

All colloquia have tentatively been scheduled for Ramaley 104 at 4:00 p.m., but please check individual notices for time and place.

Fri., Mar. 7 - Dr. George Van Dyne, Depts. of Range Science and Fishery and Wildlife Biology, C.S.U. -- "Systems Ecology and Modelling of Grasslands Ecosystems."

Fri., Mar.14 - Dr. Ann Bekoff, Research Associate, EPO Biology -- "Neural Basis of Coordinated Behavior in the Chick Embryo."

Wed., Mar.19 - Dr. Stephen Bernstein, Dept. of Psychiatry, U. Calif., Los Angeles -- "Adaptive Behavior of Ants."

Fri., Mar.21 - Dr. Joe Crim, American Medical Center, Denver -- "Hormones and Differentiation of Amphibian Visual Pigments."

Fri., Apr. 4 - Dr. Richard McIntosh - MCD Biology -- "A Sliding Filament Theory of Mitosis."

Wed., Apr.16 - Dr. Roger Payne, New York Zoological Society and Rockefeller University -- "Biological Acoustics and Behavior of Large Whales." Jointly sponsored with MCD Biology.

Wed., Apr.30 - Dr. Harvey Nichols, Assoc. Professor, EPO Biology and Institute of Arctic and Alpine Research -- "Paleo-Ecology in the Canadian Arctic." (illustrated).

Fri., May 2 - Dr. Peter Feinsinger, Dept. of Biological Sciences, U. of Denver -- "Coevolution of a Tropical Hummingbird-Plant Complex."

Note: March 24 (Monday) - March 28 (Friday) is Spring Vacation.

2/26/75 FEB 26 1975

TO: Faculty of EPOB

FROM: Charles H. Norris

SUBJECT Conversation with Dean Briggs

This morning I talked with Dean Briggs about new FTE's. He stated that it is unlikely that the Legislature will fund New FTE's for the University, although for some existing programs which are undermanned this would be possible. However, he did say that there is a possibility of "in-house rebudgeting within the College and that we are high on the priority scale for new FTE's based on such a possibility.

Thus he says he will permit us to start advertising. Such ads will be placed in such a way as to have all three positions listed as possibilities for one or more places, and must not suggest more than possibilities. I have asked Hobart Smith to get the chairmen of the three search committees together to prepare copy, and it will have to be approved by the Dean and by Affirmative Action Office.

NOTE: does anyone have the loading permit (pink) for Ramaley#3845. We are unable to locate it. The traffic people will not replace it unless we pay another 10.00. Please return immediately if you find it on your desk.

Dr. David Rogers
Hale 114

TO: All EPOB Faculty and Graduate Students

FROM: David O. Norris, Assoc. Chairman

Students proceeding toward a Ph.D. and admitted to the Graduate School prior to fall semester, 1974 may utilize any one of the following pathways which is applicable. However, a student may not "mix-and-match" the various approaches (which is consistent with University requirements).

Alternative I

Ph.D. Preliminary Examination
"... must be written, but may be followed by an oral, at the discretion of the examining committee. The written portion shall consist of two 3 hour sessions, and a copy of the exam shall ultimately b be placed in the student's folder in the office.

"Students who received their M.A. prior to coming to Boulder for the Ph.D. will be interviewed and appraised by the Graduate Committee (i.e., a departmental committee and not the student's advisory committee) during their first month as Boulder graduate students." Note: this does not apply to students who entered the Division of Organismic Biology beginning Fall, 1973.

Ph.D. Comprehensive Examination
"Upon completion of essentially all formal coursework for the Ph.D.,.., a written and oral Comprehensive must be taken ... in the general area of specialization. In practice, the Comprehensive Examination covers the area of specialization and peripheral disciplines, and it is organized in any appropriate 4 disciplinary areas .... The written part of the examination is divided into four half-day sessions within a 7-day period and is followed within two weeks by an oral examination... (which) is open to all members of the faculty.

Questions may be given in advance.

Alternative II

This alternative is open only to former graduate students of the Division of Organismic Biology.

The Ph.D. Preliminary Exam
"The Ph.D. Prelim is to be individually scheduled, is to allow no questions in advance but is to be restricted to any 4 areas previously designated in an established list of divisional areas; it is to be given in 4 half-day sessions of writtens followed by an oral; and is to be administered by the 3 member MA committee or Ph.D. advisory committee."

The Comprehensive Exam

"The Ph.D. Comps are to consist of a half-day oral examination only ... The exam covers areas related to the student's research field.

Alternative III

This is the new scheme adopted Spring 1974 and is the same one in force for all students entering Fall, 1974.

Dr. David Rogers
Hale 114

TO: EPOB Faculty

FROM: Graduate Program Committee

Enclosed you will find a revised draft of the Graduate Regulations which incorporates:

1) updating according to current Graduate School Regulations
2) new examination procedures for Ph.D. Prelim, Comp and Final Exams as approved by the faculty, Spring, 1974, to be in effect for all students entering fall, 1974 or former students who wish to switch from the "old program" to the "new Program". Note that a student must adopt the complete sequence of examinations. Programs may not be mixed.

No mention is made of Plan II Master's which is being considered by a separate committee.

We wish to call several items to your attention. Based upon considerable imput from a variety of faculty we have included several items that require specific consideration and possibly amendment. On page 2 under Admissions Requirements the requirement for chemistry, physics and math has been stated in this manner to force a decision by the faculty concerning this requirement which was vague at best in the old rules. On page 11, paragraph 2, the requirement that an advisor be a full member, voting member or what have you should be decided. Finally, page 18 represents a list of ideas from many faculty about when graduate exams should not be given. These can be considered separately and incorporated into the rules if the faculty wish.

Please examine these regulations. Minor corrections can simply be submitted to the Graduate Program Committee for incorporation or alteration. The final form will be outlined and indexed for ease of finding specific information. In a coming faculty meeting we will consider approval of this document, the specific items outlined above and any additional faculty suggestions.

OUTLINE OF PROCEDURES Rev. 10-74
LEADING TO ADVANCED DEGREES IN THE
DEPARTMENT OF ENVIRONMENTAL,
POPULATION AND ORGANISMIC BIOLOGY

I

GENERAL REGULATIONS

Admission

Each applicant should obtain a copy of the Graduate School Bulletin, supplied through the admissions office, 125 Regents Hall. Upon admission he/she is responsible for fulfillment of deadline and procedural requirements of that Bulletin and of this outline. Applicants must request, execute and return at once to the EPO Biology Department a pre-application form, on which basis the department advises the applicant whether to make formal application for admission. Approval of pre-application does not imply approval of application. Students for whom English is not the native language must be proficient in speaking, reading and writing English.

Application for admission to the Graduate School as a graduate biology student is made to the Department of EPO Biology. Those intending to work towards a Master of Arts as well as a Ph.D., should indicate both degrees on the application. Otherwise the intended one degree (M.A. I or II, or Ph.D.) is indicated (see Sections II and III for description of these degrees). The forms provided each applicant also cover scholarships, fellowships, and teaching and research assistantships. Two copies of official transcripts of all academic work must be filed with applications. All information should be returned to the Department of EPO Biology. Completed applications should be submitted to EPO Biology not later than February I for admission the following fall semester and October I for the following spring semester. Late applications will be considered but are less likely to be successful.

Applicants for University admission must take the General Aptitude Test (Verbal, Quantitative) and the Advanced Test in Biology of the Graduate Record Examinations. GRE Scores should be sent directly to the Department of EPO Biology from the Educational Testing Service at Box 1502, Berkeley, California 94701, or Box 955, Princeton, New Jersey 08540.

The Graduate Program Committee of the Department reviews these documents as soon as files are complete. Shortly before given deadlines, the committee recommends:

1) acceptance of the applicant as a degree student (a student who may proceed towards a degree, and may select a graduate faculty member as a major advisor and chairman of the appropriate advisory committee)

2) Acceptance of the applicant as a provisional degree student (a student with several important deficiencies, a questionable academic record, or both, and hence on probation; such a student may not immediately proceed towards a degree nor can he/she formally select a graduate faculty member as a major advisor)

3) rejection of the application.

Upon review of credentials, the Department and/or Graduate School will notify applicants of the decision. Only the Graduate School can issue a formal, valid admission and it also makes the final decision on status. The departmental recommendation is recorded on each application after it is reviewed. If an applicant is accepted as a degree or provisional degree student, he/she is sent a permit to register. The application and all pertinent correspondence are filed in the departmental office. If the student is not accepted, he/she is so notified and all documents are kept on file for one year. Transcripts indicating courses in

progress pending receipt of degree must be replaced by official transcripts showing proof of degree awarded. All applicants are admitted subject to completion of anticipated degrees.

Admission is completely independent of all forms of assistantship and fellowship awards.

Registration

All students must appear at the University on the dates designated for counseling and registration as in the Graduate School Bulletin. At the departmental office, Ramaley 110, students will be referred to the appropriate advisors (see "Orientation Advising") for review of background, determination of deficiencies, if any, and formulation of a preliminary program. They then proceed with registration.

Admission Requirements

To qualify as a degree student an applicant lacking a Master's degree must have:

1) a baccalaureate degree

2) an undergraduate major, or equivalent thereof, in some biological area,

3) one year of course work each: mathematics, physics, and chemistry;

4) a gradepoint average of 3.0 for both
   (a) all undergraduate courses, and
   (b) all courses in biological subjects.

Admission cannot be granted even on provisional status if the gradepoint average is less than 2.75 for either

1) undergraduate courses, or

2) biological courses collectively.

Students lacking these minimal requirements have deficiencies that must be removed by credit courses taken during the first year (and preferably the first semester); deferral to the second year is permissible only insofar as removal the first year is prevented by schedule conflicts. Deficiencies that can be removed by courses at the 400 level of higher apply toward the M.A. degree, courses at the 500 level or higher apply toward the Ph.D. degree.

Even where no deficiencies exist, the Department may require certain courses, whether applicable to the degree sought or not, if the individual advisor or Advisory Committee so requests. Such requirements are designated solely in the interest of competence in the candidate's field.

Courses regarded as deficiencies can be considered removed

1) in non-biological undergraduate courses if a minimum grade of C is earned,

2) in biological and graduate courses only if a minimum of B is earned.

Any coursework that is "proficienced" is acceptable.

Admission requirements for students with a Master's degree are given in Section IIIA and IIIB of this Outline (p. 10).

Minimal Performance Criteria

All graduate students must maintain a gradepoint average no less than 3.0 at the end of each full scholastic year in order to register the following year. Reappointment eligibility of teaching assistants also requires satisfactory pedagogic performance and satisfactory academic progress. In addition, the Graduate School demands that, except for the Ph.D. degree, a 3.0 G.P.A. must be obtained either in all work offered for the degree, or in at least the minimum required hours. For the Ph.D., courses in which a grade less than B is obtained cannot be counted toward the degree, and a 3.0 GP.A. is required in all work attempted in Graduate School. A student placed on probation by the Graduate School may be suspended subsequently; he/she should consult with his/her advisor at once upon receipt of such notice. The Advisory Committee is required at once upon notice of a possible suspension, to recommend a course of action to the Department Chairperson.

Time Limitations

The Department restricts degree and appointment eligibility for full-time Master's degree students to three years and for full-time Ph.D. students to four post-Master's years (or six years, if no Master's degree is held). Part-time or irregular applicants for the Master's degree must complete all degree requirements within five years or seven successive summers; those for the Ph.D. degree must observe the Graduate School limitations. Minimum residence requirements are, for the Master's degree, two semester or its equivalent in summer terms (5-wk, summer session = 1/3 semester, 8-wk. summer session = 1/2 semesters); for the Ph.D. degree, six semesters or equivalent thereof are required. (See also Sect. III of this Outline).

Choice of Degree Candidacy

A student enrolling without a Master's degree may declare his intention to secure only a Master's degree, or to seek a Ph.D. degree. In the latter case, the student may elect to secure a Master's degree enroute to the Ph.. D., or to bypass the Master's degree. Bypass nevertehless requires that he pass the Ph.D. preliminary examination with a "superior" rating and receive approval by a majority of his/her Ph. D. Preliminary Examining Committee. If a student was initially accepted for a Master's degree only, he/she must reapply to the Graduate School for admittance on a Ph.D. program.

Special Provisions in Relation to Graduate Teaching

All graduate students pursuing a Ph.D. degree in the Department of EPO Biology are required to complete at least one year of teaching experience in biological science at the secondary school level or above.

A teaching assistant employed on a half-time basis during a regular session shall not register for more than 9 nor fewer than 5 credit hours, regardless of the course numbers, except upon recommendation of the major advisor and approval of the Graduate Program Committee.

A teaching assistant employed on a half-time basis during summer sessions shall not register for more than 4 credit hours regardless of the course, numbers, except as above.

A teaching assistant working on a quarter-time basis shall not be limited in his/her registration beyond the limitation prescribed by the Graduate School for unemployed graduate students.

Independent Study Courses and Tutored Courses

Registration for independent study courses requires submission in advance to the departmental office of an authorization signed by the person who will supervise the independent study. The area of study should not duplicate, overlap, or anticipate research undertaken for a thesis, nor should it in effect duplicate formal courses. Exceptions may occur when graduate students take 300 or 400 level courses as independent study courses. Under these conditions, the student may receive graduate credit for the course if there is additional work or reduced number of credit hours.

Independent Study may not be offered to satisfy any part of the minimum requirements for an optional minor at the graduate level. The maximum number of credits of Independent Study offered as a part of the course requirements for any advanced degree is not specifically limited, but any total (of independent study coursework) over 6 semester hours must be approved by the Advisory Committee. When a graduate student takes an undergraduate course as independent study, this does not count toward the 6 hours limit. In all cases, a graduate student must fill out an Independent Study Form in the Biology office in addition to normal registration for any independent study course taken.

Transfer from Provisional to Degree Status

All provisional degree students must apply through the Departmental Associate Chairperson to the Graduate School for change from provisional degree to degree status, preferably at the end of the first semester (with at least a minimal full-time load (see Sect. III, p.) and no later than the end of the second semester. Approval by the Graduate School is virtually assured with 12 hours or more of B, but this usually requires a full year. Advisors and students are urged to request transfer after one semester if any convincing case can be made for it, e.g. grades above B level, success in difficult courses, strong faculty recommendations, etc. The advisor then recommends to the Associate Chairperson of the Department that

1) the student be informed he will not be allowed degree status in this Department, or,

2) that degree status be requested for him.

If a student is denied degree status after the full probationary period he/she shall be denied the privilege of taking further graduate work in the Department.

Orientation Advising

All new graduate students are to report upon arrival to the Associate Chairperson in the Biology office for assignment to a faculty advisor. The student should consult with that advisor and determine at least two additional graduate committee members. This information should then be communicated to the EPO Biology Office on the Advisory Committee Form.

Provisional degree students, and degree students of uncertain objectives, will be assigned by the Associate Chairperson to a temporary advisor, who may become or be replaced by a permanent advisor as soon as the student's progress permits, during or as soon as possible after the first semester.

The record for each beginning student is reviewed by his/her advisor, in consultation with other committee members, to determine the most suitable course of studies. A schedule for completion of coursework, foreign languages, examinations, and thesis research should be reasonably well outlined by the end of the first year, and maintained as firmly as possible thereafter.

Any student is at liberty to change advisors at any time, with approval of the Graduate Program Committee in consultation with the advisors concerned and without penalty of any sort.

Overall Progress

The EPOB Graduate Program Committee is responsible for periodic review of all graduate students to determine eligibility for assignment of teaching assistantships, scholarships, etc., and to assure that all are making satisfactory progress toward a degree.

Graduate Majors

The major is "Biology" for all degrees granted in the EPO Biology Department. Any courses taken in any department may, with the advisor's approval, be counted toward that major.

Departmental Colloquia: Regular attendance at departmental colloquia is expected of all graduate students.

THE MASTER'S DEGREE

Types of Master's Degrees

Only the degree Master of Arts is given by the Department.

Before the status of a graduate student has been established, he/she should, in consultation with his/her Advisor, decide on one of two plans leading to the Master's degree.

