BIO Briefs Issue 2

An alumni publication of the Eastern Illinois University Biological Sciences Department
http://www.eiu.edu/~biology/
Edited by Andrew Methven

A Message from the Chair….

Dear Alumni and Friends:

Welcome to the 2nd edition of "BIO BRIEFS." Alumni response from the first edition was incredible; we heard from literally hundreds of alumni and friends updating their addresses, careers, marriages, children, etc. If you haven't done so, please update your personal information (you can do this on our web site: http://www.eiu.edu/~biology/). The Department is extremely proud of our alumni and we are very interested in hearing from all of you. Although we plan to highlight alumni activities in future editions of "BIO BRIEFS," this edition is devoted to student and faculty activities and achievements.

The Department has had more extramural research/teaching grants this year than at anytime in the history of the Life Sciences and leads the University in this area. Similarly, the number of peer-reviewed publications authored by our faculty and students/year has reached an all time high. Over 70 undergraduate students/year participate in a research experience with one or more of our faculty and almost all Master's degree students are completing theses. I am equally proud that the research effort of our faculty and students has NOT been at the expense of traditional classroom/laboratory teaching. The Department of Biological Sciences is one of the strongest teaching departments at the University and the number of teaching awards our faculty have won in the past few years documents this fact.

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A Message from the Dean….

Dear Alumni and Friends,

The College of Sciences formed in 1993 from the previous Liberal Arts and Sciences Colleges, has ten departments: Biological Sciences, Chemistry, Communication Disorders and Sciences, Economics, Geology/Geography, Mathematics, Physics, Political Science, Psychology, and Sociology/Anthropology.

Two years ago, the College began a Scholars in Undergraduate Research at Eastern (SURE) award program designed to develop research and communication skills. Each year the College of Sciences students compete for $100 and the chance to present their work projects at the College ScienceFest, to the Illinois State legislature or to a professional conference. Students and faculty mentors report that the SURE competition has developed excellent inquiry and presentation skills among students. Congratulations to Christina Heisler, Angela Kerber, Krista Kirkham, Kimberly Lackey and Todd Brent, student winners from Biological Sciences this year.

Lida G Wall, Dean

College of Sciences

A Message from the Chair (continued from page 1)

It remains an exciting time in the Department of Biological Sciences. Dr. Stephen Mullin joined our department this fall and Dr. Mark Mort came on board in January. Both are highlighted in this issue of Bio Briefs. We are currently interviewing candidates for a Plant Ecology position. In addition, the Department hopes to hire two tenure-track faculty next academic year. Although still hampered by space and equipment limitations, we are well on our way to becoming one of finest Biological Sciences Departments in the state and region.

Kipp Kruse, Chair

New Faculty

Two new faculty have joined the Department of Biological Sciences since the last newsletter. Dr. Mark Mort, an evolutionary biologist, teaches evolution, systematics, and plant anatomy. Dr. Stephen Mullin, who was hired to replace Dr. Ed Moll, teaches Vertebrate Natural History and Herpetology. The following biographies are intended to introduce you to our new faculty members.

Dr. Mark Mort

I received my B.S. in Biology from Indiana University of Pennsylvania in the spring of 1992. Following a two month fellowship at the Mount Desert Island Biological Station (Salisbury Cove, ME), I began my graduate studies at the College of William and Mary, graduating with an M.A. (with thesis) in the spring of 1994. I received my Ph.D. in Botany from Washington State University in May of 1999.

My doctoral dissertation research involved a family-level systematic study of the flowering plant family Crassulaceae using DNA sequence data. In addition, I conducted a detailed systematic analysis of four genera of Crassulaceae that are largely endemic to the Canary Islands. This framework of relationships was then used to investigate the patterns of morphological and physiological diversification in *Aeonium,* the largest of these four genera. Most recently, I obtained a post-doctoral research fellowship from The Ohio State University to work with Dr. Daniel Crawford. While at OSU, I had the opportunity to learn new techniques for determining the levels of genetic diversity within and among populations of island plants.

