



Bioluminescence



Table of Contents

Bioluminescence Vol. 7

Fall 2003 and Spring 2004

| | Page #s |
|------------------------------------------------------------------------------|---------|
| Chairman's Corner | 1 |
| What's happening | |
| Selman Living Laboratory | 2 |
| Unfinished first floor laboratories | 2 |
| Retirements | 2 |
| Faculty News | |
| Recent publications | 2-3 |
| Recent Presentations | 3-4 |
| Other Faculty Activities | 5 |
| Marine Biology Field Trip | 5 |
| Community presentations | 5 |
| OAS Spring Field meeting | 5 |
| Grants and awards | 6 |
| Meet the Faculty and Staff | |
| Dr. Peggy Guthrie | 6-7 |
| Special Seminars | |
| Dr. Adrian M. Wenner | 7 |
| Student Activities | |
| New Graduate students | 8 |
| Masters thesis defense | 7 |
| Biology Education | 7 |
| Student presentations | 8 |
| Clubs | |
| Tri-Beta (Biology Club) | 8 |
| Pre-med/Health Professions Club | 8 |
| Student awards and grants | 9-10 |
| Alumni | 10-11 |
| UCO Outstanding Former Student— W.E. Beasley | 12 |
| Students accepted into professional programs | 12 |
| Biology Faculty Say good bye (Photos) | 13 |
| Investing in Excellence campaign of the UCO College of Mathematics & Science | 14-15 |



Bioluminescence



UCO- Biology Department Newsletter
Editors: John Barthell and Jenna Hellack

Vol. 7— Summer, Fall 2003 and Spring 2004

Faculty and Staff

Dr. Peggy Guthrie, Chairperson
Dr. Riaz Ahmad
Dr. Troy Baird
Dr. John Barthell
Dr. David Bass
Dr. James Bidlack
Dr. Gloria Caddell
Dr. William Caire (Dean)
Dr. David Elmendorf
Dr. Jenna Hellack, Assistant Chair
Mr. Ralph Jones
Ms. Linda Luna
Ms. Sherry Meeks
Dr. Randy Myster
Dr. Clark Ovrebo
Dr. Paul Stone
Dr. Greg Wilson
Dr. Donna Zanowiak
Ms. Elaine Holt, Associate
Ms. Sharron Lafave, Administrative Sec.

Adjunct faculty

Ms. Marie Babb
Ms. Marti Barfield
Dr. John Campbell
Ms. Cari Deen
Dr. Harold Cleveland
Ms. Marilyn Cleveland
Dr. Janice Countaway
Dr. Terry Harrison
Dr. Lynn Laws
Ms. Lynda Loucks
Ms. Margaret Matzinger
Mr. Marvin Mays
Mr. Chris Ridner
Dr. Tony Stancampiano
Dr. Sheila Strawn
Dr. Jinren Woo

Chairman's Corner



The 2003-04 year has been a good year. Student enrollment increased again this year. We currently have almost 600 undergraduate majors and 16 graduate students. The Faculty of 17 full-time and 17 adjuncts taught a record number of students. Our high demand, beginning and service classes, continue to draw students interested in all areas of the Health Professions. Laboratory and technology fees have been used to purchase new stereomicroscopes and to upgrade the Biology Computer Lab. An equipment grant received from the OUHSC Volunteer Auxiliary provided several pieces of equipment. New torso models for General Biology, LCD projector, three circulating water baths, and software upgrades were purchased.

Faculty research has been prolific. Specific details are found in subsequent areas of the newsletter. Tri Beta, the honorary society for biology students, has had an outstanding year. The organization was selected as the UCO "Outstanding" student group and also the "Outstanding" Community Service Award. The president, Kevin Pargeter, and sponsors, Dr. David Bass and Dr. Greg Wilson, are to be congratulated.

This will be my last "Chair's Corner" as I retire at the end of the spring semester. It has been a great 37 years at UCO. I am sure that I will miss UCO, the faculty and the students. My husband, Cal, and I are busy building a new home at our farm near Chandler. We will not be far away. Please welcome two new Assistant Professor faculty members, Dr. Anne Ewing and Dr. Mel Vaughan. Dr. Ewing will assume the position of Health Professions Advisor and will be teaching General Biology. Dr. Vaughan is a cell biologist and will be teaching Histology and General Biology in the fall. Elaine Holt, Biology Associate, will be leaving us in July. Her replacement will be Will Unsell. Dr. Jenna Hellack will be the new Chairperson.

