

Are there problems with this approach? Some of the student graders are "better" than others. Just as faculty members tire after looking at the same question 50 times, so does a student. I periodically spot check the current exam worked on by each student grader to check for consistency, accuracy, good judgment, etc.. Occasionally (but rarely), I have had to review all the exams for a particular student graded question. Some questions I have pondered: if one student grader is much slower than the others, should I help them through their stack so that everyone finishes at about the same time? Or is consistency in who is grading the exam an essential component? Should the students in the introductory course be informed from the outset that a portion of their exam will be graded by another undergraduate? It is not uncommon for students to grade objective test questions, but it might disgruntle a few students to think that their essay question might be peer evaluated. I inform the students about peer graders before their first exam, and I maintain an open door policy with my students for discussion of any complaints or criticisms concerning grades. In three years of using this method, I have not yet had a single student voice concern about this method of grading.

The student perspective...

From the perspective of a student who served as a peer grader for several semesters, I considered this method of assessment valuable from several vantage points. Namely, the integration of subjective evaluations, peer grading and the student-instructor rapport that this method generates has benefited me as a student, a "teacher in training", and fostered a unique classroom environment in the major's classroom. Clearly, being confronted with students' answers to exam questions and learning to recognize concise, thoughtful and confident responses, as well as facing responses of considerably lower quality, provided some realinsight about my own progress as a student. Gaining appreciation for both the student's and the instructor's responsibilities throughout the learning process aided my ability to improve my performance in my own undergraduate courses.

Additionally, using peer graders in the university classroom is a unique method to cultivate young teachers. Pursuing a science degree in a liberal arts based curriculum grants exposure to diverse studies; however, in lieu of pursuing a specific education curriculum, it might be difficult for a student such as myself to gain meaningful "hands-on" teaching experience at the undergraduate university level. Equipped with guidance and training about how to effectively evaluate the written exams of my peers, my collaboration with the instructor cultivated a student-mentor relationship that has been essential to my growth.

Finally, beyond my personal growth through my experience as a peer evaluator, the benefits of this method extend to the entire major's classroom environment. For example, the peer evaluator in this scenario generates a liaison figure between the instructor and the students. Whilst it might be expected that some students would object to another student evaluating their exams, none as of yet have voiced protest. Likely, I presume the outstanding guidance provided to peer evaluators by the instructor has eliminated poor quality grading.

Perhaps the students are comfortable with this system because of the rapport that develops with their instructor. Specifically, from a student's vantage point, the instructor is seen as one who respects other students' (alumni to that class) abilities to the extent that those students would participate in the teaching responsibilities for that class. Perhaps to an undergraduate taking the course, the employment of peers as evaluators of exams would encourage that student to excel because obviously the instructor's expectations of the students taking the course is remarkably high.

Essentially, the cooperation between the instructor, the peer grader, and the student not only facilitates an effective method of administering and evaluating subjective exams, but also cultivates mutual respect in the classroom. The combination of respect, confidence and efficiency, enhances not only the personal growth of individuals, but also the quality of the teaching environment.

Conclusion

Each semester I evaluate this approach, and I come up with ways of improving this method. It saves me valuable time, the students get their exams back in a reasonable amount of time, and the student graders learn one facet of biology in a unique way (from a student's perspective). Do other people use this approach? I would be happy to discuss the topic of peer graders for subjective exams with anyone who is interested - I appreciate any comments and suggestions from colleagues! I can be contacted:

by phone (816-785-4619 - voice mail)
or e-mail (nsanders@truman.edu)

Teaching Ecology with RAMAS[®] Software

RAMAS software is well-known to teachers and researchers alike in the field of ecology, and has been used in teaching college-level ecology for about fifteen years. Prior to the recent release of *Applied Population Ecology* (a textbook/software combination described below), there were already one hundred universities and/or colleges which had classroom licenses for RAMAS programs developed by Applied Biomathematics[®].

The recent release of *Applied Population Ecology* is exciting to educators because of its new approach to teaching ecology—a combination of lecture material and a computer laboratory (using RAMAS Ecolab software), which emphasizes practical applications in conservation biology and natural resource management. The book and software have sufficient flexibility to allow use in lecture classes, computer laboratories, or both.

The aim of the RAMAS educational software is to teach quantitative methods that are necessary to develop a basic understanding and intuition about ecological processes without intimidating or discouraging students who do not have extensive mathematical backgrounds. Even students averse to mathematical equations are not usually afraid of using computers. Applied Biomathematics has used this premise in developing the RAMAS Ecolab software that implements the mathematical models of population ecology—all the while, making such models accessible to college students in biological and environmental sciences, as well as to field biologists, wildlife managers and conservationists.

Here's what Mark Shaffer, Director of Heritage Network Operations at The Nature Conservancy, has to say about the subject:

" . . . For whatever reasons, many people drawn to the fascination and beauty of the qualitative aspects of ecology are put off by the quantitative aspects. Mathematics seems far too abstract and inanimate to describe palpable flesh and blood. . . . This book is meant for such people. The text is clear and the examples real. But more than this, the book is accompanied by a friendly computer program that allows the reader to interact with the quantitative aspects of ecology without first having to become a mathematician. A little time with this program and the exercises the authors provide quickly illustrates how dynamic and fascinating quantitative population ecology can be. . . . The authors also provide the best treatment of variation and its effects on population dynamics that I have seen anywhere."

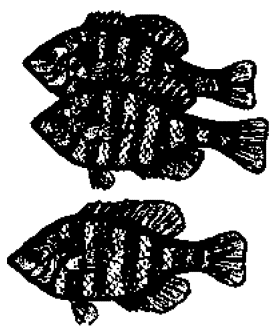
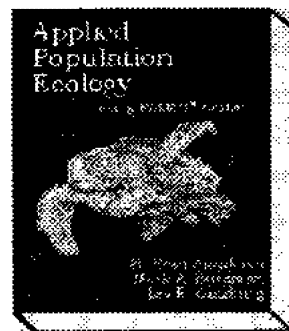
[excerpted from Foreword to *Applied Population Ecology*]

RAMAS teaching software is available for various levels. *RAMAS Primer*, consisting of a text and laboratory exercises based on RAMAS Age (described below) has been successfully used in high school classes to engage students in issues regarding human demography and endangered species. *RAMAS Primer* and *RAMAS Age* have been adopted for freshman, sophomore or non-major undergraduate classes. *Applied Population Ecology*, and the accompanying RAMAS Ecolab software, are suitable for undergraduates at the junior and senior levels. And *RAMAS Metapop* and *RAMAS Stage* are typically used for teaching at the graduate level.

New textbook-software combination from Applied Biomathematics

Applied Population Ecology by H.R. Akçakaya, M. Burgman and L. Ginzburg emphasizes practical applications in conservation biology and natural resource management, teaching principles of quantitative population ecology in a way that can be easily understood by undergraduate students.

