

# MIDWEST BIOSCENE



ASSOCIATION OF MIDWESTERN COLLEGE BIOLOGY TEACHERS Vol. 1 Nos. 3-4 May, 1975

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*Prairie-land, prairie land  
where  
does your garden grow?  
Hidden in graveyards  
where no one will go!*

*Spring  
in Illinois  
happens between 2 and 2:30  
some day  
in May.*

ELM, NOBLE ELM

*Reaching fingers to the sky  
the stately elm stood  
as sentinel of seasons.*

*Then, slowly on the shading leaves  
and solid, scaling trunk  
a sign of illness came.*

*Felled by the struggle from within  
the stoic elm succumbed,  
its epitaph a crown of sprightly shoots.*

ODE TO MARION

*Take the fragrance from the lilac,  
Take the shimmer from the dew,  
Take the elegance from the bluebird,  
Take them all, as parts of you.*

*Take the stateliness of maple,  
Take the softness of a rose,  
Take the courage of a peach bud  
That holds on what'er wind blows.*

*Take the warmth of summer evenings,  
Take the steadfastness of wheat,  
Take the loyalty of shade trees  
That silently absorb the heat.*

*Take the silence of the coal mine,  
Take the secrets of the hill,  
Take the shifting patterns of the clouds  
That show the wonders of G-d's will.*

*Take the indiscernibles of Nature  
And try to know their worth.  
Take them, O Marion, take them,  
For they make of you a daughter of the Earth!*

*Fat  
sunburned robin  
here from the south  
you've not felt winter's rages,  
your're not down in the mouth.*

- Rita Kohn

TOWARD PUBLIC APPRECIATION AND UNDERSTANDING OF SCIENCE  
 (From the AIBS Communicator Vol. 1, No. 2, April, 1975)

It has become the fashion to express concern about the public's understanding of science. There is little doubt that an increasingly sophisticated public needs to be kept up to date on why its funds have supported R&D. For both understanding and appreciation, there is this need for continued communication on a daily basis and not in a frantic claim to imminent successes at the time of budget review. For a world that is extremely media conscious, science is making too few concessions to that increasingly anxious public. Just what have the concerned societies done to further the process of understanding or appreciation? What are the media available to them, and how have they changed their format, content, or distribution to achieve this informational function? How have they changed their journals to provide articles easier for the public to understand or more enticing to the science writer or news editor? How have their meetings changed, or do they still descend upon a campus or city, do "their thing" of impressing each other or accounting for the period since the last gathering of the clan, while the public or student body are none the richer for their having been on the scene? How many are preparing materials for radio, TV, local newspapers, or even student papers on campus? Just how are they acknowledging their obligation to the coming public in the general student population by changing courses away from the preparation of other specialists? Just what is it they are willing to give up from the old ways to accomplish those good things they talk about on an intellectual level? John Q. isn't always asking "What have you done for me recently?" Sometimes he simply says "Talk to me."

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EXPECTATIONS AND REALIZATIONS  
 (Introducing a Series of Commentaries on Curriculum)

Curriculum design and course content selection are highly variable processes. Depending upon the institution, they may reflect one person's concept or the collective thinking of a multitude, both from within and without the institution. Traditionally, one highly concerned group had little input. Students past, present and future, have not always been included. Even today input comes largely from current students, and avenues for prospective students and those who have already graduated do not normally exist. Even where student input exists it may be somewhat clouded by the position a student holds in the academic hierarchy.

In this issue (P. 8) MIDWEST BIOSCENE presents the first of a continuing series of commentaries by students - past, present and future - on collegiate biology courses and curriculum. It is the editor's hope that these will prove both interesting and stimulating.

Further contributions to this series are needed. Please suggest to present students and recent graduates that they respond to the question, "Did my college biology courses live up to my expectations, did they provide the essential understandings and information for the future?" Statements from biology majors, humanities or fine arts majors, teaching majors, persons in professional and vocational programs, and graduates now employed or working toward advanced degrees are desired. Individuals and institutions will not be identified; however authors of published statements will receive a letter of appreciation from the organization.