Plan I. Under this plan a student writes a thesis based on original research. At least 24 semester hours of work must be completed, including 6 for the thesis. A total of at least 12 semester hours, including thesis, must be at the 500 level or higher. The thesis hours may be taken during one or more semesters. A student must choose one of the following pathways.

B. M.A.I Degree - Ph.D. Degree
This pathway is chosen by students who anticipate pursuing a Ph.D. degree eventually at CU.

A. M.A.II Degree Only
This pathway is chosen by students not intending to pursue a Ph.D. degree at this time.

Major Advisor and Advisory Committee

As soon as the permanent Advisor has been chosen, the student should secure from the departmental office a form entitled "Graduate Advisory Committee Appointment." This form is completed, in consultation with the prospective faculty advisor, in triplicate one copy is submitted to the EPO Biology Office, one is retained by the student, and one by the advisor. The form in essence is

1) a request for permission to work under the person designated;

2) a signed compliance of the faculty member concerned;

3) a list of two other members of the three-man Advisory Committee, selected from the EPO Biology faculty; and,

In the case of Plan I students,

4) a brief statement of the area of research contemplated.

All three members of the advisory committee for Plan I Master's students must sign the completed thesis.

Course Requirements

There are no specific course requirements for the Master's degree, except

1) the courses required for admission

2) two semester hours of seminar courses involving student presentations, and

3) any additional general requirements of the student's Advisory Committee.

There is no foreign language requirement.

Admission to Candidacy

A student ready to become a candidate for a Master's degree (i.e., to apply formally for the degree) must file application not later than 10 weeks prior to the Comprehensive Examination but not before all deficiencies are removed. Deficiencies may arise from admission requirements and/or advisory committee requirements. The number of hours to be presented for the degree must be determined before the application for candidacy may be filed. The application form is obtained from the departmental office.

Transfer of Credit

Up to 8 semester hours of graduate credit may be transferred from recognized graduate schools if the credits have been earned five or fewer years before the Master's degree is awarded at this University, or are validated by special examination. Transfer of credit can only be made before the last semester begins and after a student has

completed at least 6 hours and one term satisfactorily (at least a 3.0 G.P.A.) at this school and has consent of the departmental Associate Chairperson and the Dean of the Graduate School. The student wishing to transfer credits must present an official transcript to his major advisor and obtain his approval and that of the Departmental Associate Chairperson for the requested transfer of credits. After submission of the specific form required (obtainable from the Biology office), it is evaluated and approved or rejected by the Graduate School.

The Comprehensive Examination for Plan I M.A. Degree

The candidate will be expected to demonstrate a depth of understanding beyond the normal coursework. The Advisory Committee will notify the student in advance of the basic plan and schedule for the examination. The Advisory Committee following the examination will meet and jointly consider the performance of each candidate on the examination.

A. M.A. I Degree Only

THose working only for an M.A. I will take a Comprehensive Examination given by their 3-man Advisory Committee. This examination will be based on material included in four of the subject areas designated in the list used for the Ph.D. Preliminary Examination (see p.). General Biology must be one of the four subject areas. The other three areas are to be chosen by the student in consultation with his/her Advisory Committee. The examination questions are to be prepared and approved by all members of the Advisory Committee prior to the date scheduled for the examination. The written exam will consist of two 3-hour sessions. The Advisory Committee will rate the performance as "satisfactory" or "unsatisfactory." If a student receives a rating of "unsatisfactory" he/she may repeat the examination only once. The repeat examination must be taken within 6 six months of the date of the original examination. The student must take the Comprehensive Examination within two years of beginning graduate work.

B. M.A. I Degree - Ph.D. Degree

Those planning to go on to the Ph.D. will take the Ph.D. Preliminary Examination (see p.). A "satisfactory" or "superior" will satisfy the Comprehensive Examination requriements for the M.A. I. A student who has taken the M.A. I Comprehensive (Section A above) must take the Ph.D. Preliminary Examination if he/she later elects to pursue the Ph.D. Degree.

Additional Requriements for M.A. I Degree

The Thesis

Before writing a thesis M.A. I students should obtain a copy of "Thesis Specifications" from the Biology office or the Graduate School office and follow directions meticulously. The thesis must be approved and signed by the three designated readers at least 30 days before the commencement at which the degree is to be conferred. Two formally approved copies of the thesis must be filed in the office of the Graduate School two weeks before the degree is conferred, and two copies with the Department (including one for the advisor).

Oral Defense of Thesis

The Advisory Committee conducts the oral defense of thesis. The examination must be held at least 30 days in advance of the thesis-submission deadline set by the Graduate School. The thesis must not be in final form at this time, so that changes and corrections suggested by the Advisory Committee may be incorporated.

TYPICAL SCHEDULE OF DEADLINES FOR MASTER'S CANDIDATES
(See Catalog for precise dates in given years.)

Orientation advising	First registration in Graduate School
Advisory Committee appointed	As soon as possible or at least by the end of the first semester
Recommendation to Graduate School for removal of provisional status	After all deficiencies removed; after first semester but no later than second semester
Comprehensive Examination	As soon as possible, and no later than the fourth semester.
Degree Candidacy	After removing all deficiencies, and at least 10 weeks before reporting of the Comprehensive Examination to the Graduate School
Final Examination (defense of thesis, for Plan I students only)	About 6 weeks prior to end of session when degree is to be awarded
Approval of thesis for final typing	Following successful completion of oral defense of thesis.
Thesis filed in Graduate School	Two weeks prior to end of session when degree is to be awarded
Completion of all requirements for degree	Within three years for full-time students, 5 years or 7 successive summers for part-time students, after beginning of work for degree

No graduate examinations will be given during

(a) preregistration and advising periods

(b) student review ("dead") week

(c) during Final Examination Periods

(d) between semesters

III. The Ph.D. Degree

Admission Requirements

A. Course Requirements. Applicants for study toward the Ph.D. degree are required to have the same coursework background as applicants for study toward the M.A. degree (see page 2). The Undergraduate gradepoint average is not an essential factor if the applicant holds a Master's degree. Any deficiency is to be removed as soon as possible after study toward the Ph.D. degree has begun.

B. Students with an M.A. degree from C.U.
Any student obtaining an M.A. degree from C.U. may continue study toward a Ph.D. degree only if he/she has (1) approval of the M.A. Advisory Committee
(2) demonstrated dedication to scholarly study, instruction and research
(3) been accepted by an adivsor for Ph.D. study, and
(4) received approval by the Graduate School of his/her new application (see page 3 if applicable).

C. Students with a non-C.U. Master's Degree.
Students with a Master's degree from another institution must have
(1) at least a 3.0 gradepoint average in both undergraduate and graduate courses in biology
(2) favorable recommendations from faculty members familiar with his/her graduate study, including evidence of approval for continued graduate study
(3) evident dedication to scholarly study, instruction and research
(4) acceptance by a possible advisor or by the EPOB Department, based upon correspondence of interests and availability of facilities, and
(5) acceptance by the Graduate School.

D. Students without a Master's Degree.
Students who do not have a Master's degree but who wish to bypass the Master's degree enroute to a Ph.D. degree must
(1) fulfill the same entrance requirements as applicants for the M.A. degree
(2) be accepted by an advisor for Ph.D. study
(3) obtain a rating of superior on the Ph.D. Preliminary Examination (see page 3),
(4) receive approval by the Graduate Program Committee, and
(5) be accepted by the Graduate School

The Ph.D. Advisory Committee

The Ph.D. Advisory Committee shall be composed of 5 members of the Graduate Faculty and includes the advisor, at least two additional EPOB faculty, and at least one member who is not appointed fully or in part in E.P.O. Biology. The composition of this Advisory Committee must be approved by the Graduate Program Committee. Changes in the composition of the approved Advisory Committee must be approved by the Graduate Program Committee.

The function of the 5-man Advisory Committee is to guide the student's professional development and to provide advice concerning coursework and research. In addition, the Advisory Committee prepares and administers the Ph.D. Preliminary Examination, the Ph.D. Comprehensive Examination and the Final Examination.

When the thesis advisor is not a (voting?) member of EPOB, a (voting?) member of EPOB must serve as co-advisor for the student.

Residence Credit Requirement

A student must be registered to earn residence credit (see Graduate Catalog for definition). The minimum residence requirement is a total of 6 semesters beyond the Bachelor's degree. No more than 2 may be allowed for a Master's degree. At least 4 must be earned at this University, and at least 2 must be in one academic year. For residence credit only, full-time requires 5 hours at 500 or 600 level, or 8 hours of other graduate work or full-time thesis work. Full load for summer is 3 hours at 500 or 600 level, or 6 hours of other graduate work, or thesis.

Students employed 1/4 time or less earn full residence credit. Those employed more than 1/4 time but less than 3/4 time earn 3/4 residence credit. After passing the Ph.D. Comprehensive, a student must maintain registration (at minimum fee, however, irrespective of enrollment hours) every semester (no summers required) until the degree is awarded or the student withdraws his/her candidacy.

For Selective Service and G.I. Bill purposes, full-time is regarded as 8 hours of coursework or full-time thesis work. Teaching assistants enrolled for 5 hours of coursework or thesis are considered full-time.

Degree Requirements

A student must satisfy the following requirements before the Ph.D. degree can be granted.

A. Course Requirements

1. Course Credits
   At least 46 semester hours of courses beyond the Bachelor's degree numbered 500 or above (including 16 thesis hours) are required. Twenty of the 30 non-thesis hours must be in graduate courses taken at C.U., and no more than 6 should be accepted in graduate Independent Study without consent of the student's Advisory Committee (see page). Students may use all 500, 600 and 700 level coursework taken at C.U. in fulfilling the minimum requirement for the Ph.D. degree. Courses taken outside of EPOB must be approved by the Advisory Committee.

2. Transfer Credits
   The student may petition that a maximum of 10 semester hours of graduate coursework completed at another institution be transferred to C.U. and applied to the non-thesis semester-hour requirement. Petition forms may be obtained from the Graduate Secretary of EPOB.

3. Seminar Courses
   At least 4 seminar courses involving student presentations must be completed satisfactorily. Enrollment in seminars should commence the first semester the student enrolls, and enrollment should be continuous until the requirement is fulfilled.

4. Other Courses
   The advisor and/or Advisory Committee may impose any additional course requirements which they believe to be essential for the student's program of study.

5. Thesis Credits
   Ph.D. degree students must register for a minimum of 16 and no more than 24 hours of thesis credit with no more than 8 hours taken in any one semester. Enrollment for thesis credit must be continuous until the degree is awarded. No more than 8 thesis hours may be taken before the Ph.D. Comprehensive Examination is passed (see below). A grade of IP is recorded for thesis credit each semester, and when the thesis has been completed, a final grade is determined by the Advisory Committee.

B. Foreign Language Requirement

The Rules of the Graduate School currently specify that all Ph.D. candidates demonstrate proficiency in one foreign language. This requirement may be satisfied by:

1. Completing a fourth semester undergraduate language course in an accredited academic program with a grade of no less than "C".

2. Passing the GSFLT Language Examination prepared by the Educational Testing Service of Princeton, New Jersey, in German, Russian, French, or Spanish with the following scores. (ETS information currently indicates that these scores are equivalent to a "C" grade in a fourth semester undergraduate course.) These scores are subject to change by the Graduate School at any time.

German	580
Russian	465
French	550
Spanish	550

3. Other demonstrations of similar proficiency include tests administered under the direction of chairmen of our foreign language departments, training in language institutes such as the armed service language institutes, training in federal programs such as the Peace Corps or Foreign Service, language training required for degrees obtained from foreign universities, and any other language training or experience that can be certified by chairmen of our language departments as equivalent to or exceeding a fourth semester undergraduate proficiency with a grade of no less than "C".

C. Teaching Requirement

(see page)

D. Ph.D. Preliminary Examination

The student must obtain a rating of superior on the Ph.D. Preliminary Examination (see below).

E. Ph.D. Comprehensive Examination

The student must obtain a rating of satisfactory on the Ph.D. Comprehensive Examination (see below).

F. The Thesis

The Ph.D. Thesis must be based upon original investigation and must show mature scholarship and critical judgment as well as familiarity with tools and methods of research. It should be a contribution to knowledge in student's special field. The thesis project, plan and progress should be known to and approved by the Advisory Committee.

G. Final Examination

The student must successfully defend the Ph.D. thesis and present a public seminar which summarizes his thesis research. (see below).

Formal Admission to Candidacy for the Ph.D. degree

The student cannot apply for formal admission to candidacy for the Ph.D. degree until he/she has completed:
(1) at least 4 semesters of full-time residence
(2) language, seminar and teaching requirements, and
(3) the Ph.D. Preliminary Examination with a rating of superior

The student must apply for candidacy no later than two weeks before the Ph.D. Comprehensive Examination is scheduled to be given. Blank forms for Admission to Candidacy can be obtained from the EPOB Office for formal departmental approval and submission to the Graduate School. Once the Comprehensive Examination is passed with a rating of satisfactory the student will be designated as a degree candidate. Once certified as a degree candidate, the student must maintain enrollment every regular semester (summer not included) until the Final Examination is passed. Registration after the Final Examination is passed is not required, although the Ph.D. degree will not be granted until the thesis is accepted by the Graduate School.

The Ph.D. Preliminary Examination

The Ph.D. Preliminary Examination is to be taken within one year by any student entering with a Master's degree, and within 3 semesters by those entering with a Bachelor's degree and planning to continue for the Ph.D. degree. This examination includes a written portion given in 4 half-day sessions followed within approximately 10 days by a half-day oral examination.

The Ph.D. Preliminary Examination is structured, scheduled and administered by the Advisory Committee in consultation with the student. The written portion is to be limited to General Biology and 3 additional areas from the Departmental listing (see below) chosen by the student in consultation with the Advisory Committee. The student writes on one subject area for each half-day session of the written examination. The questions for the written examination are prepared and selected by the Advisory Committee, and no questions are to be given to the student in advance. However, the student is to be advised well in advance as to the nature of the examination (i.e., objective, subjective, combination). After the Advisory Committee members have read the student's answers on the written portion, they will administer the oral examination which may include material from the written examinations as well as other subject matter.

A rating of superior complies with the Ph.D. requirements. When appropriate, it also complies with M.A. I Comprehensive Examination requirements. A rating of satisfactory on the Ph.D. Preliminary Examination fulfills the requirement for the M.A. I Comprehensive Examination, but does not satisfy the Ph.D. requirement.

An examination completed with a satisfactory or unsatisfactory rating may be repeated only once. The second attempt must be made within 3 to 6 months of the first attempt.

SUBJECT AREAS FOR THE M.A. I COMPREHENSIVE AND PH.D. PRELIMINARY EXAMINATION

1. General Biology (required of all students)

2. Biology of Special Taxa (chose one subarea)
   A. "Animals" (invertebrates or vertebrates)
   B. "Plants" (non-vascular or vascular)
   C. "Microorganisms (procaryotic or eucaryotic)

3. Anatomy, Morphology and Physiology (choose one subarea)
   A. "Animal"
   B. "Plants"
   C. "Microorganisms"

4. Genetics and Evolution

5. Taxonomy and Systematics

6. Animal Behavior

7. Ecology (including limnology)

The Ph.D. Comprehensive Examination

The Comprehensive Examination covers areas related to the student's field of research and is intended to detect significant weaknesses and to prescribe remedial action where necessary.

The Ph.D. Comprehensive Examination consists of a half-day oral examination conducted by the student's Advisory Committee.

The student must submit a written copy of a thesis research proposal to each member of the Advisory Committee at least one week prior to the oral examination. Discussion of the research proposal is part of the examination. The thesis research proposal should include:

(1) demonstration of knowledge of pertinent literature
(2) rationale for proposed research
(3) relevant preliminary research already completed or in progress (if any)
(4) experimental design including proposed analysis of data

At least one week prior to the Ph.D. Comprehensive Examination, the student must notify the EPOB Office of his/her name, the date and time of the examination, and the names of the five committee members (including the advisor). A form for reporting this information is available in the EPOB Office. This information is relayed to the Graduate School which returns a reporting form to the Advisor. Following the examination this form is to be marked "satisfactory" or "unsatisfactory", signed by all members of the Advisory Committee, and returned to the EPOB Office for relay to the Graduate School.

