

Kansas Association of Biology Teachers

K. A. B. T. Newsletter

April 1992 Volume 33, No. 2

Paul G. Jantzen, Editor - John Wachholz, Production

Calendar - Looking Ahead

1992 Event

April 24-26	KATS KAMP - Rock Springs
May 30-31	Prairie Festival - The Land Institute - Salina, Kansas
June 1	Deadline - Registration Summer Session Camp KATS
June 6-7	KABT Spring Field Trip - Milford Reservoir - Junction City A short mailing will be sent in May with more information.
October 15-17	NSTA Regional Convention - Fort Worth, Texas
November 11-14	NABT National Convention - Denver

1993 Event

April 1-4	NSTA National Convention - Kansas City
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Please mail or phone meeting dates and other items of interest to biology teachers to Paul G. Jantzen, Editor, 107 North Madison, Hillsboro, KS 67063 (316) 947-5433.

Your membership **expiration date** can be found on your mailing label.

KABT Notes - From President to KABT Members

1992 KABT Spring Field Trip

This year the spring field trip will be at Milford Reservoir near Junction City. As voted on in the fall KABT\KEMNET meeting, it will be on June 6 and 7. The list of activities planned include tours of the fish hatchery, the nature center, the Wakefield Arboretum, and reservoir's dam. "Birders" will not only be able to attend a Sunday morning hike with an area ornithologist, but they will also get to try to call in owls Saturday night. During the day local Fish and Game Biologists will give several presentations. The fisheries biologist is scheduled to take groups of teachers out on his shock boat. Another field biologist will show how explosive trap nets are used to catch geese or turkeys. Also teachers can help weigh and measure fish. Saturday evening, a presentation on stars, planets, and constellations will be given. And maybe the most important segment of the trip will be the late evening conversations and discussions with fellow colleagues. Hopefully, there will be something new and interesting for everyone. So bring your hiking boots, waders, and binoculars and prepare to have some fun. Have a great finish to your school year and we'll see you at Milford. Pat Lamb, KABT President

PUBLISHING DATES FOR THE KABT NEWSLETTER are the first day of September, November, February and April. Manuscripts must reach the editor by the 15th day of the previous month. The KABT Newsletter includes abbreviated minutes of the official meetings, announcements of future activities, brief news notes, and other brief items of interest to biology teachers. Send your contributions to Paul G. Jantzen, Editor, 107 N. Madison, Hillsboro, KS 67063 (316) 947-5433.

Newsletter Information Needed: Articles are needed for the newsletter. Please forward them to Paul G. Jantzen, KABT Newsletter Editor, 107 North Madison, Hillsboro, KS., 67063. Please help

with the newsletter. The most helpful occurrence would be for all individuals sending information to the newsletter to send it via PSINet-KEMNET or on a disk. If you send it on a disk, any format is acceptable. ASCII text is easy for me to work with. Your help is appreciated. (MSDos, Mac, Apple - just sent it!)

Outstanding Biology Student Certificates Are Available

Send your name and address to the John Wachholz. Look for a Xerox copy of what a certificate looks like in this newsletter.

The Kansas Biology Teacher Is Off The Ground

The second issue of KABT's journal, The Kansas Biology Teacher is being prepared. We hope you find its contents helpful and stimulating, just as the first issue. While you examine its contents, think about what you can do to make the next issue even better. I'd suggest you plan to write your own contribution to the journal. Its purpose is to share ideas regarding the teaching of biology. We know you have many ideas the rest of us would like to know about.

Send your article(s) to the editor this summer, at least by October, so we can suggest possible changes that can improve the manuscript for publication. pgj

PROPOSED CONSTITUTIONAL AMENDMENTS

By direction of the executive council the administrative secretary submits the following two items for consideration by the general membership. A vote on these amendments will occur at the next general meeting.

#1 Life Membership

Add to membership categories ...

LIFE MEMBERSHIP. A person may become a life member of KABT by making a one-time dues payment equal to twenty (20) times the current yearly dues. [Annual dues for KABT are presently \$10.00, so a lifetime membership now would cost \$200.00.]

#2 Past President (Office)

Add to officer categories ...

