ACUBE 42nd Annual Meeting
Rockhurst College
Kansas City, Missouri
October 15-17, 1998

Preliminary Program

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

Thursday, October 15th

6:00 - 8:00 PM  Registration and Reception  Richardson Entrance

8:00 PM  Opening Session  Richardson 115

ACUBE President: Karen Klyczek, UW-River Falls
Welcome to Rockhurst College: Corey Simmonds, Acting Dean, College of Arts and Sciences
Program Chair: Terry Derting, Murray State University
Local Arrangements Chair: Kevin Williams and Dick Wilson, Rockhurst College

OPENING ADDRESS (Public Welcome to Attend)
Long-Term Ecological Research in Tallgrass Prairie: The Role of Basic Research in the Conservation of Grassland Ecosystems,
Dr. Alan K. Knapp, Kansas State University and KONZA

9:30  Executive Committee Meeting  Richardson 302

Friday, October 16th

7:00 AM - 5:00 PM  Registration table will be open all day  Richardson Entrance

Please check your membership; inquire about audiovisual needs; general information.

7:00 - 8:00 AM  Buffet Breakfast (by Interest Group)  Rock Room (Massman Hall)

9:00 - 11:30 AM  Sustaining Member Exhibitors  Richardson 206

8:15 - 12:00 AM  CONCURRENT WORKSHOP SESSIONS I
1. Differential Centrifugation Using Density Gradient Beads, Harold Wilkinson, Millikin University
2. Virtual Biology: Design and Implementation of Web-Based Biology Courses, Tim Mulkey, Indiana State University
3. Interdisciplinary Student Projects for Introductory Science and Mathematics Courses, John Jungck, Beloit College; Anita Salem and Dick Wilson, Rockhurst College
4. Rediscovering Chlamydomonas, Steve S. Daggett, Avila College and Donna L. Ritch, UW - Green Bay

9:45 - 10:00 AM  Morning Break (Refreshments)  Richardson 206

11:30 - 1:15 AM  Luncheon and First Business Meeting  Rockroom (Massman Hall)
Are We Preparing Global Citizens?

Panel:
Dr. Dean Jerringan, *Ottawa University, Associate Professor of Science Education* (formerly 30-year teacher at Shawnee Mission South High School)
Mr. Chris Gentile, *Director of Material Engineering and Technical Services; Allied Signal Inc.*
Mr. Joe Werner, *Urban Ecologist, Kansas City Power and Light Co.*
Mr. John Strickler, *Executive Director, Kansas Association for Conservation and Environmental Education*
Mr. Brad Williamson, *Olahe East High School, Monarch Butterfly Project*

1:15 - 2:00 PM  Shareware
Richardson 203/205

1:15 - 2:00 PM  Student/Faculty Posters and Displays
Richardson ‘Street’

1:30 - 4:00  CONCURRENT FIELD TRIPS
All trips will leave from Massman Hall parking lot
1. **Powell Gardens** - Large horticultural collection -- and walking tour of landscaped garden and nature trails.
2. **Negro Leagues Baseball Museum/ KC Jazz Museum**
3. **Bayer Laboratories** - Animal research facilities
4. **University of Kansas Museum of Natural History** - Meet with curators of birds and mammals (Larry Martin and Thor Holmes)
5. **Linda Hall Library of Technology and Science** - Rare book collection and tour of arboretum - walking field trip. (Current exhibit will be George L. Leclerc, Comte de Buffon, *Histoire Naturelle*)
6. **Plaza shopping tour** - Particularly for spouses - buses will deliver participants to the Plaza and pick them up for return to hotel or campus - self-guided
7. **Kansas City Zoological Gardens and IMAX Theater** - Buses will deliver participants to the Zoo front door, and pick them up for return to hotel or campus in time for 4:15 sessions or dinner, at the participant’s choice - self-guided (unless there are a large number of children, in which case Rockhurst will try to provide two student chaperones).

2:00 - 4:00 PM  CONCURRENT WORKSHOPS SESSIONS II
1. **Virtual Problem-based Learning**, Karen Klyczek, *UW-River Falls*  Richardson 203
2. **Developing Teaching Strategies for Case-Based Learning**, Margaret Waterman, *SE Missouri State University*, and Ethel Stanley, *Beloit College*  Richardson 125
3.
4.
5.

4:00 - 4:15 PM  Afternoon Break (Refreshments)  Richardson 206

4:15 - 5:00 PM  CONCURRENT PAPER SESSIONS I
2. **Training Biological Citizens: Definitions and Content**, Tom Davis, *Loras College*  Richardson 315
3. **Enhancing the Science Curriculum of Homeschooled Children Through a Community Outreach Program**, Mary Haskins, *Rockhurst College*  Richardson 115
5. The Development of Inquiry-Based Outdoor Classrooms, Ed Story and Mike Quillen, *UK-Maysville Community College*

5:30 - 7:00 PM
Posters, Exhibits, Social
Richardson 206

6:30 PM
**BANQUET**
Rock Room
(Massman Hall)

7:30 PM
**BANQUET ADDRESS:**
The Anemone is Not an Enemy to the Clownfish, Dr. Daphne G. Fautin, *Professor of Biology, University of Kansas*

Richardson 115

9:00 - 10:15 PM
Curricular Issues Discussion (with cash bar)
“Preparing Global Citizens”, Tom Davis, *Session Organizer*

Massman Gallery

9:00 PM
Bus available to hotels
Richardson Front Door

9:00 - 12:00 PM
Jazz Pub Crawl - led by Phil Colombo, *Assistant Professor of Chemistry*

Richardson Front Door

10:15
Second bus will catch up with Crawl if enough discussants are interested

Saturday, October 17th

8:00 - 9:15 AM
Buffet Breakfast (by Interest Groups; Bioscene editorial board get food and take upstairs to M248)
Rock Room
(Massman Hall)

8:00 - 9:15 AM
*Bioscene* Editorial Board, Ethel Stanley and Tim Mulkey, presiding
Massman 248

8:30 - 10:30 AM
***Open Balloting***
Richardson entrance

8:00 - 11:30 AM
Zoological Gardens - Bus available for spouses/children leaves from in front of Richardson Science Center. Pick up is at 11:15 from zoo main gate for return to campus.