Yes, we still have unfinished laboratory rooms. Perhaps you can help us. Watch your mail for information about a building campaign. Come see us!

What's happening



Status of the Selman Living Laboratory

Dr. Caire received a National Science Foundation grant for \$50,000 for a third building to be placed on site. The bidding process has started for the modular home from the grant and we hope to have it in by mid to late summer.

- There are several requests for research at the SLL including projects about tiger beetles and cave invertebrates.
- Two OSU MS students are continuing their research. One is on Big Eared Bat genetics at SLL (and other areas across the state) and the other one on predator- prey relationship of pocket mice.
- Astronomy activities continue at SLL with the Oklahoma City Astronomy Club getting involved in some research projects. Mpala Pilula, a MS candidate in our department, has just completed her research on alkalophilic and alkalotolerant bacteria from gypsum outcrops in northwestern Oklahoma.
- Hopefully, before the summer is over, there will be several flag poles placed at the SLL entrance for each university that contributes to the development of the SLL. We also want to install some nice fencing around the front entrance to the buildings to make it a bit more attractive.

Status of the unfinished first floor laboratories

There is more optimism than ever that these will be finished. Dr. William Lee Beasley, an alumnus and endodontist here in Oklahoma City is beginning a campaign to find donors. The kickoff of this campaign will begin July 8, 2004. Ms. Beverly Endicott, Director of Development, is the liaison for the College of Mathematics and Science and is working closely with Dr. Beasley. Dr. Beasley has been chosen as a UCO Distinguished Former Student and will receive this award on Friday October 15, 2004 Home Coming weekend. (See page 12 for a bibliography of Dr. Beasley.

Retirements

Dr. Peggy Guthrie is retired as of May 2004. Elaine Holt who has been the Biology Associate for 17 years is also retiring at the end of June. There have been tears, parties and acclaims for both of these ladies. There probably could never be enough said about how much they have meant to the Department of Biology, so we will leave it with this: We will miss you both, we wish you both the best in your retirement and if you ever change your mind and want to come back we will find a place for you. You will always be in our hearts and minds.

Below in "Meet the Faculty", Peggy agreed to write an essay about her life (In Volume 5, Fall 2001 and Spring 2002, *Bioluminescence* we featured Elaine.)



Faculty News

Recent publications:

Baird, T.A. and C.L. *Sloan. 2003. Interpopulation variation in the social organization of female collared lizards, *Crotaphytus collaris*. *Ethology* 109: 879-894.

Baird, T.A., L.J. Vitt, T.D. Baird, W.E. Cooper, Jr., J.P. Caldwell, and V. Perez-Mellado, 2003. Social behavior and sexual dimorphism in the Bonaire whiptail, *Cnemidophorus murinus* (Squamata):



Teiidae): the role of sexual selection. *Canadian Journal of Zoology* 81: 1781-1790.