PAST PRESIDENT. The outgoing president shall assume the office of Past President. The Past President shall serve on the executive council as a voting member for one election term or until succeeded by the next outgoing president. [Currently, the person in the past president role assumes the appointed duty of KABT Representative to the Kansas Advisory Council for Environmental Education.]

Submitted by
Bob Rose, Administration Secretary

CONSTITUTION AND BYLAWS OF THE KANSAS ASSOCIATION OF BIOLOGY TEACHERS

Adopted 19 September 1981
Effective 1 January 1982

Article I. Name
Section 1. The name of this organization is the "Kansas Association of Biology Teachers," hereafter referred to as the "KABT".

Article II. Purpose

- Section 1. To encourage education in biology and dissemination of biological information through the facilities of the KABT.
- Section 2. To achieve closer cooperation and understanding between biologists and non-biologists, so that they may work together in the common cause of furthering biological education.

Article III. Bylaws

The KABT shall establish bylaws concerning the organization and procedures to be followed.

Article IV. General Prohibitions

Notwithstanding any provision of this Constitution or the Bylaws which might be susceptible to a contrary interpretation:

1. the KABT shall be organized and operated exclusively for scientific and educational purposes.
2. no part of the net earnings of the KABT shall or may under any circumstance inure to the benefit of any private shareholder or individual.
3. no substantial part of the activities of the KABT shall consist of carrying on propaganda, or otherwise attempting to influence legislation;
4. the KABT shall not participate in, or intervene in (including the publishing or distribution of statements), any political campaign on behalf of any candidate for public office;
5. the KABT shall not be organized or operated for profit;
6. the KABT shall not:
 - a. lend any part of its income or corpus, without the receipt of adequate security and a reasonable rate of interest;
 - b. pay any compensation, in excess of a reasonable allowance for salaries or other compensation for personal services actually rendered;
 - c. make any part of its services available on a preferential basis;
 - d. make any purchase of securities or any other property for more than adequate consideration in money or money's worth from;
 - e. sell any securities or other property for less than adequate consideration in money or money's worth from;
 - f. engage in any other transaction which results in a substantial diversion of its income or corpus to; any officer, member, or substantial contributor to the organization.

The prohibitions contained in this Sub-Section 6, do not mean to imply that the organization may make such loans, payments or sales to or purchases from anyone else, unless such authority be given or implied by other provisions of this Constitution or Bylaws.

Article V. Distribution on Dissolution

Upon dissolution of the KABT, the Executive Council shall distribute the assets and accrued income to one or more organizations as determined by the Council, which organization or organizations shall meet the limitations prescribed in Sub-Sections 1 to 6 inclusive, of Article IV immediately preceding.

Article VI.

This constitution may be amended by two-thirds of the membership by mail vote.

BYLAWS

Article I. Members

- Section 1. Membership in the KABT shall be open to all persons who shall make formal application and pay the prescribed dues.
- Section 2. The Executive Council shall have the right to refuse any new member or to terminate the membership of an existing member for cause and without prior notice. However, a terminated person may appeal to the general meeting of the KABT.

Article II. The Officers

- Section 1. The officers of the KABT shall be of two kinds, elective and appointive.
- a. The elected officers shall be President, President-elect, Vice-President, Secretary, Treasurer, and six District Directors.
 - b. The appointed officers shall include the Editor of the KABT Newsletter and the Administrative Secretary.
- Section 2. No one individual may hold two or more elective offices concurrently.
- Section 3. The terms of office for the President, President-elect, Vice-President, Secretary, Treasurer, and six District Directors shall be for two years.
- Section 4. The duties of the elective officers shall be as follows:

- a. The President shall preside at meetings of the KABT and its Executive council; shall be the nominal head of the KABT; shall rule on questions of procedure that may arise; and shall appoint standing and ad hoc committees as needed.
- b. The President-elect shall fulfill the duties of the President when the latter is absent; shall succeed the President at the termination of the latter's term; and shall assume Presidency should that office become vacant during a term.
- c. The Secretary shall maintain the records of the KABT and its Executive council; shall notify the membership of the KABT of pertinent business; shall be responsible for all general correspondence of the KABT; and shall be the liaison with the coordinator of the annual meeting.
- d. The Treasurer shall keep financial records and accounts of the KABT including all monies received and disbursed; shall receive the annual dues; and shall be responsible for all financial reports required by the business of the KABT. The Treasurer shall be responsible for an annual audit of KABT monies.
- e. The District Directors shall serve as members of the Executive Council.
- f. The Vice-President shall serve as a member of the Executive Council.