Currently, I am teaching Evolution and Plant Anatomy. Future courses that I will teach include Systematics, Modern Methods in Systematic Research, and Honors Botany, as well as graduate seminar courses. In addition to teaching, I am in the process of setting my research lab. Included in this lab are an automated DNA sequencer, and the equipment necessary to conduct studies of population-level of genetic diversity in a variety of taxonomic group. I plan to continue my research on the evolution and diversification of Crassulaceae and other elements of the Canary Island flora. However, I am also very excited at the prospects of interacting with the faculty, graduate students, and undergraduates at Eastern, regardless of their taxonomic group of interest.

Publications

Mort, M.E., P.S. Soltis, D.E. Soltis, and M.L. Mabry. 2000. Empirical comparison of four methods of estimating internal support of phylogenetic trees based on three data sets for seed plants. *Systematic Botany* (In press)

Mort, M.E., D.E. Soltis, P.S. Soltis, J. Francisco-Ortega, and A. Santos-Guerra. 2000. Phylogenetic relationships and evolution of Crassulaceae based on *matK* sequences. *American Journal of Botany* (In press)

Soltis, D.E., P.S. Soltis, M.E. Mort, M.W. Chase, et. al. 2000. Phylogenetics of seed plants based on phylogenetic analyses of three molecular data sets. *Botanical Journal of the Linnean Society, London* (In press)

Soltis, D.E., M.E. Mort, P.S. Soltis, C. Hibsch-Jetter, E. Zimmer, and D.R. Morgan. 1999. Phylogenetic relationships in the enigmatic angiosperm family Podostemaceae. *Molecular Phylogenetics and Evolution* (In press)

Mort, M.E., and D.E. Soltis. 1999. Phylogenetic relationships and the evolution of ovary position in *Saxifraga* section *Micranthes. Systematic Botany* 24: 139-147.

Soltis, D.E., P.S. Soltis, M.W. Chase, M.E. Mort, V. Savolainen, S.B. Hoot, and C.M. Morton. 1998. Inferring phylogenies: an empirical approach using three large DNA data sets for angiosperms. *Systematic Biology* 47: 32-42.

Sanderson, S.L., M.E. Mort, and J.J. Cech. 1998. Particle retention by non-suspending-feeding cyprinid fishes. *Canadian Journal of Fisheries andAquatic Sciences 55:* 86 1-868.

Dr. Stephen Mullin

I hail from La Jolla, California, where my family still lives. I received my B.A. in Zoology from the University of California at Berkeley, my M.S. in Zoology from the University of South Florida, and my Ph.D. in biology from the University of Memphis (formerly, Memphis State Univ.). I previously taught at the University of Memphis, at the Memphis College of Art, and most recently was a Visiting Assistant Professor at the University of Central Arkansas.

My role within the Department of Biological Sciences is to teach Vertebrate Natural History and Herpetology, and contribute to the teaching of Environmental Life Science and Animal Diversity. My primary research interests within biology are behavioral ecology, ethology, and conservation biology. My recent research has examined predator-prey systems and I like to use snakes as focal organisms because their ability to perform such a wide variety of behaviors without the use of appendages always amazes me.

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My hobbies are varied: body surfmg, volleyball, photography, and Early Music. I have enjoyed my first semester at Eastern and look forward to many excellent opportunities as a member of the Department of Biological Sciences.

Publications

Mullin, S.J. 1999. Caudal distraction by rat snakes (Colubridae, Elaphe): A novel behavior used when capturing mammalian prey. *Gr. Basin. Nat. 59:361-367.*

Mullin, S.J. and R.J. Cooper. 1998. The foraging ecology of the snake Elaphe obsoleta spiloides: Visual stimuli facilitate location of arboreal prey. *Amer. Midl. Nat.* 140:397-401.