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## AN ENVIRONMENTAL STUDIES PROGRAM

*A summarization of a paper presented to the March 21-22  
adjunct meeting of AMCBT at Kearney State College*

Harold G. Nagel, Director of Environmental Studies  
Kearney State College, Kearney, NB 68847

The initial impetus which resulted in formation of the environmental studies (ES) program at Kearney State College was the appearance on our campus of Dr. LaMont Cole of Cornell University. He spoke at our annual Midwest Conference on World Affairs in April, 1970. His presentations stimulated a small group of Kearney State students and faculty to form an *ad hoc* group to discuss environmental problems. This interest soon resulted in the formation of a city-wide ecology club and also in a faculty committee to consider development of environmental education at Kearney State.

In the fall of 1970, the ES group sent a memo to all departments on campus, asking if they would be interested in participating in an ES program, with existing courses, in development of new courses, or having a faculty representative on the ES committee. The first meeting of what was to become the official ES committee was held in October 1970, with representatives from the following departments: biology, chemistry, economics, geography, history, physics and psychology. Art, English, mathematics and sociology were later added to the committee, although mathematics has since dropped out.

During the winter of 1970-71, the committee spent much time writing a philosophy, rationale, objectives and developing a curriculum for the program. The objectives adopted are given in Table 1. Our concept of the program from the start was that it should be interdisciplinary in nature:

*"The general philosophy of the committee is that environmental problems are very complex and thus best approached from an interdisciplinary concept. As pointed out in the rationale, environmental problems require efforts involving the commitment of a wide range of disciplines since neither the problems nor the solutions can be identified in any simplistic manner. Analysis of a specific problem, for example, might well be a technical matter, but attitudes and solutions most often include economic, social, cultural, historical and political ramifications. That we are today experiencing environmental difficulties is apparent; that we need trained technicians and experts and an alert citizenry is equally apparent. It is with these points in mind that the committee made its recommendations for the program development. We desire to provide sufficient initial training to assist our students in understanding some of the problems which confront our environment; to provide sufficient background to enable our graduates to enter careers in environmental science; and to develop an awareness among our students as to their personal responsibility to the environment. To accomplish our stated objectives, we felt we must approach our program in Environmental Studies from a multi-disciplinary approach."*

Although we eventually planned to develop the program into a major program, we determined the best course of initial action was to develop a minor program which would not require significant funding.

The committee developed a core curriculum, consisting of five new courses and an existing conservation course (Table 2). The six core courses, plus four elective hours, were to be taken by ES minors. The courses were all non-prerequisite courses so that a student with any major could minor in ES.

Table 1. OBJECTIVES OF THE ENVIRONMENTAL STUDIES PROGRAMEducational Objectives

1. To provide courses in environmental studies which assist the students in their understanding of the problems which confront our environment and their effects on society.
2. To provide a program of study for the student who desires a career in the area of environmental science.
3. To try to develop an awareness among our students as to their personal responsibility to the environment, with courses which explore the economic, historical, political, psychological and sociological aspects of the relationship of man to environmental problems.
4. To promote among students, faculty and personnel interested in and engaged in environmental work, the systematic and scientific study of environmental problems.

Service Objectives

1. To act as a clearing house for information on Environmental Studies. The information provided would eventually include: audio-visual materials (slides and films), training of staff members, library materials (books, periodicals, reports), consultant services, and laboratory services.
2. To provide information on environmental problems to the community of Central Nebraska through the development of programs such as: seminars, visiting lecturers, evening courses, and institutes.
3. To cooperate with other organizations interested in environmental work.
4. To provide Central Nebraska with expertise to assist the correction of environmental difficulties germane to our particular geographic area.

Research Objective

To promote basic and applied research by students and faculty on environmental problems in Central Nebraska.

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Table 2. ENVIRONMENTAL STUDIES CURRICULUMRequired Courses

<u>Course</u>	<u>Course Title</u>	<u>Hours</u>	<u>Credit</u>
Art 305	Aesthetics in the Environment	3	
Economics 420	Environmental Economics	3	
Environmental Studies 310	Biological Effects & Chemistry of Pollutants	4	
Geography 305	Environmental Conservation	3	
Physical Science 300	Physics of Environmental Problems	4	
Social Science 333 and English	Environment in American Life and Thought	3	
			20

Elective Courses

(Four hours to be selected from a wide variety of courses in seven departments).