Section 5. All records and implements of office shall be turned over by any officer to his successor immediately subsequent to the latter's assumption of the office.

Section 6. The duties of the appointive officers shall be as follows:

- a. The Editor of the KABT Newsletter shall be responsible for all phases of publication and may appoint staff members to assist. In general, the Editor shall be obligated to implement the stated objectives of the KABT. The Editor is responsible for reporting annually to the Executive Council. Inasmuch as the Newsletter is the principal mechanism for written communication to the membership, the Editor is obligated to publish all communications of the KABT and its Executive Council on first priority and to include, as space permits, other items consonant with the stated objective of the KABT.
- b. The Administrative Secretary shall serve as a consultant, archivist, liaison between KABT and NABT, historian, shall maintain the membership roster, and shall assist the Executive Council as necessary.

Article III. Executive Council

- Section 1. The Executive council shall consist of the President, President-elect, Vice-President, Secretary, Treasurer, and six District Directors.
- Section 2. The Executive Council shall be empowered to manage the affairs of the KABT and to designate all appointive officers for terms of one year.
- Section 3. The executive council shall fill any vacancy occurring among the officers, except that of President, by an appointment for the unexpired term.

Article IV. Elections of Officers

- Section 1. The President shall appoint three members of the KABT to serve as a nominating committee, except that not more than one member of the Executive council may be appointed to the committee in any one year.
- Section 2. The Nominating committee shall present a slate of at least two candidates for each office to be filled, except that at its discretion, the committee may offer only one candidate for the positions of Secretary, Treasurer, and District Director. The slate must be presented at the annual meeting, at which time nomination may be made by the membership.
- Section 3. The Nominating Committee, or a member of the KABT proposing a nominee, shall obtain the consent of the candidate to serve if elected.
- Section 4. The President shall appoint an Elector from among the membership who will count the vote.
- Section 5. Officers shall be elected by a majority vote of the membership at the annual meeting.
- Section 6. Newly elected persons will take office on the first of January of the year following the election.

Article V. Meetings

- Section 1. The KABT shall hold an annual meeting and an annual field trip at a time and place set by the Executive Council, except when this is contrary to the national interest. Not more than 18 months shall elapse between meetings.
- Section 2. The membership shall be informed in writing of the time and place of the meeting not later than one month prior to the meeting.
- Section 3. One-tenth of the membership shall constitute a quorum of the KABT at any meeting.
- Section 4. Special meetings may be called by vote of a majority of the Executive Council, or on petition of a quorum of the membership. The time and place of such special meetings must be announced to the membership in writing prior to the meeting.
- Section 5. All meetings shall be conducted under Robert's Rules of Order (Revised).

Article VI. Meetings of the Executive Council.

- Section 1. The Executive council shall meet at least once a year on the occasion of the annual meeting of the KABT.

- Section 2. Any meeting of the Executive council shall be open to attendance by interested members of the KABT unless the Executive council moves for Executive Session.
- Section 3. A simple majority of the Executive Council shall constitute a quorum.
- Section 4. A majority of those present and voting shall be necessary to pass any motion.
- Section 5. The meeting shall be conducted according to Robert's Rules of Order (Revised).
- Section 6. Special meetings of the Executive Council may be called by the President or by a majority of the Council.

Article VII. Dues

- Section 1. The Executive council shall be authorized to establish such dues as are compatible with the financial status of the KABT.
- Section 2. A member in arrears for payment of dues for a period of six months shall be dropped from the membership roll.

Article VIII. Fiscal Year

- Section 1. The fiscal year of the KABT shall embrace the period from 1 January of any year through 31 December of the same year.