Mullin, S.J. and W.H.N. Gutzke. 1999. The foraging ecology of the gray rat snake (Elaphe obsoleta spiloides). I. Influence of variable habitat structural complexity on snakes foraging for terrestrial mammalian prey. *Herpetologica. 55:18-28.*

Mullin, S.J., R.J. Cooper, and W.H.N. Gutzke. 1998. The foraging ecology of the gray rat snake (Elaphe obsoleta spiloides). III. Searching for different prey types in structurally varied habitats. *Can. J. Zool. 76:548-555.*

Faculty Receive National Science Foundation Grant

Dr. Marina Marjanovic and Dr. Kip McGilliard were awarded a National Science Foundation Course, Curriculum and Laboratory Improvement Grant ($70,692) and an Instructional Technology Enhancement Grant ($21,874) from Eastern Illinois University to establish a PowerLab-based Physiology Laboratory. PowerLab is a powerful computer-based system designed for classroom teaching and advanced research projects. It is designed to introduce physiology students to the principles and applications of instrumentation in a modern, experimental setting. The main objectives of the program are to:
1) involve students in interactive, investigative projects which develop critical thinking skills used in problem-solving; 2) teach physiology students modern laboratory methods and techniques that will be useful in graduate school or the job market; and, 3) allow students to conduct experimental evaluations of theories and facts presented in the lectures. The PowerLab will provide a unique physiology teaching center that will be shared by students all of our physiology classes and will be an extremely valuable resource for undergraduate research. Congratulations to Marina and Kip!

Faculty Member Receives National Institutes of Health -AREA Grant

Dr. Britto Nathan was recently awarded an Academic Research Enhancement Award from the National Institutes of Health to study Alzheimer's disease. Dr. Nathan's research centers on neuroscience with a special interest in neurological diseases. His current research is aimed at understanding the pathological pathways that lead to death of brain cells in aging humans and predisposes them to dementia such as Alzheimer's disease. A wide range of molecular, biochemical, and cellular techniques are used in his laboratory. He has received funding from the Illinois Department of Public Health, the Alzheimer's Association and the National Institutes of Health, and has published student-based research in several journals including Brain Research, Science, and the Proceedings of the National Academy of Science. Congratulations Britto!

Achievement and Contribution Awards

The following faculty received these prestigious awards in recognition of their teaching, research, and service activities during the 1998-1999 academic year. We hope the following biographies will acquaint our alumni with some of our best faculty.

Dr. Janice Coons – Balanced Category (Teaching, Research, and Service)

Dr. Coons teaches courses in plant physiology and horticulture. She received a Redden Grant to purchase systems for measuring photosynthesis and respiration in plant physiology. These systems include computer programs and allow students to watch changes over time. Other contemporary labs deal with tissue culture, forensics and nitrogen fixation. In horticulture classes, students travel to the Missouri Botanical Gardens and develop computer-generated landscape designs. Her research is focused on reproductive potential of endangered plants in Illinois. She currently is working with seven endangered plant species doing field surveys and determining needs for seed germination. Several of these species require scarification or stratification to break their dormancy. Typically 8-9 students are investigating these species each semester, and students have been very successful at obtaining Undergraduate Research Awards and SURE (Scholars in Undergraduate Research at Eastern) Awards. Other support for these projects has come from the Illinois Department of Natural Resources and the Council for Faculty Research. Several presentations involving students have been made at the Illinois State Academy of Science meetings. Future directions will be focused on establishment of these plant species into natural areas. Dr. Coons also has some especially noteworthy service. She serves as chair of the Teaching Methods Working Group within the American Society for Horticultural Science. In that role, the proceedings of a workshop that she coordinated will be published in HortTechnology. She also was elected as chair of the Botany Division for the Illinois State Academy of Science. Within the university she serves on Faculty Senate, facilitates sessions of Covey's Seven Habits of Highly Effective People, and advises Botany Club.

Publications/Presentations (* = students)

Coons, J.M. 2000. It's all about learning. *HortTechnology.* (In press).

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Franken, K.M., C.J. DuFrain*, J.M. Coons, H.R. Owen, and E.L. Smith. 2000. Seed production and germination of wild hyacinth *(Camassia angusta).* Abstract for Illinois State Academy of Science.

Heisler, C.J.[8], J.M. Coons, and H.R. Owen. 2000. Age and harvest time affect color of *Stylisma pickeringii* seeds. Abstract for Illinois State Academy of Science.

Kerber, A.J., H.R. Owen, and J.M. Coons. 2000. Photoperiod impact on lateral shoot growth in *Stylisma pickeringii.* Abstract for Illinois State Academy of Science.