If the oral examination reveals deficiencies, a rating of satisfactory may be designated as contingent upon completion of specified requirements.

If a student receives a rating of unsatisfactory he/she may repeat the examination once. The second examination must be taken no sooner than 3 months and not more than six months later.

The student must register every semester (not including summer) after the Ph.D. Comprehensive Examination is passed and until the Final Examination is passed.

If a student does not complete all requirements for the Ph.D. degree within four years of the date on which the Ph.D. Comprehensive Examination was passed, he must take a second Ph.D. Comprehensive Examination. The second examination should be similar in content to the first and should be administered by the Advisory Committee. If the student receives a rating of unsatisfactory on this second examination he may retake it once, no sooner than three months and not more than six months later.

The Final Examination

The student must notify the Graduate School of the exact title of the thesis at least six weeks before he/she expects conferral of the Ph.D. degree. The title will appear in the Commencement Program. The student must obtain from the Graduate School directions for the Dissertation Abstracts manuscript, the Final Examination Notice or Leaflet, and University Microfilms aggreement form several weeks before the date of the Final Examination. The Final Examination Leaflet is to be completed by the student and returned to the Graduate School at least two weeks before the examination. The other forms will be returned to the Graduate School with the final copy of the thesis. The student will pay the $25.00 fee at that time.

The Final Examination will consist of two parts:

Part 1. The evaluation of a penultimate draft of the thesis.
A copy of the penultimate draft of the thesis is to be approved by the advisor for submission to the Advisory Committee at least two weeks prior to a formal defense by the student.

The basic format for the thesis is to be determined by the advisor in consultation with the student, and must conform with Graduate School requirements. It is the responsibility of the student to be certain that Graduate School requirements for the format of the thesis are met.

Following a thorough examination and of the dissertation, the Advisory Committee may suggest or require revisions. The Advisory Committee may wish to read the revised draft or may empower the advisor to verify that any necessary alterations have been incorporated.

Preparation of the final draft, which incorporates all revisions, is to be completed prior to the public seminar.

Part 2. The Public Seminar
The second portion of the Final Examination is a formal 50-minute public seminar during which the student discusses the results of his/her thesis research. Following the seminar, the Advisory Committee will sign the final approved copies of the thesis. The student must present both the advisor and the EPOB Department with a copy of the thesis. Prior to signing the thesis, the Advisory Committee should ascertain that all remedial requirements have been fulfilled.

Publication of Thesis

Publication of thesis is not required but is strongly recommended. Publication of all or any part of the thesis prior to granting of the degree is permissible only by prior approval of the Advisory Committee. A letter to this effect from the Advisory Committee must be placed in the student's departmental file and a copy forwarded to the Graduate School.

If a substantial portion of the thesis has not been accepted for publication within three years of degree conferral, the advisor has the option of using the data for publication under joint authorship.

When publishing thesis material whole or in part, the author should indicate his address as the Department of Environmental, Population and Organismic Biology, University of Colorado, Boulder, Colorado, 80302. The author's current address (if different) should be noted for reprints. A reprint of all published materials from theses should be forwarded to the EPOB Office.

IV. Exceptions to Graduate Student Regulations

A student, advisor, or Advisory Committee may petition the Graduate Program Committee concerning exceptions and/or alterations in the EPOB departmental requirements described above. After reviewing the petition (including interviews if necessary) the Graduate Program Committee will forward the petition along with its recommendation to the Executive Committee for final decision.

TYPICAL SCHEDULE OF DEADLINES OF Ph. D. CANDIDATES
(See the Graduate Bulletin for precise dates in given years)

Advisory Committee appointed	As soon as possible, or by the end of the first semester
Preliminary Examination	Without M.A. degree, by 3rd full-time semester after enrollment; with a M.A. degree, by end of 2nd semester
Language Examination and Seminars	During first year and by usually uninterrupted registration thereafter until complete
Application for candidacy filed	By two weeks prior to Comprehensive Examination
Comprehensive Examination (Oral)	Prior to begining in depth research on thesis topic
Penultimate draft of thesis available to Committee	At least 14 days prior to Final Examination
Final Examination (Defense of Thesis and Public Seminar	At least 4 weeks prior to Commencement
Thesis filed in Graduate School	At least 2 weeks prior to Commencement
Completion of all degree requirements	Within 4 years after admission with an M.A. degree, 5 years if no M.A. degree sought

Because of heavy faculty (and student?) commitments,

No graduate exams are to be given during:

(a) week of preregistration and advising

(b) student review ("dead") week

(c) final examination periods

(d) between regular and summer sessions

Feb. 5, 1975

FEB 0 5 1975

TO: Faculty - EPO Biology

FROM: Charles Norris

SUBJECT: Faculty Meetings

It appears that Tuesdays at 5:00 PM are the only possible times for our faculty to meet. Therefore, I am calling our first meeting for next Tuesday, February 11 at 5:00 PM in Hale 302.

Please try to be prompt. It will be necessary to have a good many meetings this term, and I hope that we can regularly finish by 6:00 PM.

Agenda:

Announcements
New faculty priorities for 1975-1976
Graduate Regulations (please bring your copy)

Meeting of Feb. 18 at 5:00 PM in Ramaley 216

Agenda:

Announcements
Chairmanship for next year or more
Dept. Charter (bring your copy)

Dr. David Rogers
Hale 114

FEB 0 6 1975

TO: EPOB Faculty

FROM: W. Segal

Arguments Supporting the Reappointment of CN as Chairman

1. Appointment of other faculty members in the Department would seriously interfere with their research productivity at a crucial period when we should be encouraging departmental research output in every way possible. CN equates his remaining (before retirement) academic achievement and contribution, as well as person fulfillment, with upgrading and expanding the Department through administrative effort.

2. CN is totally committed in terms of time, interest and energy to the task of departmental administration and development. His allegiance and his entire professional involvement always has been exclusively with this Department.

3. He is very well known and respected in the CU academic community and in the CU administration. His influence with the Administration has already produced results in the short time that he has been Chairman.

4. He is an excellent administrator with much experience (he virtually ran the Department during a former Chairman's reign; not HS)

5. He is an excellent mediator and pacifier, a necessary administrative attribute in resolving intradepartmental and interdepartmental conflicts. At the same time he is principled and is willing and able to be forceful in asserting our rights. His approach to seeing to it that our needs are satisfied by the Administration may be low-keyed to some, but who can establish that this is less effective than an arrogant, hardline approach (I can cite several examples where the latter approach has failed miserably with our Administration). We must face up to the reality of our situation (especially difficult for new members), as we make new demands for space, facilities and faculty, that we are encumbered by a historical tradition of weakness, administrative neglect and prejudice against us as a department (to quote a recent statement by an influential member of the Physics Dept., "Let's face it, the Biology Department (EPOB) has always been low man on the totem pole".). This, combined with hard times and a bare bones University budget (especially for the College of Arts & Sciences), makes the position of our Chairman very shaky in relation to the Administration. I believe CN is ideally suited to deal with this sensitive situation.

6. He has a progressive approach to the introduction of new fashions, new concepts and new generation in Biological Science (probably derived from his broad historical perspective). This is another important attribute at this time in our history when we are undergoing a large turnover in faculty personnel with a "new generation" (during the past 10 years) assuming the majority of departmental members.

7. For the many years of his total dedication to this Department he deserves this opportunity to make a significant contribution to the future development of the Department.

EPD Bio.

Rogers

TO: Executive Committee
Crumpacker, C. Norris, D. Norris, Bornstein, Linhart, Marr, Buchner and Owen

There will be an Executive Committee meeting Tuesday Nov. 12th at 1:00 o'clock in Rawaloy 211.

Agenda:

Discussion of projects by Dr. D. Rogers

Any other business

TO: Faculty - EPOB

Oct. 16, 1974

FROM: Charles H. Norris

Faculty meeting minutes of 10/14/74

The meeting was called to order by Chairperson Charles Norris at 5:10 PM. in Ramaley 216. Eighteen voting faculty were in attendance. He announced that the Graduate Student Council representatives had requested permission to attend the meeting. Professor Winston moved that they be permitted to do so and the motion was seconded. The representatives, John Mendenhall and David Buckner were asked to leave during the voting. The motion passed, without dissent. While Mendenhall and Buckner were out, the Chairman announced that, on the request of a faculty member, the Chairman had inquired of Hobart Smith concerning his willingness to r return to the Chairpersonship of the Department in fall, 1975. C. Norris reported that Professor Smith has said he is not willing to do so. In the discussion following, Professor Windell moved that the Chairperson inquire of Dean Briggs concerning the possibility of inviting applications from outside the University. The motion was seconded. After appreciable discussion, the motion passed (10-6)

C. Norris then reported on his meeting with Vice-Chancellor Gary Andrew, who was accompanied by Dr. David Potter, (Director of Campus Planning), Robert Smith (Budget Analyst for the Regents), and Sam Fisher (Statistician in the University Planning Office), concerning building plans. Without entering into many details, essentially what was accepted by the Vice-Chancellor is the following:

1. That faculty protested remodeling of Ramaley be abandoned.

2. That the Department during the next three months develop a sound academic program, from which will flow a sound facilities program.

3. That in close cooperation with the Planning Office a sound facilities program be fully developed and presented by fall, 1975, with a request to the legislature for approximately $4.7 million for new construction and Ramaley remodeling, with the new construction to be started in late 1976 and (hopefully) completed in 1978.

The Development Committee of the Department will meet on Thursday, Oct. 17, at 2:00 PM.

Professor Windell inquired whether it is mandatory that the General Biology laboratories and support facilities be moved to Ekeley east, suggesting that other segments of the department might more easily be so accomodated. (SEE: Note 1 at end of these minutes). The Chairman was directed to make inquiries concerning this.

Professor David Norris then moved that the proposal for the Ph.D. preliminary examination, presented by the Graduate Program Committee in dittoed form be accepted. Professor Jones seconded. Following a suggestion by Professor Segal, Professor Shulls moved that under II there be added:

C. Microorganisms
   1. prokaryotic
   2. eukaryotic

The motion was seconded by Professor J. Bock, and after considerable discussion, was passed by a 13-3 vote.

Professor Crumpacker then moved that the subjects of Genetics and Evolution (Area IV) be separated and made 2 areas. The motion was seconded and failed by a vote of 3-12.

Professor Shushan then moved that Area VII - Animal Behavior be deleted, and Animal Behavior included in Ecology. Professor Winston seconded. After discussion the motion failed by a vote of 2-15.

Professor Shushan then moved that Area V - Ecology, be separated into Animal and Plant Ecology. The motion failed by lack of a second.

The motion as amended was then voted on and passed 13-2. - A copy of the motion as ammended, is attached.

The Faculty then entered into a discussion of the actions of the Graduate Program Committee and the Executive Committee in providing Paul Rock with an opportunity to try the Ph.D. Preliminary Examination for a third time. The discussion was protracted, and it became apparent that many members of the Faculty did not have sufficient information on which to base judgement. It was pointed out that action to allow this would be in the nature of a petition to the Graduate School Dean to allow this. (SEE: Note 2.)

Professor Linhart moved that statements from the persons having knowledge of the circumstances be prepared, and be circulated. The motion was seconded and passed (SEE: Note 3)

The meeting adjourned at 6:45 PM.

Submitted by C. H. Norris

NOTE 1: On Tuesday, Oct. 15, C. H. Norris met and talked with Vice-Chancellor Andrew, who agreed that instead of General Biology, other laboratories could be moved to Ekeley East. C. H. Norris is now working on this.

NOTE 2: Your Chairperson did not do his homework prior to the meeting. He has checked the Graduate School rules and there is no Graduate School statement of how many times a student may take Preliminary Examinations. This is a departmental ruling only, and if the Faculty ratifies the actions of the Graduate Program Committee and the Executive Committee, Mr. Rock will be allowed a third chance.

NOTE 3: A file of statements is being prepared and is at Mrs. Owen's desk. If any members of the Faculty who have knowledge of the situation wish to contribute that knowledge - please do so.

NOTE 4: Since writing the minutes and other notes, C.H.N. has just finished talking with Dean Briggs re Chairperson problems. He says he has no guarantee of any FTE's for next year. Further, he says that, supposing he could say the EPOB Department could have 25 thousand dollars for faculty, which is more needed - 2 younger not well-known scientists but promising - to aid the instructional program or one distinguished scientist who, as Chairperson, would not be able to help the instructional needs of the Department?

In other words, while he does not say no to going outside, he gives the impression that the Department would have to make a very good case indeed.

The Graduate Program Committee moves the adoption of the following listing from which graduate students may choose for their Ph.D. prelim or Master's I Comprehensive examination: All will choose General Biology (Area I) plus 3 others.

I. General Biology (must be one area)

II. Biology of Special Taxa (choose one subarea)
- a. "Animal":
  - 1. invertebrates
  - 2. vertebrates
- b. "Plant"
  - 1. non-vascular
  - 2. vascular
- c. "Microorganisms":
  - 1. Prokaryotic
  - 2. Eukaryotic

III. Anatomy and Physiology (choose one sub area)
- a. "Animal"
- b. "Microbial"
- c. "Plant"

IV. Genetics and Evolution

V. Ecology (includes Limnology)

VI. Taxonomy and Biosystematics

VII. Animal Behavior

D. O. Norris

Nov. 12, 1974

TO: All Faculty

FROM: EPOB Office

RE: Executive Committee Meeting

Dr. David Rogers
Hale 114

The meeting was called to order at 1:20 by the Chairman, Dr. Charles H. Norris.

Present: R. Bernstein, David Buckner, Crumpacker, Linhart, D. Norris and E. Owen

Guests were: Dr. Charles Slater of School of Business and Dr. David Rogers

1. The chairperson spoke to the Executive Committee about a Christmas Party. He suggested the 20th of December. Members felt that perhaps Dec. 13 would be more appropriate so that all Faculty and Staff would still be here. It was suggested that the Faculty wives (husbands) could possibly each send something in the way of refreshments. The office would see about the drinks.

2. There should be a meeting of the Graduate Faculty to Organize and Develop policies for selection of membership on the Graduate Faculty by 6th of December. (per memo)

3. Summer school courses are being prepared. Anyone involved should have their definite plans to Dr. C. Norris immediately.

4. Dr. David Rogers then took the floor and explained the function of his contracts with USAID and FAO plus projected relationships with the USDA, IBM, and expanded relations with USAID. Dr. Slater then added his connection and envolvement of the Business School. Much
5. discussion ensued.

5. Dr. Crumpacker suggested that the Development Committee must have their plans to the Dean before xams.
He also discussed importance of having our requests regarding inequities in salaries to the Dean before xmas.

6. Dr. Crumpacker moved and Dr. Norris seconded a resolution of enthusiastic support of proposals from the Taximetrics Laboratory.

7. Two special Faculty meetings were scheduled for next week and you have now received notices about them.

Rogers

UNIVERSITY OF COLORADO
College of Arts and Sciences

NOV 4 1974

Office of the Dean
Hellems 152

October 31, 1974

MEMORANDUM

TO: Department Chairmen, Vice Chairmen or Major Advisor Coordinators

FROM: Bruce E. Ekstrand, Associate Dean, and Mr. Peter List

SUBJECT: Statements of Major Completion

DUE NOVEMBER 27, 1974

We want to thank you again for undertaking this task. There are several items to which we would like to call your attention before you begin filling out the forms.

I. Students are being informed to report to departmental offices between November 4 and November 27. It is extremely important that the student's signature appears on the form. Please return the forms en masse. Do not give the forms to the students to return. Be sure that both the department and the student retain a copy of the statement. The white copy is to be returned to the Dean's Office, the yellow is to be kept by the department and the pink is to be given to the student.

II. In filling out the form:

Section A

1. Indicate the number of hours the student has completed in his major through the last semester completed. (Last semester to be indicated on top of form: thru _____ semester, 19___.) This information will be found on the Dean's Page which accompanies the Statement of Completion.

2. Indicate all upper division hours earned in the major.

3. Indicate all hours of C grade earned in the major.

4. List all required courses by course number which the student has completed. Please remember that a student is under the major requirements which were in effect at the time of admission.