Article IX. Amendment of Bylaws

- Section 1. Amendments may be proposed by the Executive Council or by petition to the Secretary by ten or more members of the KABT.
- Section 2. Proposed amendments must be submitted in writing to the Secretary one month before the meeting at which they are to be discussed.
- Section 3. Such amendments shall be submitted in writing by the Secretary to the general membership at least two weeks prior to the meeting at which they are to be discussed.
- Section 4. To be approved, an amendment must receive a positive vote by two-thirds of those voting at the meeting.
- Section 5. Any adopted amendment shall become an integral part of the Bylaws and the Secretary shall be instructed to add them to copies of the Bylaws and to distributed the amended Bylaws to the members of the Executive Council and to other interested members of the KABT.

Prepared by Joseph T. Collins January 1981

Sense of Wonder

“If a child is to keep alive his inborn sense of wonder . . . he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in.”

Rachel Carson

SUMMER GRADUATE PROGRAM IN BIOLOGICAL SCIENCES

The Division of Biological Sciences at Emporia State University has a SUMMER GRADUATE PROGRAM designed especially for secondary teachers. The program consists of a four-summer sequence of course work plus five additional hours of research to be arranged at the student's convenience. The course work expands the student's knowledge in the major areas of the biological sciences. The research experience will provide depth in the area of the student's greatest interest. Successful completion of the program will lead to a Master of Science degree. Substitutions in the program may be made with the approval of the division.

Admission to the program is by application to the Division of Biological Sciences and the School of Graduate and Professional Studies at ESU. The applicant should have an undergraduate major, or a significant number of undergraduate courses, in biology. The criteria for admission to, and completion of, all graduate programs at ESU are outlined in the Graduate Catalog. It should be noted that there is a **six-year** time limit for completion of all requirements. The sequence of courses in the program is given below:

Summer 1992	MC 859 Topics in Microbiology	- 4 hours
	ZO 859 Field Zoology	- 4 hours

Summer 1993	ZO 859 Topics in Physiology	- 4 hours
	GB 859 Issues in Human Biology	- 3 hours
	GB 870 Seminar in Biology	- 1 hour
Summer 1994	EB 859 Prairie Ecology	- 4 hours
	GB 859 Genetics in Today's World	- 3 hours
Summer 1995	BO 859 Field Botany	- 4 hours
	GB 750-751 Research Design/Analysis	- 3 hours
Summers 1996-1999		The above sequence repeats.
Arranged	GB 880 Research Problems in Biol.	- 3 hours
	GB 809 Graduate Project in Biol.	- 2 hours
	TOTAL HOURS:	35

Dr. Rodney J. Sobieski, Division of Biological Sciences, Box 50, Emporia State University, Emporia, KS 66801, Phone: (316) 341-5620

Project WILD is Here!!

Project WILD, an educational program which emphasizes an awareness, appreciation and understanding of wildlife, is now available throughout Kansas. A network of Project WILD Coordinators has been established within seven regions across the state. Starting last fall, these coordinators are planning, organizing and implementing training sessions for Project WILD facilitators and staff development workshops for educators.

Through these sessions participants are given the opportunity to learn basic concepts about wildlife, its needs, and relationship and importance to people and the environment. It also increases the awareness and confidence of educators in utilizing the outdoors as an effective learning setting.

Project WILD also addresses two other major concerns: (1) the time restraints all educators face in our educational system; (2) the lack of practical experience or knowledge some educators face when presenting subject matter related to the outdoors.

The time restraints are very real. More and more requirements are being added to the daily instructional sequence. Because of this situation educators may have lost insight into incorporating outdoor learning experiences as part of their on-going curriculum. The beauty of Project WILD is it demonstrates how easily one can integrate outdoor learning experiences into one's daily instructional plans. Math, science, social studies and art are natural, but music, physical education and language arts are just as integrative. The myth that one is losing demanded instructional time is just not true. In essence one experiences a doubling effect: bringing across an environmental concept while presenting a part of the required on-going curriculum.