Lackey, K.R.*, J.M. Coons, H.R. Owen, and J.E. Ebinger. 2000. Seed production and germination of *Astragalus crassicarpus* var. *trichocalyx.* Abstract for Illinois State Academy of Science.

Todd, B.L.', J.M. Coons, and HR. Owen. 2000. Scarification of *Stylisma pickeringii* (Patterson bindweed) seeds using different techniques. Abstract for Illinois State Academy of Science.

Greenwood, L.*, J.M. Coons, H.R. Owen, L. Ferguson*, and R. Wang'. 1999. Emergence of five lettuce cultivars using seeds developed in different seasons. *HortScience* 34:502.

Heisler, C.J., M.L. Rycerz*, J.M. Coons, H.R. Owen, and W.E. McClain. 1999. Seed color and mechanical scarification affect germination of Patterson bindweed *(Stylisma pickeringii). Trans. ill. State Acad. Sci.* 90:71.

McClain, W., J. Shimp, J.Coons, and J. Ebinger. 1999. Distribution and invasive potential of kudzu *(Pueraria lobata,* Fabaceae) in Illinois. *Trans. Ill. State Acad.Sci. 90:45.*

Sojka, M.M.*,C.L. LaZier*, H.R.Owen, J.M.Coons, and W.E. McClain. 1999. Surface sterilization treatments for *in vitro* germination of *Stylisma pickeringii. Trans. Ill. State Acad. Sci.* 90:42.

Dr. Bud Fischer - Balanced Category (Teaching, Research, and Service)

I have been very busy this year with teaching, research and service commitments. I continue to enjoy teaching large sections of Environmental Life Sciences. In addition, I continue to teach Ichthyology, Stream Ecology and Fisheries Ecology and Management on a rotating schedule that allows students to take these courses over a two-year period. I have also designed a new course in population ecology that is designed to introduce students to the structure and dynamics of populations using models to address specific applications in conservation biology and natural resource management. With the addition of this course and the new advanced limnology (taught by Dr. Charles Pederson) we offer both undergraduate and graduate students the opportunity to take a series of course that will qualify them to become certified fisheries biologists.

Currently my research focuses on two specific areas: 1) examining changes in morphology, physiology, behavior and life-history traits of bluegills and other aquatic organisms in response to environmental perturbation. This research involves both field and laboratory experiments utilizing state of the art laboratory equipment and procedures to answer questions concerning changes in body shape, performance traits, lipid cycles, reproductive cycles, metabolic rates, and age at sexual maturity in bluegills and other aquatic organisms from stressed sites; and, 2) determining the effects of land-use practices on stream ecosystems. This research uses intense field analysis to answer questions related to the effects of flow regime and riparian zone changes on species diversity, species richness, biotic integrity and genetic structure of stream fish communities. Research projects being conducted with undergraduates and graduate students have specifically examined 1) the effects of landscape processes on fish communities, 2) the effects of near stream habitat changes on the Index of Biotic Integrity, and 3) the effects of stream habitat fragmentation on the genetic diversity of darter populations.

I continue to be active in service at the Department, College, and University Level. At the College and Department level I presently serve on the ScienceFest Committee, Honors Committee and am the coordinator of the Environmental Biology Program. At the University level I am presently a member of the Library Advisory Board and the Faculty Senate and have just finished serving on a search committee for the Associate Director of Financial Aid and chaired the search committee for the Director of Campus Recreation. Finally, I serve as faculty advisor for the Association of Honors Students on campus.

Publications/Presentations (* = students)

Fischer, R.U and J.D. Congdon. 1999. The effects of 30 years of thermal extremes on bluegill *(Lepomis macrochirus)* morphology. *Environmental Bio!ogy of Fishes.* (In Press)

Fischer, R. U and M. Marlen*. 1999. Parental investment in the red-eared slider turtle. *Journal of Herpetology* 33(2):306-309.

Jackson, N*. 1999. The effects of stream patch formation on fish growth rates. Illinois State Academy of Sciences.

Popp, K.*, and R.U. Fischer. 1999. The effects of habitat fragmentation on stream fish communities. Illinois State Academy of Sciences.