The program combines tutorial features of more advanced RAMAS programs that are used in research and teaching at over 600 universities and governmental laboratories in 40 countries. Just listen to the enthusiastic endorsements that have greeted this book so far:



"... The book is clearly written and well illustrated with examples. However, I believe it is absolutely essential for most serious readers of this book to use the software (RAMAS Ecolab) because it provides an intuitive understanding of otherwise difficult concepts that are usually addressed mathematically. The RAMAS Ecolab program is user-friendly, easy to install and has a good "help" facility. . . . I recommend it highly to students of fisheries science at an upper-undergraduate or earlygraduate level as a valuable adjunct to any beginning fishery science text. The book contains much important information that is given little or no attention in conventional texts"

—Saul B. Saila, Graduate School of Oceanography, University of Rhode Island, from *Fisheries* 22:47-48 (1997)



"... Where this software really scores is in the way it handles the replicate data. From this you can explore the probabilities of the population becoming extinct (or even exploding), purely as a result of the various stochasticities. . . . In summary, this book should provide a valuable teaching aid in courses on Applied Ecology, especially for Conservation Biology and Management." —John Rostron, Department of Environmental and Mathematical Sciences, University of East London, London from *Life Sciences Educational Company* 8(1):31-33 (March 1997)

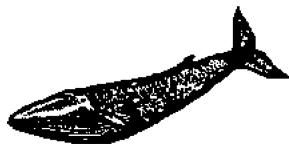


"... Current areas of scientific interest, such as risk uncertainty, and decision-making under less than optimal understanding, make the book novel as an introductory population ecology text. The contemporary applications are generally more sophisticated than are usually found in introductory texts. Theoretical topics are generally well presented and there are sufficient data presented to illustrate the concepts." —Thomas G. Hallam, University of Tennessee from *Society for Environmental Toxicology and Chemistry (SETAC) News* (November 1997)

Contents of *Applied Population Ecology*

Chapter 1 Population growth

Exponential growth with migration, harvesting and translocation; explosion of pest densities; exponential decline of blue whales; human population growth



Chapter 2 Variation

Modeling natural variability (environmental and demographic stochasticity); incorporating uncertainty and ignorance; sensitivity analysis; calculating extinction risks

Chapter 3 Population regulation

Intra-species competition and density dependence; cycles and chaos, carrying capacity for the human population; harvesting and density dependence



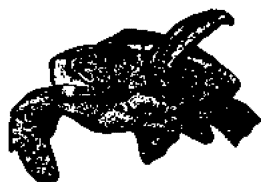
Chapter 4 Age structure

Calculating Leslie matrix from census data; stable age distribution and reproductive value; life tables; age-structured model for a human population; fishery management with an age-structured model



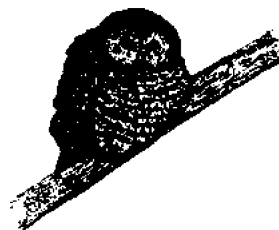
Chapter 5 Stage structure

Building stage-structured models; adding density dependence to matrix models; modeling size-structured plant populations; conservation strategies for sea turtles



Chapter 6 Metapopulations and spatial structure

Habitat fragmentation; island biogeography; spatial correlation of environmental variation; dispersal patterns; reintroduction and translocation; corridors and reserve design; designing reserves for the spotted owl



Chapter 7 Population viability analysis

Extinction in geological time; the causes of extinction; classification of threat; components of population viability analysis; the limits of population viability analysis; comparing management options for conservation of a threatened bird species



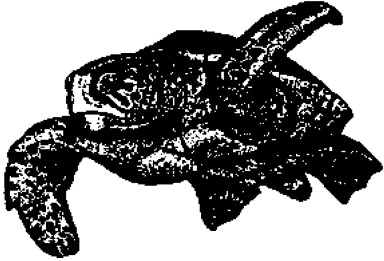
Chapter 8 Decision-making and natural resource management

Effect of uncertainty and variability on resource management decisions; strategies and contingencies; the economic and ecological contexts of natural resource management; sustainable use of a renewable resource



RAMAS EcoLab Software (accompanying *Applied Population Ecology*)

Each chapter includes examples and laboratory exercises based on the software RAMAS EcoLab that comes with the book. While less powerful than the research-grade software developed by Applied Biomathematics, RAMAS EcoLab incorporates all features of the RAMAS Library essential for teaching the basic principles of population ecology.



The DOS-based program has three modules for (1) simple models that incorporate variability and density dependence; (2) matrix models that incorporate age and stage structure, variability and density dependence; and (3) metapopulation models with spatial structure, variability and density dependence.

Each module is used to create models or load sample files, enter or modify input parameters. Students can create and save their own models, run simulations, and watch as the population trajectories or the map of the metapopulation is updated at every time step during a simulation.

Example and exercises involve Muskox, bluegill sunfish, *Paramecium*, helmeted honeyeater, teasel, speckled alder, loggerhead sea turtle, California gnatcatcher, spotted owl, blue whale, human population, brook trout.

RAMAS Primer

Give your students a chance to save the spotted owl population from probable extinction... or tackle population growth issues (including the effectiveness of fertility control and immigration control programs) by working with real Census Bureau data.



Population growth and endangered species are the focus of RAMAS Primer's laboratories--a teaching tool which is suitable for high school and undergraduate (freshman/sophomore or non-major) level courses in: General Biology, Environmental Studies, Ecology, Conservation Biology

Real problems in population biology are explored in a way which is easy to understand through demonstration and use of the software. RAMAS Primer comprises a 60-page manual with background information, exercises and suggestions for additional work, as well as software (based on RAMAS Age) for performing simulations. An instructors' edition of the manual contains answers to questions and additional notes in the margins.

For more information on the above, or on any RAMAS educational and/or research software products, contact:

Applied Biomathematics
Order Toll Free: 800-735-4350
Phone: 516-751-4350
Fax: 516-751-3435
email: ab@ramas.com
homepage: www.ramas.com

* RAMAS is a registered trademark and Applied Biomathematics is a registered service mark of Applied Biomathematics. RAMAS software has been developed with partial support from SBIR grants (Phases I and II) by the National Science Foundation, the National Institutes of Health, the Center for Disease Control, the Forest Service, and the Environmental Protection Agency. RAMAS development has been continuously supported for over 15 years by the Electric Power Research Institute which owns and co-owns many of the programs.

News and Notes

Announcing a name change: AMCBT to ACUBE

Association of College and University Biology Educators

At the October 1997 annual meeting at Beloit College, the membership voted to approve a name change. Henceforth, the organization will be called the Association of College and University Biology Educators (ACUBE). The name issue was raised initially when the Steering Committee reviewed papers filed officially in the state of Iowa, listing the organization as AMBT. Many members felt that the new name would better reflect the membership of the organization, and would be more conducive towards attracting new members. During the transition period, organization materials will be identified as ACUBE (formerly AMCBT).

Dear Colleagues,

The October 1997 annual meeting held at Beloit College was particularly exciting. The presentations and interactions were excellent, as usual. But I also was very encouraged by the positive vote to change the name of the organization to the Association of College and University Biology Educators (ACUBE). The new name is more inclusive and should help us attract a larger and broader membership. I want to thank the membership for supporting the Steering Committee in these efforts to look toward the future.