While it may be true that many educators have not been exposed to outdoor learning experiences in their professional training, it does not necessarily mean these opportunities are lost forever. Project WILD is designed to assist educators in providing a hands-on learning approach for their students in an outdoor setting. The six hours of training and the activity guides, which contain outdoor experiences in all subject and skill areas, would enhance the knowledge, understanding and teaching abilities of any educator regarding wildlife and the environment.

For additional information regarding Project WILD and its possibilities for you as a concerned individual contact Roland Stein, Project WILD's Program Director at: Kansas Department of Wildlife & Parks, RR 2 Box 54A, Pratt, KS 67124 or call 316/672-5911, extension -108.

GARDENING IN THE HEARTLAND

Most garden books provide midwestern gardeners with advice meant for friendlier climates--those with cool, light-wind growing seasons and plenty of moisture. Gardening in the Heartland, just published by the University Press of Kansas, addresses the tougher conditions gardeners in the Midwest face: constant wind, extremes of heat and cold, sudden and violent weather changes, and drought, not to mention periodic insect invasions.

But breath taking flower gardens and bountiful vegetable gardens are just as achievable in the country's midsection as they are on either coast, writes Rachel Snyder. The key is understanding the peculiar conditions of the region and making the most of them.

In Gardening in the Heartland, Snyder focuses exclusively on Midwestern garden problems and prescribes simple, effective remedies. Information was drawn from Nebraska, Iowa, Missouri, and Kansas. In 49 stunning full-color photographs of gardens in this region, she offers clear evidence that her methods work.

Snyder reviews hundreds of kinds of plants and identifies those that grow best in the Midwest. She explains different gardening techniques and offers a cornucopia of gardening advice: hints for growing annuals and perennials, tricks for cultivating beautiful roses and keeping them beautiful year after year, tips on vegetables ready-made for the region, and a list of fruits that will grow in the Midwest without a fight.

Snyder also explains the advantages of native plants and organic gardening methods. She evaluates the pros and cons of xeriscaping versus traditional "well-manicured lawns," and includes Department of Agriculture's latest calculations.

Kansas native Rachel Snyder, now of Mayetta (Kansas), was editor of Flower and Garden Magazine for 31 years and is the author of The Complete Book for Gardeners. Heartland contains 288 pages, 43 line drawings, and 8 maps.

To order this cloth-bound book rate OR plus \$3.00 UPS. Add \$0.50 for each additional book for postage. Address: University Press of Kansas, 2501 West 15th, Lawrence KS 66049-3904.

"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."

Albert Einstein

"The finest investment of a lifetime is to become acquainted in one's years with the great thoughts of great minds."

Aldo Can Eyck

"Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Aldo Leopold

KABT at KATS KAMP

This year KABT will give a series of presentations at KATS spring convention. Several members have offered to demonstrate some of their favorite labs in several different areas. If you have ever

had a difficult time finding labs for photosynthesis, cellular respiration, or aquatic field biology, come to our session. I believe you will leave with some new exciting ideas for your classes. The format will be three series of short presentations. Each session will be very informal. So if you have any ideas or labs to share, come and join this Saturday morning presentation. I am sure you will find it very rewarding.

The following is a list of presentations.

Photosynthesis

Presenters:

- Brad Williamson 1. Observing Different Rates of Photosynthesis in C3 & C4 Plants 2. Utilizing pH to Measure Photosynthetic Activity in Algae
- Pat Lamb 1. Using Paper Chromatography to Separate Plant Pigments
2. Using Column Chromatography to Separate Plant Pigments and a Spect. 20 (or any other light analyzing device) to Determine Each Pigment's Activity Spectrum
3. Observing Plant and Animal **Relationships** (Elodea and either snails or humans)
- Pat Wakeman 1. Determining the Effects of CO₂ Deprivation on Plants
- Paul Jantzen 1. The Effects of Various Factors on the Rate of Photosynthesis

Field Biology

- Brad Williamson 1. Seining and Identifying Kansas Fish
- Steve Case 1. Nine Different Chemical Tests to Determine an Overall Water Quality Index
- Terry Calender 1. How to Map Streams
2. Determining Water Quality Using a Diversity Index of Benthic Organisms 3. Determining Water Quality Using a Sequential Comparison Index of Benthic Organisms
- Pat Wakeman 1. Sampling Benthic Organisms
2. Vegetative Sampling
3. Observation Hive of Honeybees ? maybe?
- John Wachholz 1. Pond Samples Through the Year