Fischer, R.U. 1999. Lipid and reproductive cycles of bluegills exposed to 35 years of elevated environmental temperatures. Study of Evolution and the Society of Systematics.

Fischer, R. U., J. Aho, C. Di Fonzo and J. D. Congdon. 1998. Reproduction and whole body lipid cycles of bluegill fish from heated and normothermic habitats. *Thermal Biology 23(6):359*-367.*

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Elkin, K.*, and R.U. Fischer. 1998. Relationship between habitat variables and fish diversity in Illinois streams. Midwest Ecology and Evolution Conference.

Hausmann, B.*, and R.U. Fischer. 1998. The role of bowfin in multiple species fisheries management plans. Illinois State Academy of Sciences.

Fischer, R.U. 1998. Response of bluegill to 30 years of thermal extremes: a case of rapid evolution? American Fisheries Society.

Fischer, R.U. 1998. Lipid and reproductive cycles of bluegills exposed to 35 years of elevated environmental temperatures. Midwest Fish and Wildlife Conference.

Dr. Marina Marjanovic - Research

Since my undergraduate studies I have been fascinated by the fact that some mammalian species, like ground squirrels, hamsters and bats, not only survive long periods of low body temperature, but their tissues and organs continue to function near 0°C. These species are better known as hibernators. Other, closely related, mammalian species die if their body temperature drops even a few degrees. My research ranges from studies of annual rhythms in whole animals to biochemical studies of subcellular particles in search of adaptational mechanisms underlying natural hibernation. Results obtained may have a great impact on cryopreservation procedures. Understanding the mechanisms that enable hibernators to survive low body temperatures are important in developing methods to improve the viability of tissues and organs stored at low temperature.

Although my laboratory is "open" to all students interested in animal physiology, I am particularly enthusiastic about mentoring young women in science. Besides giving them research opportunities, I offer them advice concerning their academic struggles and careers. My goal is to help them establish themselves as successful professionals.

Publications/Presentations (* = students)

Marjanovic, M., Dzakula, Z., Zivadinovic, D. and Andjus, R.K. 2000. Temperature dependence of coupled and uncoupled in brain synaptosomes from hibernators and non-hibernators. *(In press)*

Andjus, R.K., Zivadinovic, D. and Marjanovic, M. 2000. Circannual rhythms in European ground squirrels during nine years of entrainment. *(In press)*

Andjus, R.K., Zivadinovic, D. and Marjanovic, M. 1999. Long-term study of free-running and entrained rhythms in the European ground squirrel. Hibernation and Adaptations in the Cold, Estes Park.

Maijanovic, M., Dzakula, Z., Zivadinovic, D. and Andjus, R.K. 1999. Temperature adaptation mechanisms in mammals. Experimental Biology, Washington D.C.

Marjanovic, M., Elliot, A.C. and Dawson, M.J. 1998. The temperature dependence of intracellular pH in isolated frog skeletal muscle: lessons concerning Na-H exchange. J. *Membrane Biol.* 161:215-225.

Marjanovic, M., Andjus, R.K., Dzakula, Z. and Zivadinovic, D. 1998. Immediate temperature compensation mechanisms in a hibernator. Experimental Biology, San Francisco.

Bruce, B.C., Carragher, B.O., Damon, B.M., Dawson, M.J., Eurell, J.A. Gregory, C.D., Lauterbur, P.C., Marjanovic, M., mason-Fossum, B., Potter, C.S. and Thakkar, U. 1997. *ChickScope:* An interactive MRJ classroom curriculum innovation for K-l2. *Computers Educ.* 29(2/3): 73-87.

Dr. Tom Nelson - Teaching

My areas of expertise are wildlife ecology and applied community ecology. As such, I teach classes in wildlife biology, ecology, and mammalogy. My research focuses on wildlife-habitat relationships, particularly in agricultural or forested landscapes. I believe that it is important for students to have the opportunity to pursue research and that mentoring students is the purest form of teaching.

We have been busy during the past year investigating a wide variety of problems in wildlife management. Recent studies have: measured the impacts of deer grazing on sensitive plant communities; assessed the effects of heartworm on the condition and reproduction of coyotes; developed a more effective technique for monitoring beaver populations in Illinois; and investigated the effects of forest fragmentation on small mammal communities. All of these studies have actively involved students in the research process. I have been fortunate to receive funding from agencies such as the Illinois Department of Natural Resources, the National Science Foundation, and the US Forest Service for these studies.