Section B

1. State the number of hours the student has remaining to complete his major requirements. These hours are those yet to be completed during fall, 1974 and spring, 1975 semesters.

2. Give the number of upper division hours necessary to complete the 16 hours of upper division courses with C grade or better required for the major.

3. Indicate the total number of hours yet to be completed in the major with a C grade of better.

4. Indicate all courses both in the major department and in related departments which the student is required to complete in order to meet his major requirements.

   If any courses must have a grade of C or better, clearly indicate this by the courses. Otherwise, we will not require the student to obtain a grade of C or better.

5. If the student has completed more than 45 hours in the major department, please check the box indicating excess hours in the major.

Should you have any questions, please feel free to call extension 7885.

10/31/74

FROM: Charles H. Norris
TO: Faculty - EPOB
Report of Executive Committee Meeting of 10/29/74

NOV 4 1974

The Executive Committee of the EPOB Department met in Ramaley 211 at 1:10 PM, on Tuesday October 29. Attending were Ruth Bernstein, David Buckner, Yan Linhart, John Marr, David Norris and Charles Norris.

The Chairperson reported briefly on his attendance at the "Governor's Forum" in Fort Collins on 10/24/74, on plans for utilization of space in Ekeley Bldg, east wing and on results of proposals for grants for undergraduate scientific instruction.

The discussion of plans for Summer 1975 led to the information which was sent to you by intradepartmental mailing on 10/30/74. There was also some discussion of the report from the Office of Institutional Research containing the 10 year data on instructional activities of this Department.

The rest of the meeting was a consideration of a working draft of a proposed Department Charter. The outcome of the deliberations has been sent to you with enough time for action next Wednesday (Nov. 6, 4:00 PM) in Hale 302.

The meeting adjourned at 2:45 PM.

Dr. David Rogers
Hale 114

Dr. David Rogers
Hale 114

Minutes of EPOB Meeting Nov. 6, 1974

Announcements

1. Final exams from 12/13 to 12/20, 1974. No deviants allowed.

2. 10 new FTE requested for next year - "If we're lucky we may get one," though our version should be: "We MUST get AT LEAST one."

3. New regulations for personnel Appointment, re-appointment tenure etc... will be handed out.

4. Xerox budget was $851 last month for faculty. Please restrain yourselves (at least with respect to Xeroxing).

Discussion of P. Rock Appeal

D. Norris moved that P. Rock be given 2nd opportunity to take prelim exam.
R. Jones seconded

W. Segal moved that debate be limited to 5 min. per person.
P. Winston seconded
Motion passed 18 - 1

C. Norris relinguished the chair to D. Norris so he could comment on the situation.

J. Marr then pointed out that one of his most successful students had 4 tries at the exam, finally passed it, and is now a very successful biologist.

S. Shushan pointed out that:
1. It is the responsibility of the examining committee only to make a decision about a student's performance.
2. P. Rock was given 2 chances.
3. If we allow Rock a third chance, our standards are nil.
4. If we persist in our efforts, Shushan will personally go to the Graduate School to fight this decision.

J. Bushnell stated that in general, he goes along with S. Shushan's sentiments. He also agreed with J. Marr that some people deserve another chance.

W. Lewis wanted to hear some of the arguments in favour of giving P. Rock another chance.

R. Jones, a member of Rock's thesis committee answered. Jones felt that:
1. Rock shows potential, and his committee is impressed with him
2. By giving him another dance chance we are not prostituting our standards.

O. Williams added that one reason for the length of time taken by Rock to complete his M.A. in that he worked 40-60 hours per week to support his father, mother, brother, sister-in-law.

C. Bock endorsed Jones' opinion.

M. Bekoff asked for re-clarification of exam procedures.

S. Shushan re-clarified.

M. Bekoff pointed out problems associated with the decision-making regarding a student's performance.

C. Bock pointed problems associated with Rock, a physiologist, being in the Environmental Division because O. Williams, his major professor was in that division.

R. Jones called the question, C. Bock seconded.

Vote in favor of P. Rock getting another chance was 19 - 3.

Reports of committees followed.

11/7/74

TO: Faculty EPOB

FROM: Charles H. Norris

SUBJECT: Charter revision

While walking back to Ramaley from Hale yesterday, it was suggested to me that we might increase the rate at which we complete our Charter revision by inviting criticisms of the draft of the Charter sent to you last week. I would like to have you read it thru, looking for inaccuracies, typos, misstatements, ambiquities, etc. etc., and send me your ideas. I'll then try to combine all the criticisms and present them to you in advance of the meeting at which this is to be considered.

Addendum

Please notify Gil Hersh in Professor Rogers' Lab. of all computer needs for COURSES (not research) for Spring Semester, 1975.

Dr. David Rogers
Hale 114

NOV 19 1974

To the Curriculum Synthesis Committee - Rogers, Windell, Segal, Winston

The first part of the meeting on Monday afternoon was spent in verbal jockying that allowed us to get things off our chests, to clear our minds of our own plans and axes to grind, etc. It was suggested that we were to be mere instruments to put the desires of the subcommittees into a meaningful whole. However, Jay Windell had not had a subcommittee for General Biology and when he finished expounding his latest dreams and desires, we had all worked out what looks like a good redoing of the General Biology Program. This would take care of the needs for Gen. Bot. and Gen. Zool., for example, without piling them on top of 2 semesters of Gen. Biol. A suggested beginning looks like this:

	102A	- Animal Biology
	102B	- Plant Biology
Biol. 101 Principles of Ecology Environmental Problems Investigative Techniques An Holistic approach to Biology	102C	- Microbiology
	102D	- Cell Biology, Genetics and some of 102A,B,C. THis would be a terminal course.

(These leaves us without the nice introduction to genetics - or could it still go into 101 - yes.)

102D would be terminal for the Non-Biology major.

102A&B would be more than the straight conventional Botany and Zoology courses but would also include some functional aspects in them (and others, presumably). Only a bit of cell stuff here - but some.

102C Microbiology would have the heaviest input of cellular studies of the 3, naturally, but here is where they would also be introduced to biochemistry and cell structure and function.

It was suggested that students would be required to take 101 and one of theseothers if not more. (We should keep the overlap to a minimum among A,C,B.)

Also, in 101 we would be able to demonstrate the need for Cell Biology taxonomy, and other studies that they are apt to shy away from. There they will be shown how important plants really are and they will flock into 102B. (Presumably the 102 courses would be prerequisites for respective advanced courses).

Would you please set up what you think are the good routes for majors emphasizing different things - try to identify those within the framework of the scheme I gave you Monday.

Further, somwhat unrelated points dredged from the poor memory.

We must try to get it accross to the rest of the Department that we need this framework right now for planning the new building. The more concrete this is, the better our chances of convincing others that we really need it. There is no need to panic however, there is plenty of time to ignore it for the next 4 years when the building might be ready - at the earliest. Parts of a new plan can go in before then of course.

We tried to list courses that were requried by other Deaprtments or Schools (Pharmacy, etd.) and the only one that is almost wholy a service course is Human Anatomy. A list of courses for the general student - not requiring General Biology was very small. They mostly seem to be one-shot deals that we can't keep up with.

Agreement was unanimous that the number of requirements should be kept to a minimum - no more than Genreal Biology? Pathways must be very char frOm there on, though.

One of our problems is to be sure to try to set up the curriculum so that more of our graduates can get jobs other then teaching. Dave suggested that we might profitably bringing soemone in Goverment or Industry to give an idea of the tings bpeople need. (Charlie Norris has all ready gotten a start on this).

It was suggested that more examples from the "real world" be used, that Man is an environmental factor, and that Agriculture is worthy of study. The world Food Problem was suggested as a good thing for the kids to look at as a central theme.

The equal split between Ecology and Populations Biology is not necessary, but the latter is good to bring all the geneticists under the umbrella.

We all agreed that Environmentla Biology should be the umbrella for the Department. Don't change the name again, however.

We did not come to grips with the small class vs. large class problem, but it was discussed.

ATTENTION - ALL ADVISORS

NOV 20 1974

This policy adpoted during summer just came to the attention of the Chairman.

IMPORTANT POLICY

TO: General Biology Faculty's of Integrated Studies, MCDB, EPOB (J. Bock, Cundiff, Dubin, Ham, McIntosh, Porter, Windell) and Dean John Carnes

FROM: EPOB Office (Smith)

RE: Response to 6/5/74 memo from Dean Carnes re interchangeability of General Biology courses

DATE: Aug. 6, 1974

The available representatives from the three departments giving a course in General Biology convened at noon, Aug. 5. Present were Drs. Cundiff, Dubin, Ham, McIntosh and Smith. Dr. Porter was represented by Dr. Ham; Dr. Albersheim has withdrawn all concern; and Drs. Bock and Windell could not be present but were represented by Smith.

The 5 members present unanimously committed their respective departments to the following policy, adapted from Dr. Dubin's letter of February 11; such policy should become a part of the descriptions in the A & S catalog and elsewhere as seems appropriate.

> EPOB 101-102, BS 103-104, and MCDB 105-106 are two-semester sequences in introductory biology, each sequence intended to be taken in order. Students taking any one of these sequences will not receive credit for any other General Biology course. Students who have previously taken two semesters of General Biology (or its equivalent) may not also receive credit for any one of these sequences. Transfer students who have one semester of General Biology transfer credit should consult the course instructors to determine which semester of which sequence to elect to finish their sequence in General Biology.

In addition, the group unanimously endorsed the following understanding which is to constitute an unwritten policy for all.

> Completion of one sequence by a semester in another sequence may be permitted, but only under extraordinary circumstances.

We reiterate that the latter provision should not be publicized, lest the option be abused.

We trust that these commitments by the representatives listed above of the concerned departments will meet with the approval of Dean Carnes and will be honored by all advisors.

NOV 20 1974

Nov. 20, 1974

TO: Faculty EPOB
FROM: Charles Norris
SUBJECT: Copies of term papers

If you assign term papers to students for fulfillment of course requirement, and the students wish to retain copies for themselves students should be told that they should either make carbon copies or pay for their own Xerox copies.

THE OFFICE WILL NO LONGER PROVIDE THIS SERVICE FROM DEPARTMENTAL FUNDS. WE SIMPLY CANNOT AFFORD IT.

SUBJECT: report of Faculty Meeting 11/18/74

The Faculty of the Department met in Hale 302 at 5:10, for a special meeting with Dean William Briggs attending. Twenty five members of the faculty attended. Dean Briggs discussed the options open for the Department in selecting a chairperson to take office in fall, 1975.

He pointed out that he had no way of assuring that there would be funds available for searching out some distinguished biologist to serve beginning at that time. However he did not close the door to such a possibility in the future, utilizing several ways that might be utilized. These included pooling allocations for temporary faculty, and anticipated retirements or resignations.

There was also considerable discussion of other departmental staffing problems. Dean Briggs was candid and expressed himself as being fully aware of the staffing needs of the Department, however he emphasized the importance of the Department's establishing policies for itself. Such policies are of great significance in the processes of selection of appropriate faculty, staff, and chairperson.

In conclusion, he expressed the opinion that for at least two or three years, the Department should find some person already on the Faculty to serve as chairperson.

The meeting adjourned at aobut 6:20 PM.

Graduate School NOV 14 1974

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

Department of Environmental, Population and Organismic Biology

Nov. 12, 1974

Associate Dean Deward Walker, Jr.
Graduate School.

Dear Dean Walker:

In the Department of EPO Biology the rules for graduate students provide that the student who takes the combined MA Comp/Ph.D. Preliminary Examination must achieve a rating of Superior to continue toward the Ph.D. degree, while the grade of Satisfactory allows the award of the MA degree. Further, a person who fails to achieve a Superior grade may be allowed one further trial.

During the spring of 1974 one of our students, Paul Rock, tried the written MA Comp./Ph.D. Prelim for a second time. He received a Satisfactory grade. It is worth noting, perhaps, that as a Plan I MA candidate, he did not really complete his MA Comp. until his oral defense of thesis. This was done a short time ago, and on that defense the Examining Committee was enthusiastically pleased with his performance.

His MA Advisory Committee petitioned our Graduate Program Committee for a third trial for Paul Rock. That Committee recommended that the petition be granted, and this action was approved by the Executive Committee of this Department.

At a meeting of the Faculty of EPO Biology last Wednesday, after appreciable discussion, the Faculty voted (19 for - 3 against) that the petition be granted.

This communication asks that you approve the action of our Committees and our Faculty, permitting Paul Rock a third try at the Ph.D. Preliminary Examination.

Sincerely,

Charles H. Norris

Charles H. Norris
Chairman

CHN:so

O.K.
DEW
11/14/74

Mintues of Meeting of EPOB Faculty, Sept. 3, 1974

Recorded by YBL

Meeting called at 2 p.m. by Charles Norris, Chairman

New members of EPOB faculty, Drs. Marc Bekoff, Ruth Bernstein, William Lewis, Jr., Jeffry Mitton were welcomed.

First item of business dealt with temporary lecturers, and their role in departmental affairs. It was agreed that:
a) Alan Crockett and Frank Moore can attend faculty meetings and have a vote.
b) Jonathan Oldham and Dr. Estela can attend meetings but have no vote.

Purchasing procedures:
A memo from P. R. Johnson, Director of purchasing services was read to the faculty. This memo states among other things: Written bids will not be required under 1,000, however, proper competitive documentation is required on all orders over 200.00. Subject to certain provisions, the standing order system has been approved. We suggest each standing order be reviewed upon renewal with the buyer concerned.

It is hoped that P. R. Johnson is available for translation of this memo into every day language, and for interpretation of various clauses.

Personnel:
Because non-academic personnel is now part of the state system, hiring procedures are revised. Copies of procedures to be followed in hiring etc... are available in office.

Registration:
Once again, unreasonable demands in terms of numbers of students to be taught are being made upon EPOB's faculty, T.A.'s staff and facilities.

Colloquium:
W. Crumpacker reported on the forthcoming schedule. A round of applause was given the committee for its diligent and imaginative work.
Crumpacker also reported about the location of the colloquium (Ramaley 116) which many felt was unsatisfactory. There ensued an anarchistic discussion about the merit of various rooms and Hale 103 was tentatively approved - subject to further change. Final decision is Colloquium will be in Ramaley 104. Except the Dec. 5, which is a Thursday and will be ARR.

Departmental reorganization:
Several suggestions were made in response to Charles Norris' proposed outline of committees - for example:
a) cut down the number of persons per committee, so as not to overburden us with committee work.
b) Membership on committees should be on a rotating basis, and organized so that there are always new members mixed with experienced members.
It was moved by W. Crumpacker that the executive committee be composed of the chairman and associate chairman of EPOB plus four faculty members to be elected by the membership. All members except the chairman will vote. The chairman will vote only to break a tie - the motion carried unanimously.
It was also agreed upon unanimously that the members elected to the Exec. serve one year terms.
Bernstein, Crumpacker, Linhart and Marr were elected to the Exec. Committee. In addition, one graduate student and one staff person will be on the Exec. Committee.

The meeting adjourned at 4 p.m.

9/12/74

TO: Faculty, EPO Biology

FROM: Charles H. Norris

SUBJECT: Executive Committee of EPOB meeting of 9/10/74.

The Executive Committee of the Department met for two hours, starting at 1:00 p.m. on Tuesday, Sept. 10, in Ramaley 211. For the time being at least, the Committee will meet each Tuesday at 1:00 P.M. in that room. Several subjects were discussed and certain actions taken.

In the light of last year's consideration of near future needs of the Department for faculty and current registrations the following were suggested, and the suggestions will be transmitted to the appropriate committee when that is established (presumably the Development Committee - as soon as possible).

2 ecological physcologists - one botany, one zoology
1 cytotaxonomy and plant evolution
1 protozoology
1 entomology
1 microtechnique
1 bioinstrumentation

The Committee discussed several of the suggestions from the Chairmen for the committee structure of the Department and presents the following to you for your consideration. Attached to this communication you will find a ballot, and we would like you to vote for or against each of the proposals which we herewith present to you.
Other committees will be considered later. In asmuch as these are really changes in our present Charter, we assume that a 2/3 majority of the voting faculty will be essential for acceptance.