Respiration

- Dan Daniels 1. Measuring Respiratory Rate in Insects
- John Wachholz 1. Starch Digestion
- Pat Lamb 1. Aerobic and Anaerobic Respiration in Human Muscle Tissue
2. Several Experiments Involving Cellular Respiration in Yeast

"Life is like a ten speed bike. Most of us have gears we never use." Charles Schulz

"Change favors only the prepared mind." Pasteur

"Today the pioneering spirit of Kansans shows signs of a revival in the battle to save our natural heritage. It is a battle that we must win, not only for ourselves and future generations but for the land and its creatures..." Joseph T. Collins

In Memory of George F. Toland - 1915-1992

On March 15, 1992 George F. Toland died. George was a long time biology teacher in the Salina school system. He was well known for his detailed studies and herpetology work. While attending the funeral it was brought out that George had some native American Indian blood. The 23rd Psalm, Native American Indian version was read at his funeral. A copy is printed here as a tribute to George

Psalm 23 - American Indian Version

The Great Father above a shepherd Chief is. I am His and with Him I want not. He throws out to me a rope and the name of the rope is love and he draws me to where the grass is green and the water not dangerous, and I sit and lie down and am satisfied. Sometimes my heart is very weak and I fall down but he lifts me up and again draws me into a good road. His name is WONDERFUL.

Sometime, it may be very soon, it may be a long time, He will draw me into a valley. It is dark there, but I'll be afraid not, for it is in between those mountains that the Shepherd Chief will meet me and the hunger that I have in my heart all through this life will be satisfied.

Sometimes He makes the love rope into a whip, but afterwards he gives me a staff to lean upon. He spreads a table before me with all kinds of foods. He puts His hand upon my head and all the "tired" is gone. My cup He fills till it runs over. What I tell is true. I lie not. These roads that are "away ahead" will stay with me through this life and after; and afterwards I will go to the Big Tepee and sit down with the SHEPHERD forever.

HOW TO PREPARE BIRD STUDY SKINS

Richard H. Schmidt, taxidermist emeritus of Emporia State University, has just published the fourth major revision of his bird study skin manual.

Beginning his work in high school, Richard has distinguished himself by doing excellent work, teaching his craft to many college students, and presenting his traveling display and nature talks to many community groups. His skills were applied to a bird collecting expedition to the far North and a teaching stint in South America. He hired on at ESU in 1956, developed the Natural History Museum there, and retired in 1974.

While at ESU, Richard wrote several well-received instruction manuals: Bird Taxidermy, How to Mount Birds, and How to Mount Fish. The bird study skin manual contains 55 pages of clear instructions and is liberally sprinkled with helpful line drawings. This edition includes the skin-plus-skeleton method of preparation now becoming popular.

To order, send \$5.50 to Richard H. Schmidt, 716 Ash St.,
Newton, KS 67114.

Museum of Natural History - University of Kansas - Special Events
Exhibit Opening - Sunday, April 26, 1992 - 2:00 pm

The museum will host an opening of a temporary exhibition titled "Robert M. Mengel: A Life With Birds" in the museum's Public Education Room, 602P Dyche Hall. Guest curator Robert McCracken Peck will introduce this exhibition of drawings and paintings by Robert Mengel by commenting briefly on Mengel's artistic accomplishments.

Mengel was curator of ornithology at the museum and KU professor of systematics and ecology from 1967 until his death in 1990. He was a nationally recognized scientist, teacher, historian, writer, editor, and artist. The exhibition, which will be on the fifth floor of the museum, will include more than 100 examples of Mengel's drawings and paintings. It will continue through August 2, 1992.

Peck, fellow of the Academy of Natural Sciences of Philadelphia, is a writer, naturalist, and historian. He is the author of "Land of the Eagle: A natural History of North America," the companion volume to the BBC television series of the same name, which was shown in the "Nature" series on PBS stations in November of 1991.