I do not mean to imply that we should necessarily change what we have been doing as an organization. On the contrary, we should keep doing more of the same, serving even more people. ACUBE remains the primary organization focused on biology education at the undergraduate level, with all of the issues and ramifications associated with that endeavor. The valuable resources available through this group should be shared with anyone interested in improving biology education. We recently have taken other important steps toward increasing our accessibility, such as making back issues of *Bioscene* and other information about the organization available on the world wide web.

Increasing and expanding our membership will enrich the variety of ideas and perspectives shared, and I am confident that expansion can occur without a loss of the personal connections and other characteristics we have come to value throughout the history of this organization. These traditions will continue to impact future directions, but the future of ACUBE will depend largely on the vitality of its membership. Please help us recruit new members. Share this issue of *Bioscene* with colleagues. Invite them to attend the 1998 Fall meeting at Rockhurst College in Kansas City. Bring information about ACUBE to your local, regional, and national professional meetings.

As a part of building for the future, I invite you to share ideas or concerns that you may have about ACUBE with me or another Steering Committee member. Although Steering Committee members are elected to represent the members and make certain decisions on their behalf, it is important for the committee to stay connected to the membership as much as possible.

Finally, I would like to take this opportunity to thank John Jungck for all of his work during the past ten years as editor of *Bioscene*. His efforts and leadership have resulted in outstanding publications which will have a lasting impact on many biology educators.

With warm regards,

Karen Klyczek
President, ACUBE
Email kk00@uwr.edu

A Student's Perspective of ACUBE

Jill H. Kruper

Department of Biological Sciences
Murray State University
Murray, Kentucky 42071

My first attendance of an ACUBE (formerly AMCBT) meeting (1994) occurred during a hiatus in my academic career. I had completed my Masters degree and was teaching part-time at a community college and a university. I was enjoying my teaching experiences and Terry Derting cajoled me into attending the meeting. I found the first ACUBE meeting to be engaging and inclusive, and most importantly the meeting inspired me to think about how I teach. This was a new concept to me because I had been concerned with simply giving a coherent lecture, let alone thinking about how I was presenting the information. Since then I have entered a Ph.D. program so that I can teach at the college level on a full-time basis. I now look forward to each ACUBE meeting as a means of "jump starting" my teaching skills.

The 1997 ACUBE meeting was particularly meaningful for me. I was at a point (probably one of many) in my Ph.D. program where I was questioning why I was putting myself through the rigors of academia just for another degree. The 1997 meeting was a reassuring reminder that it is challenging and rewarding to teach and facilitate a student's learning process. In particular, I was struck by one of the keynote speakers, Jeanne Narum. She stated that we should not be so concerned with how we teach, rather, we should be concerned with how students learn. Such a common sense statement, I thought, but yet a powerful one for me. When I first started to teach I did teach from the students' perspective rather than from my own. This was inevitable because some of the information I presented was new to me also. Therefore, I was learning the information right along with my students and I was constantly thinking about whether I was able to understand my own lectures. After Jeanne's talk, I realized that I had been losing the "student perspective" on learning. I had been forgetting what it is like to be a student and feel overwhelmed by the simplest of information. My academic mantra now is "Remember to think about how students learn, not how I should teach." I hope that 20 years from now I will still be using this mantra.

The 1997 meeting also reminded me that even simple concepts can be exciting. During Karen Klyczek's workshop on DNA labs, I was clearly excited to be able to spool DNA from the testis of a sheep. It was a simple lab, requiring Woolite detergent, meat tenderizer, and ethanol, yet it was exciting for me from

a student's point of view. Why? First, the information was new to me. Yes, I had known and taught about DNA for quite some time, but I had never spooled DNA onto a glass rod. Second, the concepts of the exercise were accessible both physically and intellectually. I had always assumed you needed to order special chemicals to remove DNA from cells and here I was using products found in my own house. Karen's workshop taught me to remember that I may be providing information to students that is new, intimidating, and often hard to visualize. As an educator, therefore, if I can provide the basis of a biological principle and subdue any fears or mystique associated with the principle, then I may be able to have a student say, "Wow! This is interesting." I now believe that once you have "The Wow!" within the student, you have set the foundation for more complex information to be considered.

As I looked ahead to my future career as an educator, I observed participants at the 1997 meeting and thought about what made these educators different from others. Two points came to mind. First, you must be willing to try new ways of teaching with your students. Change is beneficial, yet it can also be intimidating and risky for the instructor, especially if "nothing in the lab worked." Students, however, can benefit from such an experience because they need to learn that science is not always exact nor predictable. Second, teaching well takes time. I am always astounded by the time educators must take in order to develop a new course, new labs, or simply a new lecture.

Finally, I would like to formally thank ACUBE for my selection for the John Carlock Memorial Award. The award supports graduate students who are interested in becoming effective educators by helping to fund their attendance at ACUBE meetings. The award reminded me of why I am slugging through my Ph.D.; because I believe that I have the potential to become a very good facilitator of learning.

I look forward to future meetings and to adding to my academic mantras. I strongly encourage anyone who knows a graduate student who is interested in "how students learn" to please bring them to future ACUBE meetings. It could change how they teach for a lifetime.

Congratulations to Newly Elected Officers:

President: Charlie Bicak

Secretary: Margaret Waterman

Steering Committee: Mark Bergland

Steering Committee: Nancy Sanders

and Appointed Officers:

Vice President and Program Chair: Terry Derting

Vice President and Local Arrangements Chair: Dick Wilson

In Memoriam: Daniel Burton

I first met Dan Burton in 1959 at the first meeting of AMCBT I attended. It was held that year at Mankato State University, Mankato, Minnesota. At that time I was at Parsons College in Fairfield, Iowa and the meeting was recommended to me by a colleague, Floyd Von Ohlen, who had attended the first meeting of AMCBT. As an attendee who knew nothing of AMCBT or its brief history I was struck by the cordiality, friendliness, and informality of the organization, yet its firm commitment to the teaching of biology. An example of this could be found in Dan Burton. I later had the privilege of serving as a Steering Committee member when Dan was President of AMCBT. He provided excellent guidance and direction to the organization. After his tenure expired Dan did something which represented his care and concern for the individual. He wrote a letter to my president commenting positively as regards my service to the organization. He did this for everyone on the Steering Committee. It was a gesture that has remained in practice in the organization and extended to presenters at the Annual Meeting.

Dan remained very active in biology education both at the University and in the state of Minnesota. As I recall he became a consultant to the governor's office on higher education. He had an impact on higher education in Minnesota.

After his retirement, Dan kept up his interest in AMCBT. He attended several of the annual meetings and participated. More apparent to me as Executive Secretary were his occasional letters commenting, always positively, on *Bioscene*, some article, and the activities of the organization in general.