- Baird, T.A.** 2004. Reproductive coloration in female collared lizards, *Crotaphytus collaris*, stimulates courtship by males. *Herpetologica* 60: 337-348.
- Baird, T.A.** 2004. *Crotaphytus collaris* (eastern Collared Lizard). Homing after displacement. *Herpetological Review*. 35: 167.
- Barthell, J. F., and T. A. Baird.** 2004. Size variation and aggression among male *Xylocopa virginica* (L.) (Hymenoptera: Apidae) at a nesting site in central Oklahoma. *Journal of the Kansas Entomological Society*. 77: 10-20.
- Barthell, J. F.** 2003. The honeybee in America: An organism of contradictions. In Y. A. Schnoeker-Shorb and T. L. Shorb, editors. *Blessed "Pests" of the beloved west: an affectionate collection on insects and their kin*. Native West Press, Prescott, Arizona. USA.
- Bass, D.** 2003. A survey of freshwater macroinvertebrates in Tobago, West Indies. *Living World, J. Trinidad and Tobago Field Naturalists' Club* 2003: 64-69.
- Bass, D.** 2003. Comparison of freshwater macroinvertebrate communities from small Caribbean islands. *BioScience* 53:1094-1100.
- Bass, D.** 2003. Freshwater macroinvertebrates of Barbados. *J. Barbados Mus. Hist. Soc.* 49:269-280.
- Baumgardner, D., S. Burian, and **D. Bass.** 2003. Life Stage descriptions, taxonomic notes, and new records for the mayfly family Leptohyphidae (Ephemeroptera). *Zootaxa* 332:1-12.
- Buckallew, R. and **G. Caddell.** 2003. Vascular flora of the University of Central Oklahoma Selman Living Laboratory, Woodward County, Oklahoma. *Proceedings of the Oklahoma Academy of Science* 83: -----
- Caddell, G.** 2003. Take time to watch, not just smell the wildflowers! Critics Choice Essay. *Oklahoma Native Plant Record* 3: 73.
- Cooper, W.E. Jr., V. Perez-Mellado, **T.A. Baird**, J.P. Caldwell, and L.J. Vitt. 2004. Pursuit deterrent signaling by the Bonaire whiptail lizard *Cnemidophorus murinus*. *Behaviour* 141: 297-311.
- Ligon, D.B., and **P.A. Stone.** 2003. Radiotelemetry reveals terrestrial estivation in Sonoran mud turtles (*Kinosternon sonoriense*). *Journal of Herpetology* 37: 75-754.
- Ligon, D.B., and **P.A. Stone.** 2003. *Kinosternon sonoriense* (Sonoran mud turtle) and *Bufo punctatus* (red-spotted toad). Predator-prey. *Herpetological Review* 34: 241-242.
- Myster, R.W.** 2003. Using biomass to model disturbance. *Community Ecology* 4: 101-105
- Myster, R.W.** 2003. Vegetation dynamics of a permanent pasture plot in Puerto Rico. *Biotropica* 35: 422-428.
- Myster, R.W.** 2003. Effects of species, density, patch-type and season on post-dispersal seed predation in a Puerto Rican pasture. *Biotropica* 35: 542-546.
- Myster, R.W.** 2003. Seed regeneration mechanisms over fine spatial scales on recovering coffee plantation and Pasture in Puerto Rico. *Plant ecology* 166: 199-205.
- Myster, R.W.** and D.A. Schaefer. 2003. Species and microsite effects on litter composition in a Puerto Rican landslide. *Community Ecology* 4: 157-162.
- Stone, P.A., and T.A. Baird.** 2002. The effect of sample size on space use data: the Rose model revisited. *Journal of Herpetology* 36: 427-436.
- Stone, P.A., and H.L. Snell.** 2002. *Microlophus albemarlensis* (Galápagos lava lizard). Cannibalism. *Herpetological Review* 33: 53.
- Stone, P.A., H.L. Snell and H.M. Snell.** 2002. Island biogeography of morphology and social behavior in the lava lizards of the Galápagos Islands. Pages 190-239. In S. Fox, J.K. McCoy and T.A. Baird, editors, *Lizard Social Behavior*. Johns Hopkins University Press, Baltimore, Maryland.



Recent Presentations

- *Babb, M.E., and **P.A. Stone.** Space use in male red-eared sliders, *Trachemys scripta elegans*. Presented at the Southwestern Association of Naturalists 50th Annual meeting April 2003.
- Baird, T.A., J.M. Hranitz, *D.K. Timanus, and *A.M. Schwartz,** "Its in the way that you use it": Behavioral attributes increase male mating success more than morphological traits in collared lizards, *Crotaphytus collaris*. American Society of Ichthyologists and Herpetologists. University of Oklahoma, Norman. May 2004.
- Baird, T.A., Hranitz, J.M., *D.K. Timanus, and *A.M. Schwartz,** Behavioral attributes increase male mating success more than morphological traits in collared lizards, *Crotaphytus collaris*. Southwestern Association of Naturalists, San Antonio, Texas. April 2004.
- Barthell, J. F. and *J. L. Griffith.** Size variation, site fidelity and aggression among males of the large carpenter bee,