Three of the core courses were team-taught: ES 310 by faculty from chemistry and biology, Physical Science 300 by physics and biology and Social Science and English 333 by English and history faculty. The other core courses also utilized quest resource personnel frequently. Of the electives, Human Ecology has proven to be most popular and Special Topics in ES has been very useful in presenting material more specific than that in the core courses (e.g., analysis of water quality in Wood River). The first ES core courses were offered in spring of 1972. We began with 16 declared ES minors. By 1973, we had 34; in 1974, 49; and we presently have 45 minors. Interest in ES at Kearney State seems to have leveled off.

ES courses have averaged 25 students, with roughly half being ES minors. Environmental Conservation and Environmental Economics have been the most popular core courses, drawing around 40 students each time they are offered. Physics of Environmental Problems and Biological Effects and Chemistry of Pollutants have attracted the fewest students, averaging only about 15 per course offering.

Fifty-five percent of ES minors have been biology majors. Although a student with any major may choose an ES minor, geography majors constitute our second largest pool, with the rest coming from accounting, art, business administration, chemistry, industrial education, mathematics, physics, political science, psychology, recreation and sociology.

The ES committee has remained the administrative body for the program. Three hours released time are granted the director, and no faculty are assigned to the program. Faculty are loaned for whatever time necessary to teach ES courses offered each semester, and student and faculty time is donated for committee work.

The ES committee has spent much of its time the past three years in reviewing the progress and success of the program. Several attempts have been made to develop a major program, because students desired a more career-oriented curriculum and program. All attempts to develop an ES major have been voted down by the committee. They desired to maintain the program at minor status. The biology department has recently developed an Environmental Manager option which will give Kearney State students a career-oriented program.

Several problems have hampered the total success of the program. The problem which occurs repeatedly is that of lack of financial support. Unfortunately, we do not have many ES faculty trained in interdisciplinary studies. Lacking interdisciplinarians, another approach is to team-teach the ES courses, thus making them more interdisciplinary. Unfortunately, Kearney State, as are most state supported schools, is funded on the basis of student credit hours produced. Team-teaching thus becomes infeasible, unless class sizes are exceptionally large. Large class size, however, does not allow discussion courses to operate very successfully.

Many of the ES faculty at Kearney State feel that ES, unlike much traditional education, should be a socially relevant and active experience with students becoming involved in a local and regional issues. ES education requires much faculty leadership or many problems can ensue. Substantial funding would be required for equipment, supplies, travel and low student/faculty ratio to make the problem-oriented approach successful.

Another problem has been the uncomfortable feeling of some faculty and students in dealing with a course which does not pretend to have most of the answers. Criticism has been directed at some ES courses, because they are not primarily fact or concept-oriented, but rather are issue-oriented.

One of the most perplexing problems in the ES science courses arises from the greatly different backgrounds of the students. Non-science majors have been extremely reluctant to take the required ES science core courses. These courses were designed so that no previous background was essential, but when most of the students in the course are science majors (90%), it is disturbing to bore the majority so that the minority can keep up. An alternate curriculum, which might be a solution to the problem, would be to have the student take blocks of courses from two of three of the following areas: (1) humanities, (2) social sciences, and (3) natural and physical sciences, with a student omitting the courses in the area where he or she is majoring. The problem became so serious that we dropped ES 310, Biological Effects and Chemistry of Pollutants and the ES minor now selects four hours from the biology or chemistry electives. The chemistry department has recently added five hours of mini-courses to the ES elective list.

Although the problems have probably outweighed the successes to date, we have survived for three years and have offered at least three ES courses each semester. Thus, environmental courses are available to Kearney State students on a regular basis. ES is also a significant program at Kearney State in that it is the only program which attempts to be truly interdisciplinary in nature.

In addition to the regular course offerings, the ES program has sponsored several speakers, workshops, seminars, institutes and evening courses. We have developed an information center which provides objective data about environmental issues for south-central Nebraska. We have done research on local environmental problems, both through individual faculty and student efforts and as class projects. One highlight of the program was an ES 499 class planning and helping to initiate a recycling center in Kearney.

We are gradually developing a more well-rounded curriculum, having added courses in Environmental Psychology, Introduction to Environmental Studies, and Politics of Energy and the Environment.

In summary, the ES program at Kearney State, in spite of organizational problems, has helped to make students and faculty more environmentally conscious and has broadened the outlook of all persons involved in the program.