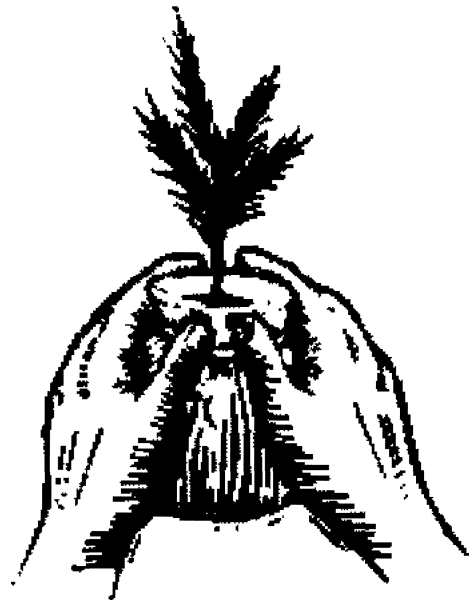
He will be remembered positively by his friends in AMCBT.

—Ed Kos

In Memoriam: Wally Weber

Wally played many different roles in AMCBT that were deeply appreciated over the years. He and Barabra Newman were our hosts for an annual meeting in 1987 at their Southwest Missouri State University campus. Many of you will remember excellent workshops and fieldtrips including the densest patch of red-tailed hawks anywhere as well as the beautiful presentations on the Ozarks. They also hosted an ABE (Association of Biology Laboratory Educators) annual meeting shortly thereafter where many AMCBTers also gathered. For years Wally was in charge of films, videos, and other media sessions at annual meetings at St. Xavier, Indiana State, and Beloit. He was a steering committee member for many years and a good friend to us all. We greatly miss him.

—John R. Jungck



Echoes from the past...

ED KOS, ACUBE HISTORIAN

Whatever the basis for calling the first meeting of AMCBT at Drake University in 1957 (*Bioscene: Journal of College Biology Teaching*, 23(1), 1997), it was by almost any standard a very successful one. A small committee of those attending the "Research and Teaching" discussion group prepared a questionnaire to sent out to schools attending the Drake meeting. This group was chaired by William K. Stephenson, then of Earlham College, now retired, and later president of AMCBT. The questionnaire was sent to 111 colleges and universities, and responses were received from 85. The questionnaire concerned itself with the kinds of biological research activities which were going on at the schools. It looked at who was doing any kind of biological research; the sources and amounts of funding; whether there were Junior or Senior Independent Study Programs; whether funds were available for Scholarly Meetings; what were Teaching Loads (contact hours) at these schools, was there allowance for research time; were summers used for research; and, the percentage of Science faculty engaged in research. The questionnaire was generated because of a concern as to whether engaging in research could be associated with better teaching. An abbreviated compilation of the results is included here.

It should be noted that the early format divided the working part of the meeting, outside of invited speakers, dinner speakers, etc., into a series of Discussion Groups. At the Second Annual Conference (considering AMCBT didn't incorporate until 1959 the positive results of the first meeting seemed to encourage the use of the term "Annual") held at Western Illinois University, Macomb, Illinois, there were a series of 7 of the Discussion Groups. Three dealt with topics related to the preparation of Biology Teachers, and four with topics not directly related to teacher preparation.

Some of the topics of the first three groups were:

- What should be included in a minimal curriculum for a biology major?
- Should students preparing to teach have the same curriculum as other majors?
- What science course other than biology should be included in a major?
- What education courses are most useful for a potential high school biology teacher?
- Should research, thesis, and an oral exam be required for a master's degree?
- Are present state education requirements for education courses too high?
- What changes in certification requirements should be made?
- How can we influence that change?
- Can a high school teacher, assuming he/she has followed the usual curriculum continue with graduate work and prepare for a college position?

In the last four groups topics were:

- How can we initiate and motivate the reading of library references?
- What should be in a good set of readings?
- Should the courses for majors and non-majors in biology be the same?
- What should be the content of the first course in general biology?
- What is the value of the laboratory in a general biology course?
- How can the biological science departments of Midwestern colleges in the same area work together to help solve mutual problems and to improve their programs?
- How can they help to support and improve teaching of high school biology in their area?

Type of School	# per Group	Size	FT Faculty	Research \$\$	Contact Hours	% Fac Res
Junior College	7		1	little or none (7)	22 (17-26)	<1%
Small RC College	9	<1500	2-1/2	none (4); 150-9,000	17 (15-20)	30%
Small College	9	<500	1-1/2	none (5); 200-1,000	20 (14-24)	20%
Med. Church Rel. College	17	500-1500	3	none (9); 100-13,000	19 (14-24)	20-30%
Med. Private College	6	500-1500	4-1/2	100-35,000	15 (12-21)	70%
Munic. College	3		5	little or none (3)	18 (16-21)	40%
Sm. State School	13	,500	7	none (5); 500-9,000	16 (12-21)	40%
Lg. RC Colleges	6	>1500	9	14,000-100,000	11 (9-13)	70%
Lg. Private College	3	>1500	6	100-8,200	17 (16-18)	50%
Unclassified	8		3-1/2	none (6); 600-1,000	17 (15-18)	40%

Leopold Education Project Update

by Thomas A. Davis
Department of Biology
Loras College

The Leopold Education Project is an innovative, interdisciplinary educational curriculum based on the epic book, *A Sand County Almanac*, by Aldo Leopold. The curriculum guide, *Lessons in a Land Ethic*, and its set of indoor and outdoor investigative, hands-on learning activities was originally designed for 6-12 grade students. However, I have used it with great success in my college biology classroom and especially in outdoor investigation sessions.

The goals of the LEP are summarized in one of Leopold's quotes, "The objective is to teach the student to see the land, to understand what he sees, and enjoy what he understands." The LEP teaches the public about humanity's ties to the natural world and more importantly, fosters a personal relationship with the land. The program tries to establish a personal land ethic in each student by increasing the awareness, appreciation, respect and stewardship of ones surrounding natural environment. The curriculum uses 3 main areas of learning to help establish this land ethic: content knowledge, critical thinking and creative thinking.

Pheasants Forever, Inc., a national nonprofit conservation organization has been cooperatively sponsoring LEP facilitator workshops and educator in-service workshops across the northern tier of the US. for the last four years. To obtain the curriculum guide and accompanying educational resources, educators must attend an LEP facilitator workshop. These are held at various locations (see schedule below) around the country each year. A typical facilitator workshop may last for 2 days. Participants gain familiarity with Leopold's life and philosophy, with his book, *A Sand County Almanac*, with the teacher's guide, *Lessons in a Land Ethic*, and teaching strategies for indoor and outdoor use of the LEP curriculum. Once trained, facilitators return to their communities and conduct six-hour in-service workshops for local educators, who then use the curriculum in their classrooms. Curriculum materials are not for sale directly from Pheasants Forever. Interested parties must complete a facilitators workshop or an in-service workshop to obtain curriculum materials. The time and the training are well worth it.

If you are interested in the LEP and would like more information, please contact me, Tom Davis, Ph.D., Department of Biology, Loras College, Dubuque, IA 52004-0178, 319-588-7767, email: TODAY@LORAS.EDU or contact the LEP office at 1783 Buerkle Circle, St. Paul, MN, 55110, 612-773-2000, email: lep@pheasantsforever.org. You can visit their website at <http://www.lep.org>. I am an LEP facilitator and will be offering a 1 credit workshop for 6 days at the Iowa Lakeside Laboratory, Milford, IA this summer, Aug. 2-7, 1998.