- Xylocopa virginica*. Annual Technical Meeting of the Oklahoma Academy of Science. November, 2003. University of Science and Arts of Oklahoma, Chickasha, Oklahoma.
- *Griffith, J. L., **J. F. Barthell** and J. M. Hranitz. Stress protein levels and male reproductive behavior in the large carpenter bee, *Xylocopa virginica*. Annual Technical Meeting of the Oklahoma Academy of Science. November, 2003. University of Science and Arts of Oklahoma, Chickasha, Oklahoma.
- Barthell, J. F.**, R. W. Thorp, A. M. Wenner, J. M. Randall and D. S. Mitchell. Seed set in a self-compatible thistle on Santa Cruz Island: further evidence for honeybee effects in an island ecosystem. Sixth California Islands Symposium, 1-3 December 2003, Ventura, California.
- Bass, D.** Aquatic Habitats and Freshwater Macroinvertebrates of Small Caribbean Islands. South-Central Regional Meeting of Beta Beta Beta, O.U. Biological Station (invited banquet speaker). 2004.
- Bass, D.** Biodiversity of Freshwater Macroinvertebrates on Small Caribbean Islands. Symposium: The Emerging Science and Practice of Invertebrate Conservation, American Museum of Natural History (poster). 2004. 
- Caddell, Gloria.** Plants of the Selman Living Laboratory. Talk presented to the Northeast chapter of the Oklahoma Native Plant Society. May 2004.
- Hranitz, J.M., **T.A. Baird**, R.A. Van den Busche, and K.L. Parise, Microsatellite evidence that high reproductive success is achieved through territorial defense in male collared lizards, *Crotaphytus collaris*. American Society of Ichthyologists and Herpetologists. University of Oklahoma, Norman. May 2004.
- Meeks, S.** Incidence of Equine West Nile virus in Oklahoma County in 2002. Poster presentation, OU Health Sciences (GREAT) Graduate Research Education and Technology Competition. April 2004
- Powers, S.M., **P.A. Stone**, and *M.E. Babb. Assemblage composition of turtles in central Oklahoma farm ponds. October 2003. Presented at the Southwestern Association of Naturalists 50th Annual Meeting. April 2003
- Thompson, James N. jr., R.C. Woodruff, **J.J. Hellack**, Joseph Fleming, John Glomset, Clayton Hallman, Diane Jackson, Jeremy Madrid, Christopher May, David McDaniel, Andrew Miller, Bryan Potthoff, Nathaniel Scott, Scott Street, and Matthew Tany. 2003. Developmental Stress in Response to Increased Somatic Mutation and Modeled Space Flight Conditions. Poster presentation. 18th European Drosophila Research Conference, Gottingen, Germany.

Biology Department participation in Fifth Annual Research Day for Regional Universities, November, 2003—UCO Edmond, Oklahoma

The Fifth Annual Research Day for Regional Universities was held on the UCO campus on November 14, 2003. The event was the largest ever, with 186 abstract submissions in Mathematics and Sciences (362 total) eighteen institutions participated and UCO led with 101 abstract submissions (28% of all submissions). Over half of the submissions were by students (55 of 101) and several of our students and faculty participated as described below.

- Akers, B.P. and **C.L. Ovrebo**. *Leucoagaricus bivelatus*, a new volvate lepiotoid species from Panama. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- *Byrd, S. K., **G.M. Wilson** and **W. Caire**. Population genetic structure of the bat fly, *Trichobius major* (Diptera: Streblidae) in western Oklahoma. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Baird, T.A.**, L.J. Vitt, T.D. Baird, W.E. Cooper, and J.P. Caldwell*. Social behavior and sexual dimorphism in Bonaire whiptail lizards: the role of sexual selection. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Barthell, J. F.** and J. L. Griffith*. Territorial aggression among males of the large carpenter bee *Xylocopa virginica* under field conditions. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Barthell, J. F.**, J. M. Hranitz, M. C. Hartless and J. L. Griffith*. Stress protein levels differ among heat-treated larvae of two leafcutting bee species Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Barthell, J. F.**, J. M. Randall, R. W. Thorp, A. M. Wenner, J. L. Griffith* and K. D. Rice. Pollinator and herbivore effects in the invasive weed yellow star-thistle on Santa Cruz island, California. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- *Griffith, J. L., **J. F. Barthell**, and J. M. Hranitz. Elevated stress protein levels are associated with reproductive behavior in males of the large carpenter bee *Xylocopa virginica*. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.