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#### CAREERS IN BIOLOGY, A MINICOURSE

*A summarization of a paper presented to the March 21-22  
adjunct meeting of the AMCBT at Kearney State College*

John F. Hertner, Asst. Prof. of Biology  
Kearney State College, Kearney, NB 68847

All too often students enter an academic program without any insight into the career opportunities the program may or may not lead to. To fill this need, the biology faculty at Kearney State College added an "Opportunities in Biology" minicourse to our schedule. The class met twice a week for five weeks and offered one semester hour credit.

Four goals or purposes for the minicourse were established:

1. The course should focus the student's attention on career awareness.
2. The course should provide an opportunity to develop skills in information gathering. (To meet this goal, the students spent two sessions in the college library searching out occupation handbooks, employment guidelines,

etc. It is not enough that students be told where to find the literature. We all know that we actually need to perform a particular task to become proficient at it.)

3. The minicourse should provide an introduction to the support services offered by the college. (To this end, guest representatives of the college placement office and the academic advisement center discussed their respective services.)
4. The minicourse should provide an introduction to the various careers in the natural science field. (During the class sessions, academic advisors from the biology department discussed the professional requirements, academic preparation and employment possibilities in their respective areas. Included were environmental studies, wildlife management, forestry, agriculture, medical technology, allied health and teaching. The course also provided an opportunity to explore "cross-match" interests (e.g., biology and art may lead to a career in medical illustration.)

It should be apparent to the reader that we relied heavily upon resource people for assistance. We felt that two advantages were realized by involving such a diverse group of people. First, no one person (i.e., class coordinator) can keep up with trends in every vocation. We therefore involved the advisors for the specific vocational areas. As a possible second benefit, students may be less hesitant to seek advice at a later date, having met the faculty advisors in the minicourse.

There were some problems associated with the minicourse and we offer general suggestions to anyone contemplating a similar offering.

1. The course should be offered on a pass-fail basis.
2. There should be a limit on the number of credits a student might accumulate in such courses.
3. The class size should be kept small (i.e., under 20) to permit active participation by everyone.
4. Representatives of our "sister sciences" (e.g., chemistry) should be involved.
5. The course might be split into two sections, one for freshman who are not committed to a major and one for upper division students who need to know how they can apply what they already have.

\* \* \* \* \*

## HAVE YOU HEARD ABOUT?

THE LIVES OF A CELL These thought-provoking essays originally appeared in the New England Journal of Medicine. Although concerned with serious content from all fields of science, they are written in an entertaining manner, sometimes reaching the witty. If you have students who are somewhat complacent about their understanding of scientific phenomena, these essays will serve to disturb their equilibrium. Don't miss reading them yourself. I believe that every biologist will find at least one new thought. Thomas, Lewis The Lives of a Cell; Notes of a Biology Watcher, The Viking Press, New York, 1974.

## EXPECTATIONS AND REALIZATIONS

*A series of articles by students  
- past, present and future -  
viewing college biology courses.*

### I. A Future Fine Arts Major

What do I, as a person who intends to go into the area of Fine Arts, expect to gain from my required college biology course?

Firstly, I would like to come away with an understanding as to what my place is in the cosmos. The knowledge of how man fits into the structure and chain of all living things is a common theme among writers, playwrights and artists. To be able to more fully interpret works of this nature, an insight into the scientific bases would be most helpful.

Secondly, I feel I need a thorough background of the principles upon which this earth operates so as to facilitate my decision-making on such issues as strip mining in my community, the construction of power plants on the banks of streams, and other such judgements that must be made. I would like to gain from my course the tools with which to comprehend the present as well as the future advances in medicine. The social as well as the scientific effects of such breakthroughs as genetic engineering and cloning may well become realities in my life time. I would like to be able to deal with them on an informed level.

I believe that a strong understanding of biology is essential for anyone going into the Fine Arts, for the arts hold a mirror on the scientific and cultural world around us. But without knowledge of the prime image, the reflection has no significance.

### II. A Future Biology Major

A college biology curriculum should prepare students to explore and scientifically investigate life and its processes. Further, students should be equipped, by these biology courses, to effectively communicate the results of an investigation.