Upcoming LEP In-Service Workshops for 1998

Feb. 7 Story County, IA
8:30am - 3pm
Facilitators: Linda Zaletel, Nancy Kurrle
515-232-2516, sccb@iastate.edu

Feb. 7 Paffel's Wildlife Project, Hutchinson, MN
8am-4pm
Facilitator: Joe Paffel
(320-587-5707) Cost: \$12

Feb 14-15 Cameron University, Lawton, OK
8am - 5pm
Facilitators: Luann Waters, Susie Ruby
(405-521-4633)

August 2-7 Iowa Lakeside Laboratory, Milford, IA;
Sun, 1 p.m. - Fri 1pm; 1 college credit
Facilitator: Tom Davis, Loras College
319-588-7767
Curriculum materials supplied free to participants



August 6-7 Springfield Conservation Nature
Center, Missouri
Accredited Course: Land Use and Conservation
Southwest Missouri State University
Course: SSFT576CO4; Instructor: Wendell Jeffery

Upcoming LEP Facilitator Workshops

June 26-28 Pingree Park Campus, CSU, Colorado
(53 miles west of Ft. Collins)
Contact LEP at 612-773-2000

Check LEP website for current updates of workshop
schedules.

CALL FOR PRESENTATIONS
ASSOCIATION OF COLLEGE AND UNIVERSITY BIOLOGY EDUCATORS (ACUBE)
ANNUAL MEETING
October 15-17, 1998
Rockhurst College
Kansas City, Missouri

Do you have:

Labs that work?

Interesting Learning Activities?

Tips on Teaching Non-majors?

Useful Software?

Exciting Demonstrations?

The 1998 ACUBE (formerly AMCBT) Meeting will focus on:

"Are We Preparing Global Citizens: Aware, Active, and Accountable?"

Papers, Posters, Software, Media and Workshops are invited

FINAL DEADLINE—April 15, 1998

Name _____ Institution _____
Address _____
Work Phone _____ FAX Number _____
Email Address _____

Proposal:

Check one: _____ 45 min. oral presentation (including discussion)
_____ 30 min. oral presentation (including discussion)
_____ Workshop (2-3 hours)
_____ Other (specify)

Title of presentation:

Abstract:

Special equipment of facilities required:

Return form to: Terry Derting, Dept. of Biological Sciences, Murray State University, Murray, KY 42071;
Phone: 502-762-6327; Email: terry.derting@murraystate.edu

Constitution Changes

The changes are in italics.

By-Laws

ARTICLE 1. TERMS & DUTIES OF OFFICERS

SECTION 1. The term of office *The executive secretary shall serve for a minimum of three years and a maximum of five years at the discretion of the Steering Committee.*

SECTION 3. The president-elect, *in the absence or at the request of president, shall perform all duties of the president, recommend*(rewritten to eliminate the "assumed" he)

SECTION 4. The first vice-president is expected to attend the executive board meetings, be the fall program chair and *fulfill duties as outlined in the Executive Board Handbook.*

SECTION 5. The second vice-president elect is expected to attend the executive board meetings and will be responsible for the program the following year and *fulfill duties as outlined in the Executive Board Handbook*

SECTION 6. The second vice-president is expected to attend the executive board meetings, serve as the local arrangements at the host institution and *fulfill duties as outlined in the Executive Board Handbook.*

SECTION 7. The secretary is expected to attend the executive board meetings, keep minutes of the Association and Steering Committee and *fulfill duties as outlined in the Executive Board Handbook.*

SECTION 8. The executive secretary is expected to attend the executive board meetings, provide information about the state of the organization and *fulfill duties as outlined in the Executive Board Handbook* The executive secretary is a non-voting member of the Executive Board.

SECTION 9. The past president is expected to attend the executive board meetings, *evaluate the currency of the constitution and fulfill duties as outlined in the Executive Board Handbook.*

SECTION 11. The association historian shall maintain a permanent archive of Association publications, minutes and other memorabilia. *The historian is a non-voting member of the Executive Board.*

AMCBT STEERING COMMITTEE MINUTES

19 September 1996

Place: Loras College, Alumni Campus Center, RM 544 Arizona Room

Time: 9:55 pm

Present: Bill Brett, Tom Davis, Buzz Hoagland, John Jungck, Karen Klyczek, Ed Kos, Suzanne Martin, Tim Mulkey, Marc Roy, Ethel Stanley, Leona Truchan, Harold Wilkinson, Richard Wilson.

I. Called to order by Tim Mulkey.

II. Minutes of previous meeting were approved.

III. Announcements.

A. Program

1. Tom Davis

a. Galena and Dubuque tours were canceled due to lack of interest.

b. Field trips will begin at 8:00 am.

c. 85 participants have registered; may increase by 10-15.

2. Ethel Stanley: There have been five cancellations and five additions

B. The AMCBT Homepage(Tim Mulkey)

1. It now has a searchable member database that lists email, fax, url, and office phone.

2. Digital photos will be obtained at each meeting for inclusion on the homepage.

3. Proceedings, Newsletters, and Bioscene issues have been scanned and presented on the homepage. However, due to the poor quality of some originals, many need to be retyped. Funding for this conversion is needed.

4. Dick Wilson agreed to have workstudy students do some of the retyping during 1997.

- C. Membership
 - 1. Dick Wilson reported that his students have put together an extensive list of the Chairs of Biology Departments from around the midwest.
 - 2. Wm.C. Brown will advertise AMCBT in their mailings
- D. W.B. Saunders has an "Active Science Book" that is available to members for free
- E. If Claire Rhinehart does not attend this meeting, he should be replaced

IV Reports of Officers.

- A. Executive Secretary (Ed Kos)
 - 1. 1995 Financial Report (see Appendix A).
We are in the best financial condition that we have seen in a number of years. AMCBT is currently registered as a non-profit organization in Iowa. Iowa is changing the rules and regulations for non-profit status, and we may need a designated agent for AMCBT in Iowa. Tom Davis has agreed to be our agent.
 - 2. Membership. Renewals have been good this year.
- B. Bioscene Editor(John Jungck) Articles are needed for the upcoming issues of Bioscene. Editorial Board members are responsible for getting one article per year Board members will rotate on and off the Board.
- C. Constitution
 - 1. Are we the Association of Midwest or Midwestern College Biology Teachers? - no decision made concerning the name
 - 2. Proposed Constitutional Revisions (see Appendix B).
 - a. Harold Wilkinson expressed concern regarding limiting the term for the Executive Secretary to 3-5 years.
 - b. New Historian to consolidate AMCBT documents
- 1) Austin Brooks, Wabash College, IN may have Labs That Work series
- 2) Joe Kapler, Loras College, IA may also know the whereabouts of the Labs That Work series.
- c. Proposed constitutional changes were approved
- D. Meeting Sites
 - 1. Kearney has had a disruption in air service, so they are backing out of hosting the 1997 meetings
 - 2. Beloit has agreed to host the 1997 meetings
 - 3. A revised schedule of future meetings:
 - 1997—Beloit College, Beloit, WI, 16-18 October.
 - 1998—Rockhurst College, 15-17 October or Kearney if air service is restored
 - 1999—University of Wisconsin at River Falls, River Falls, WI
 - 2000—Indiana State University, Terre Haute, IN
 - 4. This revised schedule will be announced in the spring *Bioscene* after a final determination for 1998 has been made.