I am particularly proud of our Research Experiences for Undergraduates program that! co-direct with Bud Fischer. This NSF-supported program allows us to bring 9 undergraduates from around the country to Eastern each summer to conduct directed research in conservation biology. It has been very rewarding to work with these talented and motivated students.

Publications/Presentations (* = students)

Frankland, F.' and T. Nelson. 1999. Impacts of deer grazing on spring wildflower communities. Midwest Fish and Wildlife Conference.

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Coon, C.' andT. Nelson. 1999. Spent lead shot as a contaminant in Illlinois' dove-hunting fields. Midwest Fish and Wildlife Conference.

Bliss, K.* and T. Nelson. 1999. Highways as barriers to the movements of small mammals. Illinois State Academy of Science.

Daniels, J.* and T. Nelson. 1999. Abundance and diversity of small mammals in CRP fields. Illinois State Academy of Science.

Council on Faculty Research Grants

The following faculty received CFR grants from Eastern during Fall Semester 1999 in support of their research activities.

Dr. Eric Bollinger – "Experimental investigation of the function of prey caching in a migratory population of Loggerhead Shrikes"

Dr. Bud Fischer – "The effects of habitat fragmentation on stream abiotic factors and growth rates of Illinois stream fishes"

Dr. Stephen Mullin – "Post-hibernacular activity and habitat selection in newborn box turtles *(Terrapene carolina)"*

Dr. Britto Nathan – "Molecular studies on a genetically engineered animal model for Alzheimer's disease"

Dr. Thomas Nelson – "Impacts of deer grazing on spring wildflowers"

Dr. Henry Owen and Dr. Janice Coons – "Seed biology of four endangered or threatened plant species in Illinois"

Dr. Gene Wong – "The actin cytoskeleton in adult neurite outgrowth"

1999 Summer Research Awards

The following faculty received awards from the University to pursue research projects during the summer of 1999.

Dr. Janice Coons and Dr. Henry Owen – "Site inventory and seed collection of four Illinois endangered or threatened plant species"

Dr. Steven Daniel (with Dr. Norbert Furumo in Chemistry) – "Detection and isolation of polydeoxycholate-forming bacteria from mammalian gastrointestinal tract"

Dr. Kip McGilliard – "Effect of Creatine on Diaphragm Muscle Contractility"

Dr. Britto Nathan – "How Apo-4 causes Alzheimer's disease?"

Dr. Paul Switzer – "Temporal changes in sex ratio and mating patterns in the Japanese beetle"

Undergraduate Research Awards

These are monetary awards Eastern gives to undergraduate students to assist them in completing their research projects.

Brian Fischer – "Seed vigor and how it relates to genetic variability in *Silene regia"* **(Dr. Janice Coons, Dr. Gary Fritz, Dr. Henry Owen, mentors)**

Angela Kerber – "Photoperiod impact on lateral shoot growth in *Stylisma pickeringii"* **(Dr. Janice Coons and Dr. Henry Owen, mentors)**

Ashley Scheffer – "The impact of bile acid-metabolizing gut bacteria on blood cholesterol levels in humans" **(Dr. Steven Daniel, mentor)**

Stephen Slowik – "Studies on a cell culture model for Alzheimer's disease" **(Dr. Britto Nathan, mentor)**

Phi Sigma Research Awards

These awards are given annually by the local chapter of Phi Sigma, the Biological Honor Society, to the outstanding undergraduate and graduate student research paper or thesis.

Jessica Baack – "Alarm calls affect foraging behavior in Eastern chipmunks *(Tamias striatus)"* **(Dr. Paul Swltzer, mentor)**

Martha Sojka – "Surface sterilization treatments for *in vitro* germination of *Stylisma pickeringii"* **(Dr. Janice Coons and Dr. Henry Owen, mentors)**

Student Receives Scholarship from the Illinois Lake Management Association.