Continues on page 5

- *Reed, A., **G. Caddell**, and **J. Barthell**. Pollination ecology of *Phyla nodiflora* (Verbenaceae): phenology, breeding system, and pollinators. Poster presentation, Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- *Rice, K., **G. Caddell** and **J. Barthell**. Flowering phenology, breeding system, and pollinator efficiency of *Dalea purpurea* var. *purpurea* Vent. (Fabaceae) in a pasture, Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- *Stine, D. A., **J. F. Barthell** and J. L. Griffith*. Aggression among males of the large carpenter bee *Xylocopa vriginica* in flight cages. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- *Young, A., **G. Caddell**, and **J. Barthell**. Heterostyly, pollinator inadequacy, and other contributors to the pollination biology of *Hedyotis nigricans* (Rubiaceae) Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Radke, W.** and H. Klandorf. Pentosidine as a measure of chronological age in ruffed grouse (*Bonasa umbellus*). Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.
- Rudisill, T. and **D. Bass**. An ecological study of the spring system at Roman Nose State Park. Fifth Annual Research Day for Regional Universities, November 2003, Edmond, Oklahoma.

*Students or former students in the Department of Biology, UCO

Other Faculty activities

Marine Biology Field Trip

Dr. David Bass led a group of 19 students enrolled in Marine Biology on a field trip to the Texas Gulf Coast during spring break. **Mr. Marvin Mays** and **Dr. Jenna Hellack** also accompanied the group. The first stop was the Big Thicket National Preserve. Everyone enjoyed studying the diverse habitats and hiking through the magnificent east Texas forests while the campsite endured at very heavy rain. The remainder of the week was spent in the warm, sunny weather of the Port Aransas area. There the class visited salt marshes, mangroves, sea grass beds, oyster reefs, sandy beaches, rock jetties, the Texas Aquarium in Corpus Christi, and the Aransas Wildlife Refuge. Many organisms were observed and much was learned, and the students came to know each other in ways only a weeklong field trip like this might provide.

Costa Rica field Trip

Dr. Clark Ovrebo spent ten days in early June collecting fungi in the Talamanca Mountains of Costa Rica.

Community Presentations

Gloria Caddell led a field trip to the Selman Living Laboratory for the Oklahoma Native Plant Society in May 2003. She presented a talk on the plants of the Selman Living laboratory to the Northeast chapter of the Oklahoma Native Plant Society in May 2004. **Jenna Hellack** and **David Elmendorf**. Gave a presentation “ Birds likely to be seen on a Christmas Bird Count in Oklahoma County” to the Oklahoma City Audubon Society, at the University of Central Oklahoma, Edmond, OK. December 2003.

Oklahoma Academy of Science Spring Field meeting

John Barthell was the field meeting Director as the spring meeting, Lake Murray State Park. **David Bass** is the executive Secretary/Treasurer of OAS. **Gloria Caddell** led the Botany field trips at Boiling Springs State Park and the Selman Living Laboratory at the Fall Field Meeting of the Oklahoma Academy of Science, September 2003. She also assisted with the botany field trips at Lake Murray State Park, April 2004. **Jenna Hellack** led the Ornithology field trip at the spring meeting, Lake Murray State Park, April 2004.

Grants and awards

Annual University Faculty/Staff Meeting August 2003

Dr. John Barthell was a co-winner of the 2003 Neely Excellence in Teaching Award. He also received the Hauptman Fellow for the College of Mathematics and Science and was the 2003-2004 Outstanding Research Scientist for the Sigma Xi UCO Chapter.

Dr. Peggy Guthrie was a winner of the Modeling the Way Award

Drs. John Barthell, David Elmendorf, and Randall Myster received Faculty Merit-Credit Awards for Scholarly/Creative Activity.