Executive Committee. This committee shall consist of the Chairman, The Assoc. Chairman, and four voting members of the Faculty, elected by the Faculty as a whole, plus one graduate student (who may vote if the voting Faculty members approve), plus one staff member, elected by the non-academic staff, with out vote. Elections shall be in the spring. With duties to start in the fall semester. The presiding officer shall be the Chairman w/o vote except to break ties. The term of office is one year, but members may succeed themselves.

Each of the faculty members shall be designated as a member of at least one of the following six standing committees on Department policy, and shall thus serve as important channels of communication between those committees and the Executive Committee.

The Executive Committee shall serve as advisors to the Chairman on all questions of policy and implementation which he may bring before it. It shall receive reports from all standing and ad hoc committees, and when these reports suggest that such action is necessary, may refer actions of such committees to other committees or to the Faculty of the Department. It may establish policy for the Department, under emergency situations, and in significant policy decisions, its actions must be ratified by the Department Faculty.

Committees on Departmental Policies

Development Committee. This Committee shall consist of four faculty members appointed by the Chairman with the advice and consent of the Executive committe plus one faculty member of the Executive Committee, plus one graduate student and one undergraduate student.

The Development Committee shall engage in activities designed to promote the present and future well-being of the Department in several related areas, as follows:

A. It shall seek to ascertain from sources within and outside of the University (e.g. industry, various governmental agencies at all levels) what kinds of knowledge and skills are desirable attributes of persons they may hire, so as to make our curricula more effective in providing education of our undergraduate and graduate students to make them reasonably successful in the highly competitive market for positions, etc. From such studies, it is expected that there will flow suggestions for modifications of our present curricular programs.

B. It shall seek to ascertain the kinds of biologists necessary to fill out the several needs of the Department, based on the findings in A, above, and keeping in mind both the undergraduate programs and the development of appropriate areas in graduate teaching and in research.

C. Based on such studies as indicated under A, as well as suggested curricular modifications, it shall seek to establish a firm basis for decisions concerning needs of the Department for space, both by conversions of present spaces, and construction of new. It is understood, of course, that there must be incorporated into such proposals, adequate space and facilities for the research which accompany effective teaching activities, and which must exist to attract the kinds of faculty which will be essential if the teaching functions are to succeed.

D. The Committee shall seek to ascertain the needs of the Faculty for effective pursuit of investigative and scholarly activities, and shall diligently seek to encourage the Faculty in such pursuits in all possible ways.

E. The Committee shall endeavor to promote the effective image of the Department and its contributions in the eyes of the University Administration and the community at large, through all possible suitable means.

Undergraduate Advising and Transfer Accreditation Committee. This Committee shall consist of four members of the Faculty, three of whom are appointed by the Chairman and one, a faculty member of the Executive Committee, plus the secretary in the Department office who is most knowledgeable about such work. The committee is expected to be thoroughly cognizant of the College and Major requirements of graduation, and shall brief the other members of the Departmental Faculty on these. All members of the Faculty are expected to participate in the advising of undergraduates, and the Committee shall assign advisors to major students on the basis of the areas of interests of the students. The Committee shall insure that records of advisor assignments are maintained in the Departmental office. They shall attempt to devise a system for maintenance of the records of all students in courses in the Department, so that when inquiries about students appear, information will be available.

Graduate Program Committee. This Committee shall consist of the Associate Chairman of the Department, plus three members appointed by the Chairman, plus one graduate student (non-voting).

This committee shall be empowered to establish standards for admission of students to the Graduate Program of the Department; to receive and act on admission applications; to receive and act on applications for appointments (assistantships, fellowships, scholarships); to receive and act on applications for reappointments, based on screening of previous performance; to maintain policies in the Graduate Program and regularly to reassess such policies for the determination of needed revision of policies; to assign students to advisors, and approve the advisory committees of graduate students; to act as advisors to unassigned graduate students; to foster the integration of graduate students and Faculty, with the view toward maintenance of morale and communication.

Tenure Committee. This Committee shall consist of all tenured members of the Faculty, and each year shall elect a Chairman from its membership.

This Committee shall be charged with careful examination of all pertinent information concerning non-tenured members of the Faculty, whose consideration for continuous tenure is anticipated within a span of two years. The findings of the Committee shall be made known to the Administration, through the Chairman.

Learning and Teaching Committee. This committee shall consist of three appointed faculty, plus a faculty member from the Executive Committee, and one graduate and one undergraduate student.

The Committee is charged with encouragement of improvement of teaching, based on carefully prepared methods of student-evaluation of the individual members of the Faculty. The Committee shall recognize that different criteria must be used for different kinds of teaching (lecture, recitation, laboratory, field studies) and for differences which exist in class sizes, etc. It shall counsel with and encourage individual members of the Faculty in their development of techniques of evaluation, and receive reports on such evaluations. Such reports are to be made available in the Department office for consultation by students, especially during registration periods.

Courses and Scheduling Committee. This Committee shall consist of two appointed members of the Faculty, plus the Associate Chairman of the Department, plus two graduate and two undergraduate students.

This Committee shall regularly review the content of the courses offered by the Department, and, when it deems that such is necessary, shall suggest modifications which appear appropriate. This procedure is especially important when the course is being offered by a member of the faculty who is new to that course. Moreover, the Committee shall solicit course outlines from other Departments when such are to be considered as fulfilling requirements for EPO Biology majors. This procedure is crucial when the courses are to be offered in schools or colleges outside the College of Arts and Sciences, where the Committee on Courses of the College has no authority.

In addition, the Committee shall be responsible for arranging the schedule of courses for the Department, making all possible efforts to avoid conflicts, and doing its utmost to insure that maximal utilization of rooms is achieved, without sacrificing educational values.

TO: Faculty, EPO Biology

SEP 24 1974

FROM: Charles H. Norris

SUBJECT: Report of Executive Committee meeting, 9/17/74

The EC met at 1:10 PM in Ramaley 211, Tuesday, Sept. 17, 1974, Chairman Charles Norris presiding. All faculty members (Bernstein, Crumpacker, Linhart, Marr, D. Norris) were present. After a few announcements by the Chairman, discussion of several items led to certain actions. No formal votes were taken, with general unanimity apparent.

The first item concerned the status of Dr. Michael Grant, appointed during the summer as Director of the Mountain Research Station, an action by the INSTAAR Council. That body had previously decided that the position should be filled by a biologist. Accordingly a screening committee was established, composed of Professor J. Bock, Y. Linhart, H. Nichols (Chmn.),and P. Webber. This committee examined the credentials of a number of applicants, and selected two for visits to this campus. The two were Dr. Jay Anderson and Mr. Michael Grant (now Ph.D.). The visits were arranged and the candidates were scheduled for presentations of their research,with our faculty notified of their seminars Unfortunately, the times were so late in the year that few of our faculty could attend. Those who did were consulted by the screening committee, and Michael Grant was nominated to the INSTAAR council. The Council then made an offer to Grant, and he accepted the position of Director of the Mountain Research Station.

It is of course, appropriate that he be considered for appointment in this Department at an Attendant rank (which has no provision for tenure consideration). Therefore, the Executive Committee recommended that:

1. Dr. Grant's folder (including curriculum vitae, etc) be available for examination by our Faculty, and

2. As a first item of business at our next (hopefully very soon) Faculty meeting, the Faculty discuss his possible role in the Department, and then vote to accept or reject his appointment as Assistant Professor, Attendant rank, with or without vote.

The folder will be available for two days in Ramaley 110, beginning Monday, September 23, 1974, and, for 2 days in Hale 112-B beginning Wednesday Sept. 25, 1974.

After discussion of the remaining Committees in your Chairman's proposal of August 8, 1974 the following have been recommended, as presented in the proposal of August 8, with changes as indicated.

Ancillary Facilities & Services

(change from two to one graduate student)

Colloquium

(change from three to one graduate student)

General Biology

(In line 3 of paragraph 1, insert the word experienced before the words teaching assistants, and in line 4 of paragraph 2, substitute the words once per semester, for the word regularly).

Library Committee - as proposed.

Honors Committee - as proposed

Graduate Student Council - as proposed

Liaison with Institutes and Council - as proposed

The selection of personnel for the departmental committees was then considered and the following faculty were appointed.

You will note that C. Bock, J. Bushnell, R. Gregg, and H. Smith are not given any committee assignments becasue of leaves. (They'll get stuck next year!)

Development - J. Bock, R. Jones, C. Norris, D. Rogers (Chmn), W. Segal

Undergraduate advising & Transfer Accreditation
E. Bonde, S. Shushan (Chmn.), O. Williams, P. Winston, and Dorothea Slater.

Graduate Program. A. Cruz, W. Lewis, Y. Linhart, D. Norris (Chairperson).

Learning and Teaching. R. Bernstein, J. Bock (Chairperson), N. Richardson, J. Windell.

Ancillary Facilities and Services. E. Bonde, Y. Linhart, W. Shults, J. Windell, P. Winston (Chairperson).

Colloquium - M. Bekoff, D. W. Crumpacker(Chairperson), W. Segal, P. Webber.

Library - E. Bonde (chairperson), Y. Linhart, D. Norris.

Honors - N. Richardson (chairperson), W. Segal, P. Winston. Richardson will be EPOB Honors Council representative.

Liaison w/Institutes and Councils. J. Mitton, H. Nichols (chairperson, D. Rogers, J. Wilson.

Your chairman reported that he will ask Mrs. Owen to communicate with non-academic staff, requesting that they either provide nominations, to be followed by an election ballot, or that they meet to nominate and elect a member of their group to serve on the Executive Committee.

Your Chairman reported that he has talked with Steve Peterson, who says that the machinery for selection of a Graduate Student Council is being set up.

Your Chairman indicated that he will arrange a meeting of undergraduate majors in EPO Biology, and will urge those attending to set up an organization, and subsequently to elect members to serve on several departmental committees.

The meeting adjourned at 2:50 P.M.

9/26/74

TO: Faculty - EPO Biology

SEP 26 1974

FROM: Charles H. Norris

SUBJECT: Building Plans

Colleagues! Like it or not, we are stuck with the high administration decision that our Department is to be housed in the area in and around the Ramaley Bldg. Remodelling of Ramaley is scheduled for fiscal 1975-65; with relocation of all functions elsewhere (Hale, E. Campus, Ekeley East, etc.) I cannot see how Ram. 104 can be vacated except during the two summer sessions involved. This will have to be worked out with the Planning Office. However, we have been stuck, and on Tues., Oct. 1, I have to deliver to the Planning Office a program for the remodelling of Ramaley, to occur during July 1, 1975 thru (hopefully) beginning of fall semester, 1976. I have been rather dilatory on doing this, hoping something would happen to ease the pains that have been developing during the onset of 1974-75 academic year. BUT WE ARE STUCK WITH IT!!

The crucial problem (if you like chess, the opening gambit) for the whole of the old (west) campus redevelopment is the Ramaley remodelling. For this, there is a proposal of $1.7 + million, and that can do a lot even with inflation. The high levels of the Administration in their wisdom have decreed that Ramaley is to be a teaching building (especially teaching labs) and that during 1977-1979 there is to be a new EPOB structure dedicated to research. When one analyzes the space problem it is completely clear that the new space will have to house not only research, but some teaching, especially General Biology and Microbiology. Such new space in toto will probably cost in the n million class.

What I must have from you immediately (like Friday, Sept. 27, 1974) is your reaction to proposals for Ramaley remodelling. These will be available to you on Friday only in the Ramaley Office. Please do not try to belabor me with objections to the Administration's decisions as to where EPOB is to do its things; I can't do anything about that. What I have to know in specific terms is how one could do a better job of using Ramaley. You will note that I am not providing for either Microbiology or General Biology. They will be taken care of temporarily in Denison and Ekeley East and hopefully later in the new building.

What we are trying to do is to establish educationally significant relationships between areas in EPOB which can interact meaningfully with each other in teaching, especially at the undergraduate level. Following this, I am expecting that within a very few months our Development Committee will have come up with a good academic plan on which to base our new building request.

On the copies of the Ramaley Bldg. available, and sheets accompanying, please note specific objections, or, if not objecting to allocations, specific needs for effective teaching (e.g. services essential at work stations like A.C. lines, gas, air, vacuum, etc)

I apologize for throwing this at you - I don't think I can help it, except for the brief time I am allowing.

Dr. David Rogers
Hale 114

TO: Faculty

FROM: Main Office

RE: Enrollment

The following is the student enrollment in EPOB for Fall Semester, 1974.

EPOB	Course	No.
101	General Biology: Sec. 1, 237; Sec. 2, 225; Sec. 3 246; Sec. 4, 204; Sec. 5, 163	1,075
101	General Biology: Section 6	270
210	Plant Kingdom	37
251	Intro to Evolution	90
300	App-Medical Technology	5
301	Biol of Microorganisms	103
302	Parasitology	25
311	Morpho Non Vas Plant	31
321	Essentials Plant Phys	45
322	Essentials Animal Phys	143
331	Field Botany	30
341	Prin of Ecology	169
345	Intro Arc-Alp Environ	49
383	Genetics Sec. 1	204
383	Genetics Sec. 2	202
400	Teaching Modern Biol	15
405	Teaching Lab Biol	23
406	Teaching Lab Biol 2	2
408	Comp Vert Anatomy	105
409	Comp Vert Anatomy Lab	102
423	Cell Physiology	23
424	Intro to Animal Behav	210
425	Microb Appr Envir Prob	34
430	Class Flowering Plants	18
435	Ecology for Man	52
441	Plant Ecology	116
443	Animal Ecology	148
491	Independent Study	40
492	Independent Study	12

Graduate

505-24 507-37 511-16 515-27 517-49 522-16 539-22 546-1 548-14 549-23

550-15 555-6 569-14 583-13 599-5 654-6 663-5

10/2/74

TO: Faculty of EPO Biology Department

FROM: Charles H. Norris

Dr. David Rogers
Hale 114

SUBJECT: Reports from Executive Committee

Meeting of 9/24/74

Attending: Berstein, Crumpacker, Linhart, Marr, C. H. Norris, D. O. Norris

Actions: (1) discussion of reappointment of A. Cruz, appointment of M. Grant. (2) Discussion of Paul Rock's status with referral to Graduate Program Committee (3) Start of rewriting of Charter.

Meeting of 10/1/74

Attending: Bernstein, Linhart, Marr, C. Norris, D. Norris, Grad. Student Rep. David Buckner. Jane Bock for Learning and Teaching Committee.

Actions: (1) Heard from Jane Bock on proposals under study by the University Council on Learning and Teaching, and on actions of the EPOB Committee on areas for study. Those areas are:

1. Methods for integrating career planning, development, and placing in our curriculum. (J. Windell)
2. Study of methods for accreditation for teaching of independent study and honors. (Bernstein and Richardson)
3. Acute problems in teaching loads and course assignment processes. (J. Bock)

Prof. Marr suggested the Learning and Teaching Committee investigate graduate participation in work-study supervision. Exec. Committee requested that the Learning and Teaching Committee explore ways of recognizing outstanding teaching in the Department.

(2) Report from D. O. Norris on Grad. Program Committee: (a) Recommendation that Paul Rock be permitted to try Ph.D. Prelims again. Unanimous approval of Exec. Comm; (b) G. P. C. is engaged in clarifying nature of graduate examinations.

(3) Continued work on rewriting of the Charter of EPOB Department.

Oct. 7, 1974

TO: EPOB Faculty

From: Charles H. Norris

OCT 8 1974

There will be a meeting next Monday at 5:00 P.M. in Ramaley 216.

Agenda:

Report of Graduate Program Committee

Faculty discussion of Paul Rock decision - Requested by Bonde & Shushan.

Building business

TO: Faculty of EPOB

From: Charles H. Norris

In the listing of faculty members on committees, I inadvertently omitted the Courses & Scheduling Committee. Those people are:

John Marr, D. O. Norris (Chairperson) and Olwen Williams.

Student members of all committees should be available within two weeks.