V. Adjournment: 11:30 pm.

Respectfully submitted, Buzz Hoagland, 14 January 1997

AMCBT STEERING COMMITTEE MINUTES
21 September 1996

Place: Loras College, Alumni Campus Center, Rm 544 Arizona Room
Time: 1:15 PM

Present: Bill Brett, Tom Davis, Buzz Hoagland, John Jungck, Karen Klyczek, Ed Kos, Ann Larson, Suzanne Martin, Tim Mulkey, Marc Roy, Nancy Sanders, Ethel Stanley, Leona Truchan, Harold Wilkinson, Richard Wilson

- I. Called to order by Leona Truchan.
- II. Presidential Appointments.
 - A. 1997 Program Chair will be Nancy Sanders and John R. Jungck will be Local Arrangements Chair
 - B. Ed Kos is the Historian
 - C. Marc Roy is the Executive Secretary
 - 1. Everything will be shifted to Beloit College
 - 2. Marc will be sent to Rockhurst to facilitate a smooth transfer
 - D. Tom Davis will have the Power of Attorney for AMCBT
 - E. Norman Waldow as been replaced by Terry Derting

- F. Dick Wilson is the Chair of the Nominations Committee
- G. Bill Brett is the Chair of the Honorary Life Committee
- H. Buzz Hoagland is 1st Vice President for 1999
- III. Thank you letters
 - A. Will be composed by Buzz Hoagland and forwarded to Leona Truchan for her signature and mailing
 - B. Should be sent to:
 - 1. All presenters
 - 2. Ed's administrators
 - 3. Administrators of the members of the Steering Committee
 - 4. Administrators of the members of the Bioscene Editorial Board
 - 5. Marion Johnson's administrators acknowledging her Life Membership
- IV. Bioscene
 - A. Motion to appoint Ethel Stanley and Tim Mulkey as co-editors of Bioscene was m/s/p
 - B. Dick suggested that Bioscene print an announcement indicating that it is a refereed journal
 - C. Motion to make a CD available in 1998 that will include all publications of AMCBT and a history, if possible, was m/s/p. Funds will be allocated for publishing the AMCBT History Monograph. Rockhurst College will archive bound materials for the History Monograph.
- V. New Business
 - A. Beloit Meeting in 1997
 - 1. Possible themes
 - a. Students as teachers
 - b. Coherence
 - c. Continuity
 - d. Constructing Coherent Curricula: Pushing the Boundaries
 - 2. Interdisciplinary session should be included
 - B. Next Steering Committee Meeting in Beloit
 - 1. 8-9 February
 - 2. Alternate is 22-23 February
 - 3. Nancy Sanders, Marc Roy, John Jungck, and Leona Truchan will develop the agenda for that meeting
 - C. Recruitment
 - 1. Need to focus on Minnesota, Ohio, and Michigan
 - 2. Dick has a list of Chairs of Biology Departments from 13 midwest states
 - 3. Wm. C. Brown has agreed to include recruitment materials with their mailings
 - 4. Committee to develop recruitment flier consisting of marion Johnson, Dick Wilson, Tom Davis, and Marc Roy was established—flier should celebrate the history and achievements of AMCBT
 - 5. Marc will develop a membership list
 - D. Constitution
 - 1. We need to review the Bylaws and the Constitution
 - 2. Ann Larson will review the Duties of Officers and propose revisions
 - E. John Carlock Fund—Bill Brett will report to the Committee after discussion the issues with Jan Carlock
- VI. Adjournment: 2:28 pm.

Respectfully submitted, Buzz Hoagland, 14 January 1997

AMCBT BUSINESS MEETING MINUTES

21 September 1996

Place: Loras College, Alumni Campus Center, Ballroom

Time: 12:04 pm

Present: Many members of AMCBT

- I. Called to order by Tim Mulkey.
- II. Presentation of the Cherry Pie to Ray Reed by Bill Brett.
- III. Old Business.
 - A. Executive Secretary's Report—Ed Kos
 - 1. AMCBT finished 1995 in the black.
 - 2. As of 9/19/96 there have been 145 renewals, slightly ahead of 1995.
- IV. New Business.
 - A. Elections—Marc Roy

1. Tom Davis and Ann Larson are new Steering Committee members.
2. Karen Klyczek is the President Elect.
- B. Constitution
 1. Motion to suspend the Constitution for the purpose of passing revisions was m/s/p unanimously.
 2. Motion to adopt Resolution #1 (see Appendix B) was m/s/p unanimously.
 3. Motion to adopt Resolution #2 (see Appendix B) was m/s/p unanimously.
 4. Members were urged to please read through the Constitution carefully and send any comments to any Steering Committee member by February 1997.
 5. Tom Davis has agreed to AMCBT's agent.
- C. John Carlock Funs—Bill Brett
 1. The fund currently has approximately \$5000.00.
 2. We would like the value to increase to \$10,000.00 through donations.
 3. Interest from the Fund will be used to assist graduate student attendance at annual AMCBT Meetings.
- D. Host Resolution—Buzz Hoagland (see Appendix C) was m/s/p unanimously.
- E. Bioscene—John Jungck
 1. It is on the web page
 2. It will soon be available on CD
 3. Ethel Stanley needs help converting back issues of the Newsletter, Proceedings, and *Bioscene* into digital text
 - a. Dick Wilson will convert all Newsletters and Proceedings from 1957-1972.
 - b. Other volunteers are needed.
 4. Resolutions
 - a. All Bioscene publications will occur in print and on the AMCBT Homepage—m/s/p unanimously
 - b. Credentials will not be listed after the author(s) name(s)—m/s/p unanimously
 5. Please write-up your presentations and send them to John Jungck
 6. Editorial Board
 - a. All members serve 3-year terms
 - b. Retiring members—Ray Reed, George Gaorian, Phyllis Kingsbury, and Bob Wallace
 - c. New members—Terry Derting, Charlie Bicak, Harold Wilkinson, and Cynthia Batrel
 7. New format—there will be a special issue each year which will include 8-10 4-page Labs That Work
- F. Tim Mulkey made a call for volunteerism and handed out sign-up sheets.
- G. Next year's meeting at Beloit College, Beloit, WI
 1. Marc Roy invitation to Beloit on 16-18 October
 - a. Easy bus service from Chicago
 - b. Easy automobile access
 2. Program Chair will be Nancy Sanders
- V. Tim's Presidential remarks
 - A. AMCBT is a unique organization
 1. Throughout its long history, the main focus of AMCBT has been teaching
 2. Other societies are experiencing rebirth as they are beginning to recognize the importance of teaching
 3. AMCBT is the professional organization to:
 - a. Put up a web page—400,000 people have accessed our site
 - b. Place all its publications on the web
 - B. Recruitment
 1. Each member should recruit 2 new members in 1997
 2. Our recruitment poster will be on the web page
 3. We should get business cards with AMCBT advertised
 4. The hardest part of the President's job is recruitment
- VI. Handing over of the gavel
 - A. Leona Truchan accepted the helm from Tim Mulkey
 - B. She reiterated the need for participation by all members of AMCBT
- V. Adjournment: 1:05 pm