Dr Randy Myster has received a Fulbright Research Fellowship for the summer 2004. Randy will be a visiting professor at the Catholic University of Quito, Ecuador. He will conduct a seminar on Plant dynamics in the Amazon. His will be doing research at their Yasuni National Park. The title of the research is "A comparison of gap regeneration between dry and seasonal wet Amazonian rainforest".

Ms Sherry Meeks poster presentation on Incidence of Equine West Nile Virus (see presentations above) placed first in OU Health Sciences GREAT competition. She has been invited to compete in the Delta Omega Xi Research Poster competition for Health Professions and Public Health.

Meet the Faculty and Staff

In this section we spotlight full-time faculty and staff. This spring we want spotlight Dr. Peggy Guthrie, the retiring Departmental Chair.

Dr. Peggy Guthrie — Retiring Chair, Department Biology



I grew up on a farm/ranch in Wayne, Oklahoma, where my father raised cotton, corn, hay, swine, and Angus cattle. My two sisters and I were avid 4-H Club members, basketball and softball players and band performers. I received an academic scholarship at East Central State College in Ada, where I completed the B.S. Ed. in Chemistry in three years and began teaching at Kerr Junior High in the Midwest City Public School system. I taught General Science, Physical Science, and Life Science to 7th, 8th and 9th grade students. I also sponsored the Girls Drill Team and the YMCA group.

My future husband, Cal Guthrie, had also begun his teaching career in the Central State College Mathematics Department in 1958. We met in February of the next year and were married August 2, in my home-town of Wayne. (By the way, Dr. Joe Jackson and his wife Enid came to our wedding.) We continued our careers in education and two years later, we

had our first son, Gregg. Carl, second son, was born in another two years. We built our first home in Del City in 1961. In the fall of 1965 I withdrew my retirement funds and with a Delta Kappa Gamma scholarship, began work on a master's degree. While completing the M.S. in Zoology (Population Ecology with Dr. Frank Sonleitner) at the University of Oklahoma, I took classes at Central State in the summer of 1965 and spring of 1966. I enrolled in four classes: Invertebrate Zoology with Marvin Mays, Vertebrate Embryology with Dr. Ethel Derrick, Vertebrate Zoology with Warren Smith, and Entomology with Dr. Lothar Hornuff. I made that trip to the Gulf in July and camped at OAS in the spring with some great teachers. Central State College was growing and hired four biology faculty in 1967. Thus, I began my teaching career in higher education as an Instructor. My classes, which included 16 credit hours were General Biology, Zoology and Vertebrate Embryology. Three years later, I received tenure and promotion to Assistant Professor.

We built our second home in Edmond and ended the daily commute. My teaching schedule now included Histology and our third son, Cory was born in 1972 as I started work on the terminal degree. The deaths of my father-in-law and father in the same year postponed the Ph.D. as we harvested the cotton, sold the cattle, and moved both mothers into new homes. Then back to school at the OU Health Sciences Center (Epidemiology – Infectious Disease -Legionnaire's Disease with Dr. Stan

Silberg) and with completion of the Ph.D. I was promoted to Associate Professor and later to Professor. By now, we had the Masters' Program and we were only required to teach 12 credit hours. My classes included Introduction to Biological Research, Microtechnique, Cell Biology and Environmental Biology along with a seminar or two in Advanced Development and/or Epidemiology.



Now, after 43 years in education I leave the University for retirement. I have seen a lot of change over the years. My tenure in higher education has spanned the leadership of four presidents, one Provost, more Academic Vice-Presidents that I can name, five Deans, three Chairpersons, and 39 Biology faculty colleagues. I witnessed the name change from Central State College to Central State University to the University of Central Oklahoma. The campus has grown in area and in numbers of students. New buildings, including the Howell Hall Lab/Annex, and new landscaping have created a beautiful campus. I have never been bored as new opportunities and changing responsibilities were offered to me. My faculty development has included a semester attending a NSF Media Institute at the University of OK, a week at a Wet Stain Seminar in Maryland, a week at Catholic University in Washington D.C. to study toxicology, and a host of professional meetings. Seventeen years of working with Dr. Dorothy Frosch through the Oklahoma Junior Academy of Science and the National Association of Biology Teachers brought me into contact with many educators and students. More recently, I also attended a week long workshop in Buffalo, NY for "Case Studies in Science", and a 17 day trip to China to visit and interact with Medical Technology professionals.