Students planning a career in the sciences need to be mentally outfitted to learn more of their world. Supplying discovered facts for their memory will not equip a student for a rewarding study of life. Career scientists must also learn, and learn to teach, the ways in which science relates to man and affects society.

It is obviously beyond the capabilities of the best biology instructors to teach all the concepts governing the complex nature, varied forms, and numerous functions of life. Thus, courses for majors in life sciences should go beyond the conveyance of mere fact. Students, after a brief introduction to the complex nature, skills, basic philosophy, and methods of science, will benefit greatly from a chance to learn research skills. While it is true that no course can cover all facts of science, an effective course can help the student personally uncover both new and previously known principles.

Basic biology curricula should include introductions to many disciplines or branches of biology. If students are presented a view of the principles and concerns of a number of areas, they can then decide which they would like to study further. They may also discover at this time that they do not wish to limit their intake to knowledge to a specific area.

If any biology study is to enable the future scientist to discover facts of biology, it must aid in the use of many methods of discovery and research. Field work, laboratory research and instruction, and library research all must be employed for students to acquire the knowledge and skills necessary to investigate life and communicate findings to both the community and the scientist.

The future scientist should be prepared to act as a useful citizen of a community. The study of life should include the humanities, as well a pure analysis of life.

What is the appearance, then, of an effective college biology curriculum? It should include instruction in various methods of exploring life. Moreover, it should prepare the student to find biological principles and communicate them to the scientist and the community. But it must also enable the scientist to become a participating member of the broader community.

## W E ' L L   S H A R E

*Correspondence concerning these items should be addressed to the individual*

RUSSELL WAGNER, University of Wisconsin - Platteville, Platteville, WS 53818, is conducting a road kill census. Information is available to any one who is not familiar with this project concerning what is trying to be learned and the progress after about a year and one-half of collecting data. Additional road kill cards are available for those who have been or wish to cooperate in a census of the effect of highway types on animal life mortality.

## C O V E R   P O E T R Y

Rita Kohn, source of the thoughts on the cover page, is Public Relations Consultant, Corn Belt Library Systems, Bloomington, IL. She is editor of "Sum and Substance" and "Junior Opinions." The editor asked that she tell the members a little bit about herself - why she writes poetry and why nature is one of her chosen subjects.

*I write poetry to preserve my sanity and there's no profit in that. (I am a writer and earn my keep as such.)*

*Why do I write of nature? Because it is here and speaks its piece, because a comment needs to be made and the setting of nature is the best one in which to make it, because I am a child of the mountains and miss them, so try to find companionship with other aspects of natural phenomena.*

*Midnight  
is my mountain  
in this place  
of plains  
that stretch beyond tomorrow.*

\* \* \* \* \*

AMCBT 19TH ANNUAL MEETING, OCTOBER 17-18  
INDIANA STATE UNIVERSITY, TERRE HAUTE, IN

"BRING A COLLEAGUE"

## P O S I T I O N S

*Reply to the position number in care of AMCBT Central Office. Service is free to members. Others may use the service for a fee of \$1.00 per line of copy for each issue.*

OPEN

7505 ASSISTANT PROFESSOR OF BIOLOGY The North Central Campus of Purdue University is currently accepting applications for the position of Assistant Professor. Broad background in biology and specialization in physiology/genetics. Responsibilities will include teaching freshman courses in biology and zoology in addition to those in the area of specialization. Research will be encouraged but emphasis will be placed on effective teaching. Salary will be commensurate with qualifications. Purdue has an excellent fringe-benefit program. Contact: Dr. Clyde Porter, Purdue University, North Central Campus, Westville, IN 46391

7506 GENERAL BIOLOGIST Ph. D. preferred to teach botany, microbiology or cell physiology, and anatomy and physiology at a small, private liberal arts college. Salary open. Equal opportunity employer.

WANTED

7503 BOTANIST MA in plant taxonomy, female. 5 yrs. college teaching experience. General biology, botany, hygiene, microbiology lab. 2 yrs. histology lab work. Special interest - local flora. Presently on temp. appt.