10/7/74

TO: Faculty of EPOB

FROM: Charles H. Norris

SUBJECT: Miscellany

1. Building business: finally on Thursday Oct. 3, I was able to talk with Vice-Chancellor Gary Andrew. He agreed to meet with Professor Rogers and me on Wednesday, Oct. 9. Dr. Andrew will bring along a new person in the Regent hierarchy, a man who has been appointed to advise the Regents on budget matters, he was on the staff of the Joint Budget Committee of State Legislature, and should therefore be particularly capable of answering questions on budgeting - in this case capital construction. I have the impression that it will be impossible to get authorization for new construction to start in 1975 but that we will be able to do a far better job of planning and get much better space to start in 1976.

Dr. Andrew would not commit himself on the proposal to go north of Ramaley. There are many problems that have to be considered.

2. Housekeeping:

a. All work for the Department office must be initiated through Mrs. Owen, in order to distribute the loads efficiently.

b. Please think a little bit before using the Xerox. Our September bill is the highest we have had. Part of this is understandable with four new faculty plus the start of the academic year.
Also, if you are having your work-study people do the work, be sure that they know that they must record the starting and ending numbers on the log plus the name of professor for whom they are doing the copying.
Also, do not tell undergrads they can use the machine.

c. Please erase blackboards when you've finished using the room, and urge your T.A.'s to do the same. Also clean up junk you've left by cutting board, ditto machine, etc., in machine room.

d. Someone borrowed and did not return an electric flashlight pointer from Ramaley 110. If you have it please return.

e. Reminder about mail:
a. If domestic first class goes any distance, first class in just as fast as air mail.
b. Any heavy materials (collections of reprints, etc.) should go third class, but must not include letter - it should be mailed separately.
c. Foreign air mail letters are best handled by using aerograms - available from department office.

10/7/74

TO: Faculty EPOBiology

From: Charles H. Norris

Faculty Meeting - 9/27/74

Minutes

Chairperson Norris called a special meeting of the Faculty in attendance at the EPOB Colloquium following that Colloquium. He reported on the building problems, and told the faculty he planned to submit a program for remodelling of Ramaley for teaching purposes, and would at the same time submit a covering statement that the Faculty of the Department was unanimous in its protest against the plan. He further said that he would submit an alternative proposal for new construction to the north of Ramaley, designed to provide much underground and some above ground space, including teaching and exhibit greenhouse. He was also able to report that he had talked with Dean Briggs & Assoc. Dean Sawin about the problem, and that they agreed that the program could be sent in, with the protest and alternative. They also indicated that they would seek an appointment with Vice-Chancellor Andrew to discuss the problem.

The members of the Faculty present expressed full approval of the action taken by the Chairman, and urged that the alternative (neo-construction to the north and attached to Ramaley) be accomplished rapidly. Meeting adjourned at about 5:45.

Faculty meeting - 9/30/74

The Faculty met in Hale 302 at 5:00 Pm. The Chairperson suggested that the Faculty first consider the reappointment of Assistant Professor Alexander Cruz. It was moved and seconded that the Department recommend his reappointment. During the laudatory discussion which followed, the Faculty expressed the opinion that the Chairperson should urge that the Dean permit the Department to initiate actions seeking to obtain an additional FTE to help Dr. Cruz in the work with section 6 of EPOB 101-102, so that he would be able to devote more time to research and advanced teaching. The motion passed unanaimously. It was then moved and seconded that the Department recommend to appointment of Dr. Michael Grant as Assistant Professor, Attendat Rank. After some discussion of proposals for teaching activities in the Department, the motion was passed unanimously.

Chairperson Norris then announced that Dean Briggs and Assoc. Dean Sawin had met with Vice-Chancellor Andrew and had received the impression that the plan for remodelling Ramaley exclusively for teaching activities would be dropped and that the completion of writing such a program could be held off. Dean Sawin further had suggested that Chairperson Norris seek an appointment with Vice-Chancellor Andrew to discuss the problem.

In the discussion, the Faculty expressed concern that all new construction would be delayed overly long - as has happened so often in the past - and that the Chairperson seek to press for such construction. to start in 1975.

Meeting adjourned about 6:05 P.M.

DATE RECEIVED:

Routing:

	Initial
April	
Abbott	
Bailey	
Hersh	
Hanley	
Rogers, Dave	DJR
Rogers, Connie	
Louis	
McArthur	
von Borstell	
Jose Saldana	
Secretary	

Filing:
Original EPD Biology -
Copies: none

In
Out
Internal
Administration
Fiscal/Contract

Organization EBOB

Project

Proposal

COMMENTS:

Into the Departmental memo file -

Oct. 11, 1974

TO: All Faculty

The Graduate Program Committee moves the adoption of the following listing from which graduate students may choose for their Ph.D. prelim or Master's I Comprehensive examination: All will choose General Biology (Area I) plus 3 others.

I. General Biology (must be one area)

II. Biology of Special Taxa (choose one subarea)
  a. "Animal":
    1. invertebrates
    2. vertebrates
  b. "Plant"
    1. non-vascular
    2. vascular

III. Anatomy and Physiology (choose one sub area)
  a. "Animal"
  b. "Microbial"
  c. "Plant"

IV. Genetics and Evolution

V. Ecology (includes Limnology)

VI. Taxonomy and Biosystematics

VII. Animal Behavior

8379- D. O. Norris

NOTICE:

Dr. Ian Thornton, Dept. of Geology, University of London, will give a talk on "Geochemistry and Health" in Geology 311, Monday (14th) at noon.

Paul Winston

Dr. David Rogers
Hale 114

10/30/74

Dave--

I've tried for about two weeks to catch you in your office, without success. So, this note is the best I can do.

With respect to Your memo of Oct. 11, re: Ph.D. prelim or Master's I Comprehensive examination, I very strongly recommend that one additional area be added (if it isn't too late already). That area is Quantitative Biology. I have my first graduate student in this area now, and if she doesn't have that area for her Prelim, she will not have a chance to be questioned on her major area. So, can this be added?

In addition to the one student, we anticipate that the department will probably have other students in such a curriculum, so we would be better off if that general area could be added.

Thanks for your consideration.

Dave Rogers

May 6, 1974

DEPARTMENT OF EPO BIOLOGY
Meeting of the Faculty - May 2, 1974

Present: H. Smith, R. Jones, B. Pollock, Y. Linhart, C. Norris, W. Shults, R. Pennak, S. Shushan, W. Crumpacker, N. Richardson, J. Wilson, E. Bonde, A. Cruz, C. Bock, W. Segal, B. Denman, R. Gregg, one graduate student (Steve Peterson), and Jay April.

The meeting was called to order at 3.15 PM.

Announcements:

1. Harvey Nichols has received a grant for field work in Labrador this summer, 1974.

2. Robert Gregg has received a travel grant for field work in Mexico during the Fall semester, 1974.

3. An emergency Senate meeting has been called for 4:10 today, in Duane G020, to consider a motion by Professor Nelson on the issue of collective bargaining for the University of Colorado. It was agreed to adjourn this meeting in time for all who wish to attend the meeting of the Senate.

4. The next meeting of this faculty will be at 4:30, Tuesday, May 7, in Ramaley 113, to consider the candidates for the Limnology position.

5. The Laboratory genetics position.
Dr. Mitton has been offered the job, and he will decide whether to accept within two days (Wilson Crumpacker).

Agenda:

1. The Ethology position.
The decision was between Dr. Heckenlively and Dr. Bekoff for first place on the slate of candidates. Discussion indicated that Bekoff is the more desirable of the two, and a motion in favor of him was passed unanimously. The qualifications of Dr. Ferguson (who had been previously for second place) were reviewed by Dick Jones. Dr. Pennak then moved to invite Bekoff to join this faculty in the field of ethology. The motion was seconded and passed, 12 to 2.

2. Report from the Departmental Development Committee.
Jay April, of the Taximetrics Laboratory, presented a proposal whereby this department (its faculty and students) may participate in a seminar of instruction on computer-based techniques that can be useful in solving biological problems. The seminar will be offered in Fall, 1974, and continued in Spring, 1975, as a 3-hr course (505) each semester. Preparation for it must begin almost immediately. Instruction in the theory and use of the computer will be included, and also the identification of specific problems with the computer applied to their solution. A detailed prospectus was circulated to all members, and all who are interested are urged to communicate with the Taximetrics Laboratory. A copy of the program is attached to the secretary's record of these minutes.

The meeting adjourned at 4:00 PM.

Respectfully submitted,
Robert Gregg, Sec'y.

July 8, 1974

TO: Faculty and Staff of the Department of EPO Biology

FROM: Charles H. Norris

When the Faculty of our Department selected me to serve as chairman during the coming year, I am sure that few of us realized all of the problems which would be thrust at us. For my part, I had expected that it would be possible to keep up the pattern which had been so successfully achieved by Hobart Smith over the past few years, and perhaps to move somewhat further in the same direction. However, with the actions of this Faculty during the latter part of the past year, as well as some actions by the Administration, it is clear that the Department will be facing a good many problems which will require earnest consideration and effective solutions. It is my heartfelt feeling that, with the cooperative spirit which you have exhibited during the past four years, we will be able to move with alacrity toward finding appropriate solutions to our problems.

Among the pressing problems which we face, I see the following as particularly urgent, but by no means the only ones.

1. Preparation of a new departmental charter and set of by-laws. The necessity for this arises from the action of the Faculty at its last regular meeting, dissolving the Divisions.

2. Careful study of our curricula. With the large number of undergraduate majors who are now enrolled in the Department, it seems to me that we must look carefully at our undergraduate instructional programs, and seek to provide curricula which will help such students to develop careers that utilize the facts and ideas and attitudes which we can provide. A similar situation holds for our graduate students. The market for Ph.D.'s certainly is shrinking at the present time. Are we providing the kinds of Ph.D. programs which will give our candidates a fair shake in the highly competitive market? We must also consider our M.A. program, and especially we should think seriously about the M.A. II. Perhaps if we establish a solid kind of M.A. II program, directed to secondary school teachers of biology, and in developing it, work toward more attention to summer session offerings at the 500 and above level, we might be doing a great service.

3. Building and Space. The Administration is going ahead with its plans to remodel Ramaley in 1975-1976. It is also now planning a new structure (tentatively listed as I-D) in the Life Sciences complex. The Department must have a major input during the next several years, with sustained pressure on the Administration to provide for our needs.

4. Staffing. The Department must continue to show that we deserve more faculty and staff. This cannot be done solely on the basis of student-credit-hour production or numbers of majors. We must also show that we are moving forward in development of curricula, and are really preparing students for entrance into their careers after formal education. In addition, there will likely be some pressures for biology faculty to engage in adult education programs; this is in the future, but we can help to justify additional faculty if this becomes a consideration in our requests.

Dr. David Roger
Hale 114

5. Image of the Department. The past four years have seen positive progress in recognition of the role of the Department in the College, the Graduate School, and the University as a whole. We must maintain our momentum, and perhaps we should direct our attention to:

   a. Development of greater University recognition of the Department's services to pre-professional and professional curricula (premedical and predental, especially) and to other departmental curricula (MCD Biology, Psychology, Geography, etc.).

   b. More directed efforts toward closer cooperation with certain institutes and agencies in the University, such as INSTAAR, IBG, IBS, and the Environmental Council.

From time to time during the next few weeks, I will be sending you statements of the ways that have occurred to me by which some of the problems I have suggested may be handled. In the meantime, please start to think of ways in which you believe some progress may be made.

Thank you for the confidence you expressed in selecting me; I will do my best to live up to that confidence. In the meantime, I ask you cooperation, and your forebearance when I make mistakes.

April 25, 1974

DEPARTMENT OF EPO BIOLOGY
Meeting of the Faculty - April 23, 1974

Present: H. Smith, W. Crumpacker, O. Williams, D. Norris, N. Richardson, C. Norris, J. Bushnell, R. Pennak, W. Shultis, W. Segal, J. Bock, C. Bock, Y. Linhart, J. Wilson, E. Bonde, S. Shushan, R. Jones, A. Cruz, J. Windell, R. Gregg.

The meeting was called to order at 3:00 PM.

Announcements:

1. Keith Porter informs us that a new member for the MCDB Faculty, Dr. Kathleen Danna, to succeed Abe Flexer, has been found. She will be available for conferences with this department, and further information will be supplied later.

2. James Wilson has been recommended for promotion to Associate Professor by the Psychology Department. Since he holds a joint appointment in Psychology and Biology, it was suggested and urged that we make a parallel recommendation. It was so moved and seconded. The motion passed.

3. Word from Dean Briggs states that he is unable to approve tenure for Harvey Nichols because it would be contrary to the rules of the University. The position of Professor Attendant makes no provision for advancement on tenure beyond that rank. The only route around this situation is for Harvey to be appointed a regular Assistant Professor in the Department, after which he would be eligible for consideration of tenure. The members greed to this procedure and suggested a short period of time lapse in order to comply with the regulations.

Agenda:

1. Selection of Limnology candidates.

The committee has screened the candidates and now submits them in two groups, a mature or senior group, and a group of young recently eclosed Ph.D.s. John Bushnell discussed the qualifications of these aspirants, presenting the senior group first, as follows:

Higgins	Cummins
Mecom	Cowgill (2)
Maguire (1)	Hermann

Much discussion ensued, followed by a ballot vote to determine the top two candidates. Maguire received first place, Cowgill second.

The junior group was treated in like manner, as follows:

Lewis (2)	Fisher
Maki	Dodson
Obrien	Stanford
Allan (1)	

The last three names were eliminated, and vote was taken on the first four with Allan receiving the first place and Lewis second place.

A final ballot was taken to determine which two candidates should be invited here for interviews and seminars. Allan ranked first and Lewis second.

Lewis (2)
Allan (1)
Cowgill
Maguire

Owing to another engagement, Hobart Smith left the meeting and C. Bock assumed the chair.

2. Carl Bock presented a notice of motion to wit:

As of September, 1974, the several division in this department will be abolished. The motion was seconded, and discussion was postponed for a later meeting.

3. Selection of Ethology candidates.

Dick Jones presented the slate that had been distilled by his committee in search for an animal behaviorist. The following persons were discussed rather fully, and the three top-ranking contestants were chosen by ballot, giving Bekoff first place, Ferguson second place, and Phillips third.

Heckenlively
Bekoff (1)
Tyler
Buchler
Phillips (3)
Ferguson (2)

The meeting adjourned at 5:00 PM.

Respectfully submitted,
Robert Gregg, Sec'y

TO: EPO Biology Faculty, Staff and Graduate Students

FROM: Colloquium Committee (Bonde, Segal and Crumpacker)

DATE: September 3, 1974

SUBJECT: Departmental Colloquia, 1974-75 Academic Year

Most of the colloquia will be held in room 116 Ramaley on alternate Fridays at 4:00 p.m. If a large audience is anticipated, Ramaley 104 will be used.

The fall semester schedule is:

Fri., Sept. 13 - Dr. Michael Grant, Dept. EPO Biology and INSTAAR - "Genetic Properties of Ecologically Marginal Populations"

Fri., Sept. 27 - Dr. Mukta Webber, Dept. Surgery, Univ. Colo. School Medicine - "Herpesviruses and Cancer"

Fri., Oct. 11 - Dr. James Wilson, Dept. EPO Biology, Dept. Psychology, IBG - "Age, Sex and Ethnic Effects on Human Cognitive Abilities in Hawaii"

Fri., Oct. 25 - Dr. Jeremy Pickett-Heaps, Dept. MCD Biology - "Origin of Land Plants from Green Algae Based on New Evidence from Electron Microscopy"

Fri., Nov. 8 - Dr. Charles Ralph, Chrmn., Dept. Zoology and Entomology, CSU - "An Overview of Pineal Gland Function in Vertebrates"

Fri., Nov. 22 - Dr. Charles Norris, Chrmn., Dept. EPO Biology - "Biophysics: What is it? Where did it come from? Where is it going?"