Mark Druffel (Dr. Charles Pederson, mentor) has received one of two $1000 scholarships from the Illinois Lake Management Association for a research project entitled "The effect of lake restoration practices on water quality at Lake Taylorville, Illinois." High levels of sedimentation due to constant inflow and direct agricultural field runoff negatively impact Lake Taylorville. For the last five years, the Taylorville City Resource Planning Committee has been installing wetlands, holding ponds, and sediment basins on drainage entering the lake in an attempt to improve water quality. Mark is conducting a twelve-month study of water quality and plankton in Lake Taylorville to determine if the restoration has had a significant impact on water quality. More specifically, Mark will test water samples on site for temperature, pH, conductivity, turbidity, and dissolved oxygen and in the laboratory for nitrogen, phosphorus, alkalinity, solids, hardness, and chlorophyll and assayed for quantity and quality of plankton. Mark's study may also provide information regarding further measures that might be required to improve the quality of Lake Taylorville as well as other aquatic systems. Congratulations Mark!

Botany Club

Botany Club continues to be a very active club under the direction of Shad Mallady, President. We still have speakers every other week with botanists from around the state. If you are interested in speaking at one of our meetings, let us know as we would love to have you. We took trips during the last year to several places including Missouri Botanical Gardens, Field Museum, Chicago Botanic Gardens, Turkey Run/Shades State Parks, and of course the annual trek to the Smoky Mountains. During the last year we sponsored several fundraisers including sales oft-shirts, cookbooks, bottled water, candy and more candy. We also received some unexpected donations amounting to almost $1000! Our "end of the semester" parties have been at faculty homes and have been great fun. If you are ever in Charleston on a Wednesday night, stop by the Life Science Building to see us.

Zoology Club

This year C.J. Woodworth Wong has taken over advising the Zoology Club from Gary Fritz, who served as advisor for the past 4 years. The Zoology Club is again bringing in a series of speakers and a field trip is planned to Mammoth Cave in Kentucky. More information about this semester's speakers can be obtained from our webpage: http://www.ux1.eiu.edu/~cfcjw1/ZoologyClub.html. If you have ideas for speakers or are interested in being a speaker please contact C.J. at: cfcjwl@eiu.edu.

Oops…

In the last issue of BioBriefs, we listed some retired faculty and their current whereabouts and activities. Unfortunately, we inadvertently left Mr. Frank Fraembs out!!! SORRY FRANK!!! Many of you know that Frank spent more than 35 years at Eastern and taught thousands of students Zoology, Entomology, etc. Frank and his wife Janet are doing fine and living in Charleston. Frank keeps busy sending postcards so if you had Frank for a class, I suggest sending a postcard to: Mr. Frank Fraembs, 2221 University Drive, Charleston, IL 61920. We all know how much Frank loves postcards!

Gifts to Annual Giving Programs

Alumni and friends interested in continuing the Department of Biological Sciences tradition of academic excellence are welcome to participate in Eastern Illinois University's annual giving program. Donations to the annual giving program occur every year and can range from $5 to $5000 per annual gift.

The Department of Biological Sciences contacts our friends and alumni every year in support of departmental scholarships, equipment needs, and student travel to meetings. In addition, the department solicits contributions for the Botany, Biological Sciences, Environmental Biology, and Zoology gift accounts in support of specific programs of study and groups of students studying in particular fields. Ongoing support of these programs enables us to continue a tradition of educational excellence for our students. In previous years the money we raised as part of the annual giving program has also gone to purchase computers for use by undergraduate and graduate students, scholarships, travel to professional meetings to present the results of their research, travel to study sites, research funding, etc. We sincerely thank the many friends and alumni who have given to these funds in the past year.

Donors who give at least $100 annually have their names published in the *Eastern Illinois University Foundation 's Honor Roll of Donors.* This publication is distributed to everyone whose name appears as a testament to those individuals who have invested in the future of the University.

If you have any questions regarding the annual giving program or other giving opportunities, please call the Department of Biological Sciences at (217) 581-3126 or the Office of Development at (217) 581-3313.