7504 SUMMER 1975 Teaching or research. General Biologist, Physiologist, Ph.D. Avail. May 31 - Sept. 1.

## W H O K N O W S ?

PHYSICAL SCIENCE AND MATHEMATICS FOR THE BIOLOGY MAJOR: One of the discussions at the Terre Haute meeting will be concerned with this topic. John R. Carlock, AMCBT Central Office, is compiling a bibliography of books, modules, self-instructional packets and other materials in this area. The bibliography, and an exhibit will be available to the membership at Terre Haute. If you know of such materials, please send full bibliographic information to the Central Office so that as complete a list as possible can be compiled.

## CONTEST FOR INNOVATIVE LABORATORIES

Ingenuity is generally thought to be a prime requisite for good biology teaching. Several years ago someone described a number of laboratory exercises which could be carried out with an ordinary baby bottle as the only apparatus. Today we live in a more sophisticated world - we now have disposable, collapsible baby bottles which should offer new possibilities and potentials. MIDWEST BIOSCENE announces a contest - for the best laboratory exercise which can be carried out using only a baby bottle - any style. The top award will be a year's free membership in AMCBT and such other awards as determined by the Steering Committee. The most useful laboratory exercises will be published in MIDWEST BIOSCENE. The Contest is open to all biologists - in fact, to anyone. The contest will extend through the 1975-6 year.