Fri., Nov. 29 - Thanksgiving Holiday

Thurs., Dec. 5 - Dr. James Joule, Division of Natural and Physical Sciences, U. Colo., Denver - "Experimental Species Removal in Rodent Communities"

Fri., Dec. 6 - Beginning of Student Review Week

Some pertinent dates and speakers scheduled for spring semester are:

Mon., Jan. 20 - Classes begin

Fri., Jan. 24 - Dr. George W. Beadle, President Emeritus and Distinguished Service Professor, U. of Chicago - "The Origin and Evolution of Maize"

Fri., Mar. 7 - Dr. George Van Dyne, Former Dir. of Grassland Biome Study of IBP and Prof. in Depts. of Range Science and Fishery and Wildlife Biology, CSU - "Systems Ecology and Modelling of Grasslands Ecosystems"

Mon., Mar. 24 - Sat., Mar. 29 - Spring Vacation

Thurs., May 1 (Date is tentative; co-sponsored with MCD Biology) - Dr. Roger Payne, New York Zoological Society and Rockefeller U. - "Biological Acoustics and Behavior of Large Whales"

IMPORTANT - Five dates are still open for speakers next spring. If you have a suggestion, please contact Bonde, Segal or Crumpacker.

Final TA Assignments

Fall 1974

EPOB 101 (17.5)

Sec. 1-5 Boyce (.67)
Byron, E. (1.0)
Duke (1.0)
Emerick (.67)
Foltz (1.0)
Garfinkle (1.0)
Hatchell (1.0)
Hanzon (.33)
Kohler (1.0)
Kirven (.67)
May (1.0)
McGuire (.67)
Powers (1.0)
Peterson, S. (.67)
Stacey (1.0)
Steuben (1.0)
Sphuler (1.0)
Sy (.5)
Telleen (.33)
Thompson (1.0)
Vincent (1.0)

Here are the final TA assignments. We were unable to obtain any additional TA positions. Check with the office before telling students to add your classes. We can anticipate no additional requests for TA's will be granted.

EPOB 101
Sec. 6 Diamond (.05)
Head (1.0)
Kodadek (1.0)
Mitchell (1.0)
Swain (1.0)
Williams (1.0)

EPOB 210 Emerick (.33)

EPOB 301 Sy (.05)
Tockman (1.0)

EPOB 302 Kirven (.33)

EPOB 311 McGuire (.33)

EPOB 321 Tillotson (1.0) Boyce (.33)

EPOB 331 Peterson, S. (.33)

EPOB 341 Zegers (.05)

EPOB 322 Fitzgerald (1.0)
Gern (.05)
Peterson, T. (1.0)

EPOB 383 Sec. 1. Byron, P. (1.0)
Sec. 2 Mendenhall (1.0)

EPOB 409 DeBeaubien (1.0)
Oldham (1.0)
Gern (.05)

EPOB 423 Snow (1.0)

EPOB 424 Diamond (.05)

EPOB 441 Buckner (1.0)
Olmsted (1.0)

EPOB 443 Hanzon (.67)
Telleen (.67)

EPOB 533 Zegers (.05)

Dr. David Rogers
Hale 114

Boyce (.67) EPOB 101, (.33) EPOB 321

Buckner EPOB 441 (1.0)

Byron, E. EPOB 101 (1.0)

Byron, P. EPOB 383, Sec. 1 (1.0)

DeBeaubien EPOB 409 (1.0)

Diamond EPOB 424 (.05);101 Sec. 6 (.05)

Duke EPOB 101 (1.0)

Emerick EPOB 101 (.67); 210 (.33)

Fitzgerald EPOB 322 (1.0)

Foltz, EPOB 101 (1.0)

Garfinkle, EPOB 101 (1.0)

Gern EPOB 322 (.05); 409 (.05)

Hanzon, EPOB 101 (.33); 443 (.67)

Hatchell, EPOB 101 (1.0)

Head, EPOB 101 Sec. 6 (1.0)

Kirven EPOB 101 (.67); 302 (.33)

Kodadek, EPOB 101, Sec. 6 (1.0)

Kohler, EPOB 101 (1.0)

McGuire, EPOB 101 (.67); 311 (.33)

May, EPOB 101 (1.0)

Mendenhall, EPOB 383, Sec. 2 (1.0)

Mitchell, EPOB 101, Sec. 6 (1.0)

Oldham, EPOB 409 (1.0)

Olmsted, EPOB 441 (1.0)

Peterson, S. EPOB 101 (.67); 331 (.33)

Peterson, T., EPOB 322 (1.0)

Powers, EPOB 101 (1.0)

Stacey, EPOB 101 (1.0)

Steuben, EPOB 101 (1.0)

Sphuler, EPOB 101 (1.0)

Swain, EPOB 101, Sec. 6 (1.0)

Sy, EPOB 101 (.05); 301 (.05)

Snow, EPOB 423 (1.0)

Telleen, EPOB 101 (.33); 443 (.67)

Thompson, EPOB 101 (1.0)

Tillotson, EPOB 321 (1.0)

Tockman, EPOB 301 (1.0)

Vincent, EPOB 101 (1.0)

Williams, EPOB, Sec. 6 (1.0)

Zegers, EPOB 342 (.05); 533 (.05)

August 29, 1974

AUG 29 1974

TO: Faculty of E.P.O. Biology

FROM: Charles H. Norris

SUBJECT: Agenda for meeting of 9/3/74

1. Permission request to attend meetings - for lecturers and Mr. Gil Hersh - w/o vote.

2. Announcements
   a. State purchasing
   b. State Personnel
   c. Registration results
   d. Colloquium, 1974-75 - Crumpacker
   e. Special problems on teaching of courses.

      1. Animal Ecology
      2. Comparative Anatomy
      3. Oceanography

3. Start discussions of departmental problems, resulting principally from decision of May, 1974 to abandon the divisions, in terms of formal organization.

   a. Suggestions from CHN re: committee structure, etc.

Dr. David Rogers
Hale 114

Dr. David Rogers
Hale 114

August 8, 1974

FROM: Charles H. Norris
TO: Faculty of the Department of EPO Biology
SUBJECT: Reorganization of Committees of the Department

I would like you to consider the following suggestions concerning the Department's committee structure, and let me know your opinions, so that, with the collective wisdom of the Department, we shall be able to function more effectively. I shall then incorporate as fully as possible your suggestions, and resubmit revised proposals to you.

All of the committees listed below will be empowered to appoint such subcommittees as may be desirable, either on a standing basis or ad hoc.

The Chairman of the Department shall be a member of all standing committees, ex officio, and without vote, except as specifically indicated below.

Executive Committee. This committee shall consist of six voting members of the Faculty, elected by the Faculty as a whole, plus one graduate student representative (who may vote if the voting Faculty members approve), plus one staff member, elected by the non-academic staff, without vote. Elections shall be in the spring. The presiding officer shall be the Chairman; the Associate Chairman shall also be a member w/o vote.

Each of the six elected faculty members shall be designated as a member of one of the following six standing committees on Department policy, and shall thus serve as an important channel of communication between that committee and the Executive Committee.

The Executive Committee shall serve as advisors to the Chairman on all questions of policy and implementation which he may bring before it. It shall receive reports from all standing and ad hoc committees, and when such reports suggest that such action is necessary, may refer actions of such committees to other committees or to the Faculty of the Department. It may establish policy for the Department, under emergency situations, and in significant policy decisions, its actions must be ratified by the Department Faculty.

Committees on Departmental Policies

Development Committee. This Committee shall consist of six faculty members appointed by the Chairman with the advice and consent of the Executive committee, plus on elected member of the Executive Committee, plus two graduate students and one undergraduate student.

The Development Committee shall engage in activities designed to promote the present and future well-being of the Department in several related areas, as follows:

A. It shall seek to ascertain from sources within and outside of the University (e.g., industry, various governmental agencies at all levels) what kinds of knowledge and skills are desirable attributes of persons they may hire, so as to make our curricula more effective in providing education of our undergraduate and graduate students to make reasonably successful in the highly competitive market for positions. From such studies, it is expected that there will flow suggestions for modifications, by additions, deletions, and modifications of other sorts, of our present curricula.

B. Based on such studies as indicated under A. as well as suggested curricular

modifications, it shall seek to establish a firm basis for decisions concerning needs of the Department for space, both by conversions of present spaces, and construction of new. It is understood, of course, that there must be incorporated into such proposals, adequate space and facilities for the research which accompany effective teaching activities, and which must exist to attract the kinds of faculty which will be essential if the teaching functions are to succeed.

C. The Committee shall seek to ascertain the needs of the Faculty for effective pursuit of investigative and scholarly activities, and shall diligently seek to encourage the Faculty in such pursuits in all possible ways.

D. The Committee shall endeavor to promote the effective image of the Department and its contributions in the eyes of the University Administration and the community at large, through all possible ethically suitable means.

Undergraduate Advising and Transfer Accreditation Committee. This Committee shall consist of four members of the Faculty, three of whom are appointed by the Chairman and one an elected member of the Executive Committee.

The Committee is expected to be thoroughly cognizant of the College and Major requirements of graduation, and shall brief the other members of the Departmental Faculty on these. All members of the Faculty are expected to participate in the advising of undergraduates, and the Committee shall assign advisors to major students on the basis of the areas of interests of the students. The Committee shall insure that records of advisor assignments are maintained in the Departmental office. They shall attempt to devise a system for maintenance of the records of all students in courses in the Department, so that when inquiries about students appear, information will be available.

Graduate Program Committee. This Committee shall consist of the Associate Chairman of the Department, plus three members appointed by the Chairman, plus one elected members of the Executive Committee, plus two graduate students (non-voting).

This Committee shall be empowered to establish standards for admission of students to the Graduate Program of the Department; to receive and act on admission applications; to receive and act on applications for appointments (assistantships, fellowships, scholarships); to receive and act on applications for reappointments, based on screening of previous performance; to maintain policies in the Graduate Program, and to regularly reassess such policies for the determination of needed revision of policies; to assign students to advisors, and approve the advisory committees of graduate students; to act as advisors to unassigned graduate students; to foster the integration of graduate students and Faculty, with the view toward maintenance of morale and communication.

Tenure Committee. This Committee shall consist of all tenured members of the Faculty, and each year shall elect a Chairman from its membership.

This Committee shall be charged with careful examination of all pertinent information concerning non-tenured members of the Faculty, whose consideration for continuous tenure is anticipated within a span of two years. The findings of the Committee shall be made known to the Administration, through the Chairman.

Learning and Teaching Committee. This committee shall consist of four appointed faculty, plus an elected member from the Executive Committee, and one graduate and one undergraduate student.

The Committee is charged with encouragement of improvement of teaching, based on carefully established methods of student-evaluation of the individual members of the Faculty. The Committee shall recognize that different criteria must be used for different kinds of teaching (lecture, recitation, laboratory, field studies) and for differences which exist in class sizes, etc. It shall counsel with and encourage individual members of the Faculty in their development of techniques of evaluation, and receive reports on such evaluations. Such reports are to be made available in the Department office for consultation by students, especially during registration periods.

Courses and Scheduling Committee. This Committee shall consist of four appointed members of the Faculty, plus one elected faculty member from the Executive Committee, plus the Associate Chairman of the Department, plus two graduate and two undergraduate students.

This Committee shall regularly review the course content of the courses offered by the Department, and, when it deems that such is necessary, shall suggest modifications which appear appropriate. This procedure is especially important when the course is being offered by a member of the faculty who is new to that course. Moreover, the Committee shall solicit course outlines from other Departments when such are to be considered as fulfilling requirements for EPO Biology majors. This procedure is crucial when the courses are to be offered in schools or colleges outside the College of Arts and Sciences, where the Committee on Courses of the College has no authority.

In addition, the Committee shall be responsible for arranging the schedule of courses for the Department, making all possible efforts to avoid conflicts, and doing its utmost to insure that maximal utilization of rooms is achieved, without sacrificing educational values.

Committees on Special Activities. In addition to the committees listed above, the following Committees are to be appointed by the Chairman, with the approval of the Executive Committee, the duties being more highly specialized. Student members are to be selected by the Graduate Student Council.

Committee on Awards. This Committee, consisting of three members of the Faculty shall be responsible for announcement of award availability from the Gardiner-O'Dell, Lichty, Ramaley and Marian and Gordon Alexander Funds, as well as any others which may later be established. The Committee shall develop policies compatible with the wishes of the donors of such funds, and shall receive and evaluate applications for such awards.

Committee on Ancillary Facilities and Services. This committee shall consist of five faculty and two graduate students, as representative as possible of the various needs of the Department for such facilities and services as are indicated below.

The Committee shall be responsible for ascertaining the needs of the Faculty and their graduate students for facilities and services, and for supervision of those facilities and services, including the screening of applicants for staff positions associated with those facilities and services, supervision of such staff, and evaluation of performances. The facilities and services

Greenhouses and outdoor garden facilities; stockroom: shop: animal care: photographic darkrooms; audio-visual equipment; equipment for production of illustrative materials; missile site facilities.

In addition, this Committee is expected to provide liaison with appropriate administrative agencies for the use of East Campus research spaces.

Colloquium Committee. This Committee shall be composed of four members of the Faculty and three graduate students. The Committee shall solicit from the faculty and students in the Department suggestions for departmental colloquia, shall arrange schedules for such, and shall seek financial support for such programs from the University Committee on Special Events, through its Subcommittee on Convocations, as well as from other possible sources of funds. When funds are received from any of such sources, appropriate acknowledgement must be made by the Committee.

General Biology Committee. This committee shall consist of all faculty engaged in the teaching of general biology, plus the preparator for that course, plus two teaching assistants. The coordinator for the course shall serve as chairman.

This committee is charged with the maintenance of excellence in the general biology course of the Department, with continual evaluation of techniques, course plans, goals, and relationship to the other courses in the Department. It shall regularly report to the Faculty of the Department on the activities of the general biology course, and shall seek the counsel of the Department as a whole on possible ways to increase the effectiveness of that course.

Library Committee. This Committee shall consist of three appointed members of the Faculty. The Committee shall solicit from the Faculty and graduate students suggestions for library acquisitions and shall seek to assure that the Boulder Campus University Library acquires those books and periodicals which are of basic importance to the teaching and research functions of the Department.

Honors Committee. This Committee shall be composed of four appointed Faculty, and shall represent several areas of specialization within the Department.

The Committee shall publicize to all undergraduate majors in the Department the existence, purpose, scope, limitations, and regulations pertaining to the departmental Honors Program. It shall communicate to the students the eagerness of the Department for extensive utilization of the Program, while being watchful to prevent abuse or over-extension. It shall insure that the Faculty of the Department be cognizant of the Honors Program, and shall seek active participation of the Faculty.

At least one member of the Honors Committee shall serve, along with two others (not necessarily members of the Committee) on a subcommittee of the University Honors Council.

Graduate Student Council. The Graduate Student Assembly of the Department shall elect a chairman and four other members from the membership of the Assembly. The Associate Chairman of the Department shall serve as Faculty representative to the Council, without vote.

The Council shall select representatives for Faculty and Executive Committee meetings, and shall select graduate student representatives to serve on [illegible] Committee. It shall be responsible for establishment

of Committees within the Assembly, and shall hold elections for replacement of members of the Council.

Committee for Liaison with Institutes and Councils. This Committee shall be composed of four members of the Faculty.

The Committee shall attempt to promote harmonious and effective relationships with such University Institutes and Councils as IMSTAAR, IBG, the University Museum, etc., seeking to achieve mutually beneficial relationships between those agencies and the Department.

In addition to the Committee structures listed above, there are other "posts" which must be filled for specific duties:

Building Proctors - these persons shall supervise space utilization, assign spaces, and be responsible in emergencies.

Computer Class Need Coordinator - shall coordinate class requests and budget allocations for computer facilities for all classes, except dissertation.

August 1, 1974

TO: All EPOB faculty

FROM: EPOB office

Dr. David Rogers
Hale 114

RE: Miscellany

Date: Aug. 1, 1974

1. Chairman: Aug. 16 (Friday) will be the last day for Smith in the Chairman's office. Charles will be holding forth there beginning the following Monday, Aug. 19. Please extend to him the same courteous tolerance and cooperation you have given his predecessor, and do allow him the necessary adjustment time as he picks up the many strings that departmental administration entails, and as he promotes further progress out of the doldrums of the past. We are entering a dynamically changing era, requiring the active participation of all to effect our healthy adaptation to it. Resistance to change leads to degeneration, of which we have suffered too much already; we must direct our energies instead to guidance of change along the most beneficial lines.