Respectfully submitted, Buzz Hoagland, 14 January 1997

AMCBT STEERING COMMITTEE MINUTES

22 February 1997

Place: Beloit College, Science Building, Chamberlin 215

Time: 12:30 pm

Present: Bill Brett, Tom Davis, Buzz Hoagland, John Jungck, Karen Klyczek, Ed Kos, Ann Larson, Suzanne Martin, Tim Mulkey, Marc Roy, Ethel Stanley, Nancy Sanders, Leona Truchan

- I. Called to order by Leona Truchan
- II. Minutes of the AMCBT Steering Committee meeting 9/19/96 and 9/21/96 and the AMCBT business meeting of 9/21/96 as amended were m/s/p unanimously. (see attached)
- III. Motion to approve the Agenda. m/s/p unanimously.
- IV. Old Business—Reports of Officers
 - A. Executive Secretary—Ed Kos. See 3-Appendix A.
 1. Financial. Checking account has approximately \$12,000 and the Carlock Fund has approximately \$4300.00.
 - a. Motion by Bill Brett: Marc should place monies that are not needed for immediate use into an investment fund. m/s/p unanimously
 - b. Carlock Funds should also be placed into CDs or some type of short term investment fund.
 2. The transfer from Rockhurst to Beloit is going smoothly.
 - B. Loras Meeting participation appreciation letters were drafted and forwarded by Buzz Hoagland to Leona Truchan for signing and mailing on 10 January 1997. Diane Bell's administrators (Avila College, Kansas City, MO) apparently never received the letter, so an additional letter was sent by Buzz directly to Avila College. Copies of letters were not sent to participants due to confusion over responsibility. Copies of letters will be forwarded to participants by Buzz Hoagland. Letters were late this year due to the difficulty in obtaining names and addresses of letter recipients. Future meeting request for presentation forms should have blanks for this information.
 - C. Nomination Committee. John Jungck is looking for nominations for President Elect, Secretary, and two Steering Committee Members
 - D. Honorary Life Membership. Bill Brett and Ed Kos will prepare a list of candidates by Sunday AM.
 - E. Ethel reported that the logo contest has only three submissions (all from her) and that we need to pursue this project with greater enthusiasm than has been previously demonstrated. We need a logo by 1 May 1997. All submissions should be in electronic format (i.e., TIFF, GIF, JPEG, EPS), in black and white and in color. Marc will be in charge of having the official stationery reflect the logo and any other changes.
 - F. Tom Davis reported that the Association of Midwestern Biology Teachers was incorporated in Iowa.
- Motion: Resolution to be presented before the membership at the Beloit Meeting to amend the Constitution to change the name of AMCBT to ACBT (Association of College Biology Teachers). m/s/p unanimously.
- V. New Business
 - A. Agenda for Beloit Meeting October 16-18, 1997
 1. Theme: "CONSTRUCTING COHERENT CURRICULA: PUSHING THE BOUNDARIES"
 2. Program chairperson report: Nancy Sanders: Preliminary Program is in development. A draft copy was distributed.
 3. Tour of the facilities.
 4. Reception may be in Godfrey (Anthropology Museum) and if requested in advance we should be able to visit the 3rd largest collection of Cave Art in the world.
 - B. Dinner break 5:30-7:00 pm
 - C. Evening Meeting (7:00-9:00 pm)
 1. Beloit Meeting
 - a. John Jungck suggested extending the Beloit Meeting through Sunday for 12 AMCBT members to interact with a PEW Meeting being held at Beloit.
 - b. Nancy Sanders and Ethel Stanley are working on the program and the fliers.
 2. Recruitment fliers are being developed by Marc Roy, Ethel Stanley, and Karen Klyczek. They will contain some of the information currently presented on a poster prepared by Karen Klyczek and Ethel Stanley.
 3. Tom Davis indicated that Wm. C. Brown is still willing to send out fliers for AMCBT.
 4. Constitution revisions: Ann Larson
 - a. Descriptions of duties should be sent to former officers and Steering Committee members for review. Buzz Hoagland and Leona Truchan will work on a letter soliciting comments on constitutional revisions.

- b. Name change needs to be presented as a resolution to the membership at the Beloit Meeting.
- 5. Future Meetings
 - 1998—Rockhurst College, 15-17 October
 - 1999—University of Wisconsin at River Falls, WI
 - 2000—Indiana State University, Terre Haute, IN
 - 2001—University of Nebraska at Kearney (moved from 1998 because of disruption in air service--Charlie Bicak needs to be contacted ASAP to resolve this issue)
- 6. Sunday morning session should reconvene at 10:00 am
- 7. Breakfast and small work sessions will be held from 8:00-10:00 am
- D. Dessert at John Jungck's (9:00 pm)
- E. Constitution Committee report: Ann Larson
 - 1. The constitution should be gender neutral
 - 2. Officer's duties should be updated and summarized, a handbook describing these duties should be prepared for the Beloit Meeting
 - 3. A new position of Web Master should be created
 - 4. Past-President should automatically be Chair of the Constitution Committee
 - 5. Proposed language changes should be forwarded to John Jungck for inclusion in the next *Bioscene* by 10 March 1997
 - 6. Motions:
 - a. Gender discrimination in the constitution should be corrected. m/s/p unanimously
 - b. Add responsibility of Past-President to be Chair of the Constitution Committee. m/s/p unanimously
 - c. Create a new position of Web Master to maintain our electronic presence; to be appointed by the Steering Committee. m/s/p unanimously
- F. Program Chair: Nancy Sanders. Abstracts should be submitted to John Jungck and Teresa Holevas by 1 March 1997
- G. Name change
 - 1. Hypercube tesseract is a 4-d hypercube that would be a good place to start for a logo
 - 2. Motion: Amend the previous motion to read: Resolution to be presented before the membership at the Beloit Meeting to amend the Constitution to change the name of AMCBE to ACUBE (Association of College and University Biology Educators). m/s/p unanimously
 - 3. Leona Truchan, Karen Klyczek and Tim Mulkey will draft a description of the rationale for the name change and submit it to John Jungck for publication in *Bioscene* in the next issue.
- H. Membership: Marc Roy
 - 1. Marc Roy is working with Dick Wilson on sending letters to the chairs of Biology Departments at Colleges and Universities in the midwest.
 - 2. Motion: Make Wm. C. Brown a sustaining member in recognition of all their contributions. m/s/p unanimously
- I. John Carlock Fund: Bill Brett
 - 1. Grants should help offset costs of attending meetings for graduate students
 - 2. Getting graduate students to attend our meetings will benefit us and the graduate students
 - 3. Graduate students should submit a letter describing why they wish to attend our annual meeting
- J. Bioscene: John Jungck
 - 1. We need more manuscripts
 - 2. ACUBE name change should help recruit more manuscripts
 - 3. A writing workshop will be offered during the normal time of the Bioscene Editorial Board Meeting at the Beloit Meeting; the goal is to help presenters turn their presentations into manuscripts for publication in *Bioscene*
- K. Web Page Committee
 - 1. We need to update email links on our homepage so that it can be updated on a weekly basis—Buzz and Karen agreed to work with Tim on this process
 - 2. There should be email links to Steering Committee members
- L. Education Archives: Ethel Stanley and Tim Mulkey
 - 1. Quark Express documents will be converted to HTML text to make web pages easier to read, and edit after downloading
 - 2. Dave Findlay, Dick Wilson, and Buzz Hoagland will continue to work on back issues
 - 3. What should be on our CD?
- a. Publications
 - b. Introduction
 - c. Images