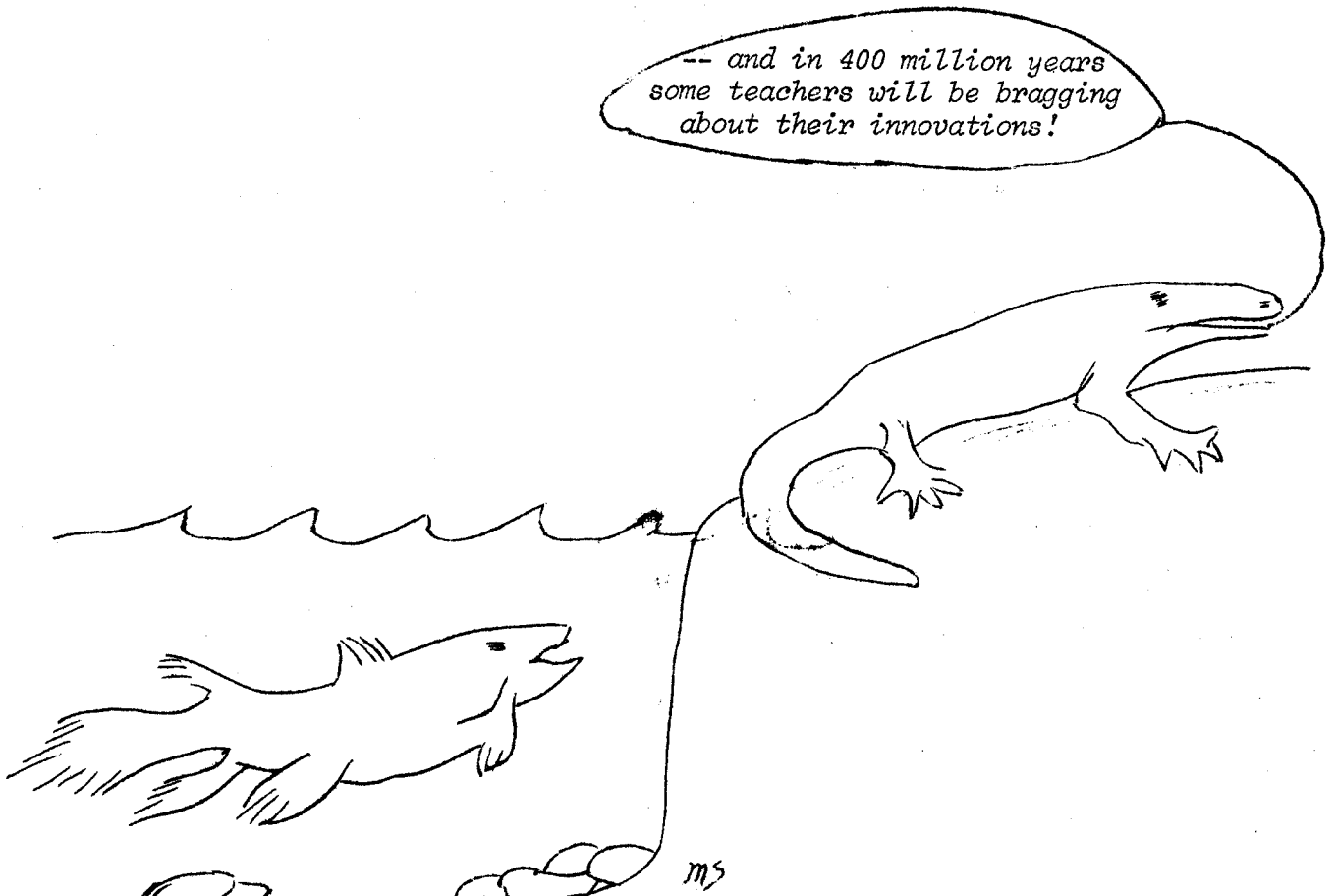
AMCBT 19TH ANNUAL MEETING, INDIANA STATE UNIVERSITY, OCTOBER 17-18

**KEARNEY INVITATIONAL** Elsewhere in this issue some of the papers presented at Kearney are summarized so that all members can share in some aspects of that meeting. There is no way, however, in which one of the major features can be shared. The morning and evening flights of the sandhill cranes must be one of greatest of the massed animal sights on the continent. This reporter suspects that in earlier days they rivaled the mass migrations of the bison. Dawn on the Platte River, with untold thousands of cranes rising against a blazing red and blue sky, is indescribable. Even from several hundred yards, the din of birds still on the primary roost in the river was masked by the wing noises of those leaving. Behavior on the feeding grounds, especially the "dance" was fascinating, but for sheer grandeur nothing could equal the sight of the massed flights.

Meeting organizer John C.W. Bliese, Department Chairman Marvin Williams, and all staff members at Kearney are to be commended for arranging this meeting. The papers were informative and interesting, the hospitality warm, and the field trips awe-inspiring. AMCBT members and other college biology teachers from several states and a variety of colleges were in attendance. AMCBT President Bob Buchholz believes that such adjunct meetings as this could become a valuable addition to the Association's activities. Other institutions may not have as spectacular a feature as the sandhill cranes to headline a meeting, but the opportunity of sharing views of campus facilities, discussions of programs, and presentation of instructional ideas on a more frequent basis to members and non-members alike can be utilized by every college and university. The organization will assist individuals or departments in planning and publicizing various adjunct activities. Quoting Bob, "Maybe there should be several Spring Field Trip meetings? I think that AMCBT would be better and stronger by such activities!"

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*-- and in 400 million years  
some teachers will be bragging  
about their innovations!*



BY-LAWS AMENDMENT PROPOSED C. L. Christensen, Chairman of the Constitution Committee, has proposed the following change in the By-Laws. The reason for the change is to keep the By-Laws in agreement with what is being done and to make them more flexible in these rapidly changing times.

Article VI of the By-Laws provides for amendment of the By-Laws, three - fourths majority of the votes cast by the members present at the business session of the Annual meeting is required.

By-Laws, Article I, Section 8

Delete: "publication and distribution of the Proceedings;  
publication and distribution of the Newsletter;"

Replace with: "publication and distribution of such journals and other information papers as directed by the steering committee;"

PROGRAM CHAIRMAN REPORTS Joseph E. Kapler, Loras College, Dubuque, IA 52001, program chairman for the 1975 meeting, reports that the program for the Terre Haute meeting is now being organized. It will include a field trip to a strip mine area, a panel curricular developments, reports on some aspects of biology teaching, an after-dinner speaker, a number of discussion sections on new developments and recurrent problems, and workshop - demonstration presentations on techniques and projects. In fact, there will be something for everyone.

Mark the dates (October 17-18) and make plans to attend. A complete program and schedule will appear in the September issue of MIDWEST BIOSCENE. Any communications regarding the program of the meeting, particularly suggestions and offers of help should be directed to the Program Chairman. Questions regarding the Association or registration and other aspects of the meeting should be directed to the Central Office.

BRING A NEW MEMBER  
TO TERRE HAUTE, OCTOBER 17-18

-----Detach Here-----

Application for Membership  
ASSOCIATION OF MIDWESTERN COLLEGE BIOLOGY TEACHERS

Regular Member (\$6.00)     Retired Member (\$3.00)     New     Renewal  
*Dues payable July 1 or at Annual Meeting*

Name \_\_\_\_\_ Date \_\_\_\_\_

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Institution \_\_\_\_\_

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