2. Work-Study: A request has already been submitted for about the same number of work-study students to be assigned to various faculty members as we used last year, but we must know before the semester begins precisely who needs how many. Please notify the Dept. office as soon as you can of your needs. No requests received after August can be honored.

   It is not at all certain that we can, in the end, honor even half of the requests for Work-study help, because preliminary emanations from Hellems indicates that our budget will be the same as last year, or less. That means about half as much money as last year for Work-study help because our Work-study budget was almost doubled through the generosity of David Rogers, who provided $800.00 from his grant funds. Those of you who had Work-study help last year thus owed nearly half of it to Dave Rogers. He is not in a position to provide such largesse this year. We have asked every year for twice as much as we get, so no help from that direction can be expected.

   It is accordingly time for each of you to seek means whereby you can either (a) support your own Work-study help, on grants or otherwise, or (b) donate funds for general departmental Work-study use - or both. When requesting Work-Study help, please indicate how many can be charged to your grants or to other sources, and how much you can contribute to departmental Work-study coffers.

3. Faculty: As you know, this office made a strong case to obtain 3 new FTE's for this fall, over and above the 1 new FTE (and 3 replacements) already granted. Gradually it has become evident that we will not get them because the 12 new position originally designated by the legislature for undergraduate teaching evaporated - in Regent Hall, not in Hellems. There now remain but 3 (one was taken by commitment to us), and these will be allocated at registration in accordance with enrollment need. We may get one then for one section of General Biology; if not, we won't give that section.

   All other courses the 3 new faculty were to have taught will have been absorbed with the faculty already allotted to us, thanks to the good-willed cooperation of several who have agreed to handle lower-division courses in lieu of upper-division or graduate courses with low enrollment. Thank you! A continued appeal will be made to relieve you next year, through adding

Aside from the 4 new faculty of whom you are well aware (Bernstein, Bekoff, Lewis, Mitton), there will be two others teaching on a temporary, 1-yr. basis, splitting the residue of Carl's salary as he goes on a 25% appointment next year to allow him to catch up on his research: Allan Crockett and Frank Moore, both with their Ph.D.'s completed in August, and each a half-time "Lecturer" appointment. They will have full faculty privileges, however.

Dave Rogers will be here on an honorarium basis, teaching his full load of courses with the help of Lois Abbott (a half-time TA, his graduate students seeking a Ph.D), Gil Hersh and Jay April. Dave and the latter two will be conducting a large project for FAO, headquarters in Rome. Thus Rogers will be performing two jobs at once. His FAO role is an international enterprise that will inevitably enhance very considerably the stature of this department and university.

Space assignments for new faculty are still being negotiated. When all are settled Mrs. Owen will issue a directory.

4. Budget: As indicated above, we don't have our budget yet, and no request for estimates is to be submitted to us. Thus we will extrapolate from previous years' allotments to assign funds this year. If you anticipate needs for the coming year markedly different from last year's, please notify this office as soon as possible.

5. Undergraduate Advising: All undergraduate advising records are now being kept by Janice Sayre in the Hale office, acting under the supervision of Sam Shushan.

6. Affirmative Action records: Chairmen of the Committees responsible for the screening that resulted in employment of our four new faculty members are responsible also for accumulation of data in compliance with Affirmative Action regulations. See Mrs. Owen if in doubt.

7. Staff: Two changes in staff are to become effective with the fall semester: replacement of McKnight as Animal Caretaker (the new position will be for 65% time for the full year, assigned to a "career" incumbent; Winston in charge of screening candidates, rest of Animal Care Committee participating); and replacement of Kionka as Preparator for General Biology (Windell in charge of screening candidates - all others in General Biology members of the committee).

8. Advising: Please note that University regulations require you presence in your offices for advising students at any and all times on Aug. 29 and 30, and Sept. 3, with classes beginning Sept. 4. Please leave instructions on your office door for students who happen to come in when you are not there on those days, and advise the appropriate departmental office if you will be absent for any extended period on those days.

9. Class material: Please provide your secretaries with the copy for preparation of outlines, schedules etc. for your fall classes as soon as you can. They can be fitted into their work schedule better now than just before classes or in the first week of classes. You otherwise risk severe production delays!

10. Registration advising: On Friday, Aug. 30, EPOB must provide advisors in the field house from 7:30 to 2:30. Wayne Whitmarsh will be there, and in conformance with a policy developed in recent years we now ask that the Undergraduate Advising Committee (Sam Shushan, Chm.; Erik Bonde; Olwen Williams) establish a schedule whereby one of that committee will share labors with Wayne on a rotating, equable basis.

11. Space: The department's case has been so effectively carried to the administration that present plans have the NEW BUILDING moved up from 1984 or so to 1976-7. There will be a year, according to present plan, for remodelling Ekeley East and Ramaley, both beginning summer, 1975, and requiring a year. The following year is to see the new building started, followed by consolidation of the department - at long last.

A committee now formed will be working energatically this fall to formulate definitive plans for the whole sequence. Although the case for new construction near Hale is recognized, all factors considered will necessitate, apparently, that the new construction be somewhere near Ramaley. The die was cast long ago, and cannot now be rescinded. Even though many of us preferred development around Hale, once the decision has been finalized, as it now has, it behooves us all to accept that decision in good grace and to make the plans to effect it the best possible under the circumstances. All is not lost: far better that we finally get our new quarters, wherever they are, that will bring us together, than that we get them in any one specific area. To this point we all unanimously agreed; it is unfortunate that there are different preferences among us for location, but there was a sizeable proportion (at least half) preferring the Ramaley area, so we do not by any means uniformly or even by a majority wish for the Hale area development. It is vital that we bury our differences now and work with good will toward making the best of this opportunity - the first in decades - to bring us all together, even though the specific nature of that opportunity isn't what all of us, anyhow, would have preferred.

TAXIMETRICS LABORATORY
DEPARTMENT OF BIOLOGY
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
HALE 114 · (303) 443-2211 x 3591

August 23, 1974

Dr. David Rogers
Hale 114

To: Faculty of EPOB
From: Charles Norris
Subject: Work-study budget

As most of you know, during 1973-74, the Department was allotted $1280.00 by AES for hourly help. Professor Rogers generously transferred $800 from his grant fund, and the Department was able to transfer (with some difficulty) $320.00 from Code 5 (Supplies and Expense) so that there was available $2400. All of that was allocated to work-study. The $800.00 is non-recurring. $1280.00 is our allotment for this year. Inasmuch as approximately $600 has already been used for summer work-study, when students are allowed to work as many as 40 hrs./wk., the budget is really slaughtered.

Our Code 5 allocation is the same as last year, so, with continuing inflation in costs, we will have to really watch carefully. It may be possible to transfer funds from Code 5 to Code 4 (hourly, i.e., work-study) but this will mean less for supplies and expenses.

There are far more requests for work-study students than we can fund from our Code 4, exclusive of those faculty members who have agreed that they will pick up the cost on their grants. If you have a grant, therefore, and have not already indicated that work-study students will be paid for by such a grant, it will be essential that this be done.

Further, I would like those of you who do not have grants, but at the same time wish to have work-study help, inform me about the amount of time per week you would need such students, and the kind of work you expect them to do.

Finally, I would like to have you let me know whether I should commit the Department to more than we can pay from Code 4, assuming the possibility of transfer from Code 5. This will mean, if such a procedure is followed, that we will have to be more stringent with supplies and expense. Please let me know your needs and suggestions without delay.

Definitive Edition

CHARTER
DEPARTMENT OF ENVIRONMENTAL, POPULATION AND ORGANISMIC BIOLOGY
UNIVERSITY OF COLORADO

Approved March, 1972
By the Requisite Two-Thirds of All Voting Faculty

Preamble

The faculty of the Department of Environmental, Population and Organismic Biology (EPOB) is limited to members appointed on the Boulder campus. This Charter pertains solely to that faculty.

The purpose of the organization outlined in this Charter is to facilitate development of the Department into an outstanding center of biological teaching and research. It is the responsibility of each administrative unit continually to assess the directions of biology and to promote implementation of measures which will keep the Department abreast of new developments.

1. The Department

The Department has both academic and non-academic functions. The former include undergraduate and graduate teaching, research, and interdivisional graduate training programs. The non-academic functions include overall budget control, the acquisition and maintenance of facilities and equipment as well as public relations, alumni contact, and student information. The Department has overall control of faculty assignments and recruiting.

The Department is comprised of three Divisions: Environmental Biology (DEB), Organismic Biology (DOB), and Population Studies (DPS). Each faculty member shall be assigned to that Division in which his chief research and advanced teaching interests lie; transfer of divisional allocation is effected by consent of the Chairmen of the Divisions concerned.

The Division of Environmental Biology deals with interactions between organisms and their environment, and the ecosystems they constitute; it includes descriptive, analytical and experimental studies of both theoretical and economic intent.

The Division of Organismic Biology deals with descriptive, comparative, and experimental studies of organisms as individuals, with emphasis on physiological and morphological approaches.

The Division of Population Studies deals with theoretical, mathematical, genetical, and historical approaches to the study of populations and evolutionary problems.

Although these three units are semi-autonomous, the academic program retains unity through designation of all courses as departmental. Specifically designated laboratories or joint programs for special research and graduate training may be recognized within any Division, with the consent of the Executive Committee, but their academic programs shall remain an integral part of the whole.

Each Division has both academic and non-academic responsibilities, especially of screening the advanced teaching program for both undergraduates and graduates, initiation of appointments and promotions for its faculty, faculty research, and maintenance of other divisional activities, all designed to perpetuate the integrity of its unit.

However, each Division is also responsible for its full contribution to the integrity of the Department as a whole and for prevention of weakening of departmental structure through accentuation of autonomy of its parts.

II. The Faculty

Any regular member of the teaching, research, and administrative staff of the Department, with the rank of assistant, associate, or full professor, and any visiting professor, professor-attendant or professor-adjoint, belongs to the voting faculty if he receives his salary through the department, or if he ordinarily teaches at least six credit hours/year of formal coursework in the department.

Faculty meetings will be presided over by the Chairman of the Department, or by an alternate approved by him and the Executive Committee. Unless otherwise specified, all business transactions require a quorum of 51 per cent of the voting faculty.

Each Division of the Department sets its own rules for meetings and policy matters, but such rules are to be approved by the Executive Committee.

III. The Administration

A. The Chairman of the Department.

The Department is administered by a Chairman, who is nominated and selected by a majority vote of the faculty under the Laws of the Regents. His term of office is conditionally four years, effective in full only if he maintains confidence of the department; with this provision he may be reelected. Confidence is established by a majority vote of the entire eligible faculty taken each year during the spring semester; failing to obtain that majority, the Executive Committee must at once entertain the Chairman's resignation, appoint an Acting Chairman to serve the rest of the year, and appoint a search committee to seek a replacement to take office as soon as possible.

The Chairman is charged with supplying leadership to and pursuing the public relations needs of the Department and for representing the Department, as reflected by decisions of the Executive Committee, in all enterchange with the Administration. On his own initiative, by request of the Executive Committee, or by request of ten faculty members, he shall call meetings of the Faculty of the Department for the discussion of matters of interest to the Department as a whole. There shall be at least one Departmental faculty meeting each semester.

The Chairman functions as the Chairman of the Executive Committee and as an ex officio member of all other Departmental committees, and casts the deciding vote in case of a tie. He consults with the Curriculum Committee with respect to the formulation and supervision of interdivisional curricular policies and educational programs. He is responsible for coordinating the activities of the faculty and non-academic staff. With the advice and consent of the Executive Committee, he appoints new committees and redefines the functions of the Department as the need arises. He is charged with screening of applications for admission of graduate students, and with reviewing recommendations for all appointments, reappointments, promotions, nominations for tenure, and salary increases of both faculty and staff, and with transmitting them to the Dean with his recommendations.

The Chairman is responsible for the departmental budget and for expediting such coordination among the divisional budgets as may be called for and for transmitting them through the Executive Committee to the Dean with his recommendations. He also reviews building, space, and equipment needs of the Department, coordinates divisional and interdivisional requirements, integrates construction design, and makes presentation of the needs to the proper university officials. He also represents the Department to outside agencies and assists in the preparation of [illegible] in all these matters and in [illegible] other business.

of general departmental or divisional concern, the Chairman must consult with the Executive Committee and must act in accordance with its decisions.

If need arises, the Chairman may, with the consent of the Executive Committee and the Dean, appoint an Associate Chairman to whom he may delegate some of his functions. Standing and ad hoc committees may with the consent of the Executive Committee aid in carrying out the responsibilities of the Chairman's office.

B. The Chairmen of the Divisions

Each Division is administered by a Chairman, who is responsible to the Chairman of the Department and to the Executive Committee. Each Division Chairman is selected each Spring semester for a one-year term, by a majority vote of the faculty of that Division.

The chairmen of the divisions supply leadership to and act as spokesman for their groups. They are responsible for representation of their divisions in meetings of the Executive Committee and for the administration of their units according to the policies established by the Division and the Department. Their responsibilities involve, in consultation with their members: (1) initiation and presentation of budget requests including salary increases and administration of divisional budgets; (2) reappointments, initiation of new appointments and of promotions of divisional faculty; (3) organizing and planning of divisional teaching and of divisional undergraduate and graduate programs including essential service courses; (4) divisional research and admission of graduate students to divisional programs; (5) hiring and promotion of divisional non-faculty personnel; and (6) upkeep of office, laboratories for instruction and research, and all other facilities specifically identified with the Divisions.

The Chairmen of the Divisions may appoint committees to assist them in their duties, and the units may decide to elect special or permanent committees.

The Chairmen of the Divisions have the right to appeal to the Dean on matters of policy or issues that fail to receive support of the Executive Committee or the Chairman of the Department, but this shall be done only after the Executive Committee and the Chairman of the Department have been notified of their intent.

C. The Executive Committee

The Executive Committee (EC) is composed of (a) the Chairmen of the three Divisions; (b) two regular faculty members who are elected each spring for a one-year term by the faculty as a whole; (c) the Dept. Assoc. Chairman (if any), who has no vote except, in the absence of the Chairman, to break a tie; and (d) the Chairman of the Department, who functions as the EC chairman without a vote, except to break a tie. All voting members must be tenured. It is the responsibility of the Executive Committee to advise the Chairman of the Department on all matters related to policies of the department as a whole and on the delegation of responsibilities to the divisions and their chairmen. Among these policies are: (1) coordination of the budgets presented by the Chairmen of the Divisions; (2) recommendations on allocation of faculty to the various divisions; (3) final action on new faculty appointments, reappointments, promotions, salary changes, and termination of employment; and (4) establishment and termination of committees and assignments to them. The Executive Committee continually assesses the directions of biology in order to keep the Department abreast of all modern developments. Decisions of the Executive Committee may be referred to the entire faculty when ten faculty members so require, but are otherwise binding.

D. Other Committees

Ad hoc and standing committees of cross-divisional composition shall be designated and shall exist solely by authority of the Executive Committee; and shall be viable entities adapted to the shifting needs and circumstances of the Department. All have the Department Chairman as ex officio member. Where appropriate, they should embrace representatives from each Division. They are to be designated during each Spring semester, for the following year. Rotation of duties should be observed insofar as possible.

IV. Emendation

The procedure adopted for amendation of this Charter is: (1) formulation of propositions for emendation by the Executive Committee, in response to faculty desires, and presentation of those propositions to the Department; (2) consideration of each proposition by the Divisions separately, following a notice of at least 1 week, with a vote summary of all eligible faculty relayed to the Executive Committee; (3) if each Division passes a given proposition by at least a 2/3 approval of its total eligible voting faculty, that proposition is adopted upon approval by at least a majority of the EC; (4) if at least a 2/3 approval is recorded in one or more divisions, but not in all, the EC may request consideration in a full faculty meeting (requiring a 2/3 approval of the total voting faculty), or allow the issue to die; and (5) if a 2/3 approval is not obtained in any Division, the issue is automatically dead. It may be revived, in modified form or not, at any time by the Executive Committee.