New Equipment

Over the past year, the Department of Biological Sciences began the process of upgrading our teaching equipment. Last year, we formally prepared a plan to replace our inventory of over 300 microscopes. To begin this process, we purchased 32 new Olympus dissecting microscopes. The microscopes are housed as two sets of 16 microscopes on mobile carts, for use in courses ranging from local flora to mammalogy. As well, 32 new Nikon compound microscopes were purchased for histology, parasitology, embryology, and developmental biology. General botany had their microscopes replaced with the previous microscopes used in these courses, which are still in good condition. This year 9 new Nikon microscopes will complete a set of 24 used in various upper level botany courses, and introductory biology will receive a new demonstration microscope to show students what they should be looking at. We hope to be able to replace more microscopes in the future.

The Department was also fortunate in obtaining 4 multimedia projection systems. These systems have a computer, VCR, and LCD projector, allowing us to project videos, Internet sites, and multimedia CD-ROMs to large classes onto a 6 foot screen, rather than a 32 inch television set. Two of the systems are mobile, which can be wheeled to various classrooms, while one is permanently housed in the Biotechnology Center. The fourth system will be installed in Fall 2000 in one of our large 90-seat lecture theaters, with a wireless microphone, amplifier, and speaker system in addition to the other components. The fourth system was made possible through a $10,438 Instructional Technology Enhancement Grant from the office of the Vice President of Academic Affairs.

Finally, the Biological Imaging Center is starting to come together. The unit has a research grade Olympus microscope with exceptional optics, a digital capture system for collecting images as computer files, and a 35 mm slide maker, which our students and faculty use to record photographic data and create slides from Microsoft PowerPoint for seminars and presentations at various scientific meetings and conferences throughout the state and country. The slide maker and microscope were made possible through support from the College of Sciences. We also hope to continue to add to the Imaging Center to meet the needs of students and faculty in the Department.

Two new scholarships established in Biological Sciences

Through the generous donations of friends, family, and alumni, two new scholarships will soon be available in the Department of Biological Sciences.

The Charles B. Arzeni Tropical Biology Fund Scholarship will first be awarded Spring Semester 2001 to a student who is at least a junior majoring in Biological Sciences. In addition, the recipient must have an overall GPA of at least 3.0 and must use the award to travel to the tropics for studies in tropical biology.

The Charles E. and Ferne Tingley Compton Botany Scholarship will first be awarded Spring Semester 2001 to a student who is a full-time junior or senior majoring in Biological Sciences with either the Teacher Certification option or the Botanical Sciences Concentration. In addition, the recipient must have an overall GPA of at least 3.0, should reflect high pedagogical and humanistic traits and values, should exhibit enthusiasm for the study of botany, dedication to sharing his/her knowledge freely, and willingness to encourage and support others in their intellectual pursuits.

The Department of Biological Sciences greatly appreciates the generous contributions of the Arzeni family and friends as well as the Compton family and friends who made these awards possible. These scholarships will be genuinely appreciated by students and are an excellent way for all of us to remember former departmental faculty as well as friends of the department.

A reminder about Commemorative Courtyard...

For those of you who have not yet purchased a brick ($100.00), a paver ($250.00), a Perennial Society Courtyard Planting ($1,000.00) a Benchmark Society Courtyard Bench ($2,500.00), or a Founder's Society Endowed Scholarship (5,000.00) to create a lasting memory in your name, it is not too late to do so. The Commemorative Courtyard was built in 1998 between McAfee Gymnasium and the Triad as a way for those who treasure their time at Eastern to leave a legacy as well as to help Eastern build scholarship for their next generation. To date, the Commemorative Courtyard campaign has receipted 599 gifts. Of the number of gifts receipted, alumni from Biological Sciences have contributed $490.00, alumni from Botany have contributed $40.00 and alumni from Zoology have contributed $1,040.00.

The dollars raised for the Commemorative Courtyard will be used for departmental scholarships, special department projects, and for costs associated with the Commemorative Courtyard wall, bricks, benches, and trees. When you purchase an item to be placed in the Courtyard you can indicate the manner in which you would like your gift to be directed. Specifically, if you choose to purchase any of the items listed above, 80% of your gift will benefit Biological Science programs while 20% of your gift will be used to pay for the costs associated with the purchase and with placing the item in the Courtyard.