- d. List of current members
 - e. Search engine
 - 4. CD production needs financial backing
 - M. Historian: Ed Kos—working on the monograph; contacting older members first
 - O. Future Meetings
 - Charlie Bicak was not contacted Sunday morning as suggested and the following tentative dates were accepted:
 - Rockhurst College—15-17 October 1998
 - University of Wisconsin at River Falls—14-16 October 1999
 - Indiana State University—2000
 - University of Nebraska at Kearney—2001
 - P. Nominations: John Jungck
 - President Elect—Charlie Bicak, Buzz Hoagland
 - Secretary—Margaret Waterman
 - Steering Committee—Jill Kruper, Nancy Sanders, C. Robert Wikel, and Mark Bergland
 - Q. Tim Mulkey will send out the brochure
 - R. Karen Klyczek and Ethel Stanley will take the poster to NABT; any information to be included should be forwarded to her
- VI. Adjournment at 12:50 pm

Respectfully submitted, Buzz Hoagland, 19 March 1997

TENURE-TRACK POSITION: Biology: Field Biology and Genetics

RANK: Assistant or Associate Professor

DEPARTMENT: Biology

STARTING DATE: September, 1998

DEADLINE: Applications accepted until position is filled. Screening will begin at the end of January.

QUALIFICATIONS: Required: Ph.D. in an appropriate scientific area; demonstrated expertise in animal field biology and molecular genetics; willingness to teach interdisciplinary and team-taught biology and general education courses; and support the mission of the College. Preferred: college-level teaching and research experience; interest in agricultural issues.

RESPONSIBILITIES: Teach courses from among genetics, several field biology courses, general biology for majors, and interdisciplinary general education; carry on an active research program involving undergraduates; scholarship and service appropriate to the liberal arts setting.

SALARY: Competitive

APPLICATION PROCEDURE: Send letter of application addressing qualifications; statement of teaching philosophy; curriculum vitae; unofficial copies of transcripts of undergraduate and graduate work; names, addresses, phone, fax or e-mail address for three professional references to: Dr. Ann Henninger, Chair, Department Biology, Wartburg College, 222 Ninth St. NW, Waverly, IA 50677.

Wartburg College is a fully accredited, Liberal Arts I, coeducational college of the Lutheran Church (ELCA). Our mission is to challenge and nurture students for lives of leadership and service as a spirited expression of their faith and learning. Approximately 90% of our faculty hold terminal degrees in their fields and about 50% have undergraduate degrees from liberal arts colleges. The College seeks to attract faculty with international experience and conversancy in a foreign language to support our initiatives to internationalize the campus. As an affirmative-action, equal-opportunity institution, Wartburg College actively seeks applications from women and members of ethnic and minority groups.

ASSOCIATION OF COLLEGE AND UNIVERSITY BIOLOGY EDUCATORS (ACUBE)
[formerly Association of Midwest College Biology Teachers (AMCBT)]

NAME: _____ DATE: _____
TITLE: _____
DEPARTMENT: _____
INSTITUTION: _____
STREET ADDRESS: _____
CITY: _____ STATE: _____ ZIPCODE: _____
ADDRESS PREFERRED FOR MAILING: _____
CITY: _____ STATE: _____ ZIPCODE: _____
WORK PHONE: _____ FAXNUMBER: _____
HOME PHONE: _____ EMAILADDRESS: _____

MAJOR INTERESTS:

- 1. Biology
- 2. Botany
- 3. Zoology
- 4. Microbiology
- 5. Pre-professional
- 6. Teacher Education
- 7. Other _____

SUB DISCIPLINES: (Mark as many as apply)

- | | |
|-----------------------------------------|-------------------------------------------|
| <input type="checkbox"/> A. Ecology | <input type="checkbox"/> H. Molecular |
| <input type="checkbox"/> B. Evolution | <input type="checkbox"/> I. Developmental |
| <input type="checkbox"/> C. Physiology | <input type="checkbox"/> J. Cellular |
| <input type="checkbox"/> D. Anatomy | <input type="checkbox"/> K. Genetics |
| <input type="checkbox"/> E. History | <input type="checkbox"/> L. Ethology |
| <input type="checkbox"/> F. Philosophy | <input type="checkbox"/> M. Neuroscience |
| <input type="checkbox"/> G. Systematics | <input type="checkbox"/> N. Other _____ |

RESOURCE AREAS:

RESEARCH AREAS:

How did you find out about ACUBE? _____

Have you been a member before: _____ If so, when? _____

**PLEASE MAIL
MEMBERSHIP APPLICATION
FORM TO:**

**Dr. Marc M. Roy
Executive Secretary, ACUBE
ACUBE Central Office
Department of Biology
Beloit College
700 College Street
Beloit WI 53511**

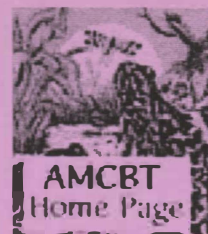
**Phone: 608-363-2429—FAX: 608363-2052 or 2718
email: roym@beloit.edu**

**CURRENT DUES ARE \$25.00
\$15.00 for Graduate Students**

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Welcome to the ACUBE Home Page:

URL: <http://papa.indstate.edu/amcbt>



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Featuring the online ACUBE archive for:

Bioscene: Journal of College Biology Teaching (1975 - present)
AMCBT Newsletter (1964 - 1974)
AMCBT Proceedings (1957 - 1972)

Other useful ACUBE information includes:

ACUBE Executive Committee
Editorial Board of *Bioscene*
1997 Annual Meeting of ACUBE
Searchable Membership Database (coming soon)
Online Membership Application
Archive of the ACUBE (AMCBT) ListServer
Scientific Meetings of Interest to Membership
Position Announcements
ACUBE in the News

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The Association of College Biology and University Educators (ACUBE, formerly AMCBT) has developed its own list server to facilitate communication between its members. The purpose of the ACUBE mailing list is to provide announcements, information and discussion of a wide variety of topics.

Information mailed to:

amcbt-l@biology.indstate.edu

will be sent to all members of the list.

To subscribe/unsubscribe to the list, send email to:

list-admin@biology.indstate.edu

To subscribe, send this message line:

subscribe amcbt

To unsubscribe, send this message line:

unsubscribe amcbt

If you have any questions about AMCBT-L,
contact Tim Mulkey at mulkey@biology.indstate.edu