9:00 - 11:30 AM
Sustaining Member Exhibitors
Richardson 206

9:00 - 9:45 AM
**CONCURRENT PAPER SESSIONS II**

1. A Multidisciplinary Inquiry-Based Introduction to Science for Pre-service Teachers: Are Teachers Prepared to Teach Science?, Terry Derting and Jimmy Dorris, *Murray State University*
Richardson 302

2. Science Studio (A science intervention program for middle school girls). Faith Wilson, *St. Teresa’s Academy*
Richardson 315

3. What do your students say about evolution?, Nancy Sanders, *Truman State University*
Richardson 125

4. Teaching Sexual Differentiation: Beyond the Textbooks, Marc Roy, *Beloit College*
Richardson 306

5. Collaborative Case-Based Learning for Introductory Biology Students using Molecular Biology Computer Simulations and Internet Conferencing, Mark Bergland, *UW - River Falls*
Richardson 203

9:45 - 10:15 AM
**Morning Break**
Posters, Exhibits, Refreshments

***Balloting Closes at 10:30 AM***

10:15 - 11:00 AM
**CONCURRENT PAPER SESSIONS III**

1. Problems of Teaching Large Numbers of Students in General Education Laboratory Classes Involving Many Graduate Student Assistants, Rita Ghosh, *Indiana State University*
Richardson 125

2. Gas Chromatography in the Non-Major Environmental Science Course, James Edmiston, *Quincy University*
Richardson 302

3. Labs That Work: A Dinosaur Trachways Exercise, Robert L. Wallace and William S. Brooks, Ripon College
Richardson 315

4.

5.

11:00 - 12:30 AM
Luncheon with Business Meeting
Rock Room
(Massman Hall)
BUSINESS MEETING

Presidential Address: Karen Klycek, UW - River Falls and Charlie Bicak, UN-Kearney
Election Results: Dick Wilson, Rockhurst College
Bioscene: Ethel Stanley, Beloit College, Tim Mulkey, Indiana State University
Executive Secretary Report: Marc Roy, Beloit College

12:30 PM  ===ADJOURNMENT OF REGULAR MEETING===
12:35 - 1:15 PM Executive Committee Meeting
          Includes newly elected Executive Committee members!

If you are interested in presenting a workshop or paper please contact Terry Derting at Terry.derting@murrraystate.edu or 502-762-6327.

ABSTRACTS OF SESSIONS

Concurrent Paper Sessions:


During the spring 1988 semester a chemistry faculty and I linked a second semester general chemistry course with a second semester introductory biology course. Sixteen students were co-enrolled in both courses that met for lecture MWF at 8:30 (General Chemistry II) and MWF at 10:30 (Biological Concepts). Students were given a survey designed to determine their understanding of the nature of the link between chemistry and biology at the beginning and the end of the semester. The extent to which each course was modified, the nature of the involvement by each faculty member, and student reactions will be discussed.

S.I.2. Training Biological Citizens: Definitions and Content. Tom Davis, Loras College

Participants in this session will discuss first, what is a “good” biological citizen and second, what subject matter should be specifically included to train better biological citizens in a one semester, introductory, non-majors biology course. In the past I have chosen the following six broad topics: a. Cells; b. DNA, Genetics, Heredity; c. Plants; d. Viruses, Prokaryotes, Protoctista and Fungi; e. Evolution; f. Ecology and Environmental Ethics. Third, participants will discuss their ideas on how to best promote active student ownership of this information.

ASSIGNMENT: Participants in this session are asked to prepare and bring to the session their definition of a “good” biological citizen and choose 6 major topics that they would include in a one semester course to train biological citizens.

S.I.3. Enhancing the Science Curriculum of Homeschooled Children Through a Community Outreach Program. Mary Haskins, Rockhurst College

Rockhurst College offers biology laboratories for middle and high school students who are home-schooled. Students attend one 2 1/2 hour lab/week on the Rockhurst campus. The self-supporting program provides several benefits to both the homeschool students and the Rockhurst community. These benefits include:

1) augmenting the science education of home-schooled children;
2) enhancing Rockhurst’s visibility within the community;
3) enhancing Rockhurst’s reputation within the metropolitan area;
4) providing teaching experience and jobs for graduate and undergraduate students who work in the program;
5) and serving as a potential recruitment tool.


Have you had students in your classroom with vision or hearing impairments, cancer, or hemophilia? Students such as these have different types of disabilities that need to be addressed when considering how your students will learn. Despite the fact that most biology educators have had students with some type of disability in their classroom, few institutions require their faculty to be formally trained about their role as educators when teaching students with disabilities.

We will present information to bring you up to date on what is required of the student with some type of disability and the teacher when designing lectures, exams, and laboratories. Specifically, we will address how teaching a biology course to students with disabilities can be very challenging as compared to courses in other disciplines. We will also provide helpful suggestions so that you will be better prepared when you realize you are teaching a student who cannot see, or perhaps, hear you.

S.I.5. The Development of Inquiry-based Outdoor Classrooms. Ed Story and Mike Quillen, UK-Maysville Community College

The presenters of this proposed session have developed a state award winning Outdoor Education Center at Ward Elementary School in Fleming County, Kentucky. Ward Elementary is located in rural Northern Kentucky.