For the past 14 years, I have been the health professions Advisor, working with UCO's brightest and best students. This has been a great experience; to see the academic maturity and professional success of the students as they reach their goal of becoming a physician, dentist, veterinarian, or allied health care professional. For the past eight years, I have been the Chairperson for the Biology Department. This responsibility has allowed me to be an administrator with UCO's brightest and best faculty and the best Biology Associate, Elaine Holt, and Administrative Secretary, Sharon Lafave. Dr. Hellack (Jenna) has been an excellent Assistant Chairperson, a true friend, and a loyal supporter willing to fill whatever role was needed. All are dedicated teachers and/or staff members that work long hours and go the extra mile for their students and department. It is gratifying to see their efforts rewarded with academic and research honors. And best of all, they enjoy what they do.

It has been a great 43 years and I will miss all of you. Please keep in touch. Cal and I are building a new home and will be relocating to our farm near Chandler, OK. The Biology Department will have our new address. It is time to enjoy my granddaughters, garden, read, and travel.



Special Seminars

Dr. Adrian M. Wenner, Professor Emeritus, University of California Santa Barbara presented a seminar entitled "Where we erred in the bee language controversy". Dr. Wenner was sponsored by the UCO's Undergraduate Student Center for Advancement of Research and Education in the Joe C. Jackson College of Graduate Studies and Research, the College of Mathematics and Science, the UCO Tri-Beta Biology Club and the UCO Chapter of Sigma Xi.

His talk was a narrative of an ongoing debate in animal behavior about honeybee dance language and a discussion of its scientific and educational implications.

Visit Dr. Wenner's website at <http://www.beesource.com/pov/wenner/index.htm>

Student Activities

New graduate students

Three new graduate students entered the Biology Masters program this year. **Shana Shanto** and **Nathan Calder** both received their undergraduate degrees from UCO and will be working with Dr. Troy Baird. **Prianka Rajan** received her undergraduate degree from UCO and will work with Dr. Greg Wilson.

Masters thesis defense

Babb, Marie E. Behavioral Ecology and Melanism in male Red-eared sliders (*Trachemys scripta elegans*) in central Oklahoma Ponds. Presented in partial fulfillment of the requirements for the degree of Master of Science in Biology. March 2004.

Miller, David. A survey of the Macro-Fungi of Pontotoc Ridge Nature Preserve, Oklahoma. Presented in partial fulfillment of the requirements for the degree of Master of Science in Biology. August 2003.

Pilula, Mpala. Isolation, characterization, and identification of alkaliphilic and alkalotolerant bacteria from gypsum outcrops in northwestern Oklahoma. Presented in partial fulfillment of the requirements for the degree of Master of Science in Biology. April 2004.

Biology education



As we are concluding another school year, we are pleased to see five science education graduates approaching the end of their residency year. Three of them (**Michelle Hostler**, **Chris Lowrey**, and **Gabe Robertson**) are at Edmond Santa Fe High School. **Joann Peterson** is at Putnam City High School, and Misty Williams is at Yukon 9th/10th grade high school. We had seven science student teachers this year and look forward to following them through their residencies next year.

Student presentations

Kendra Byrd. "Population Genetic Structure of the Bat fly, *Trichobius major* (Diptera: Streblidae) in Western Oklahoma". Poster presentation Tri-Beta South Central Regional Meeting April 2004.
"See also Faculty presentations for posters presented by students and faculty."

Clubs



Tri-Beta (Biology Club)

The club has over 80 active members and formally meets twice monthly. During the regularly scheduled meeting the club has invited speakers who address environmental issues both local and nation, research and job opportunities for biologist, Other activities include state and local field trips, UCO Earth Day, research activities, and volunteering. Perhaps the three most significant activities of the club this year were:

- Co-hosting the renowned and controversial scientist Dr. Adrian Wenner, Professor Emeritus, University of California, Berkley, who presented "Where We Erred in the Bee Dance Language Hypothesis?"
- Begin an Environmental Consciousness Initiative with recycling Projects in Howell Hall and Plant sales.
- Co-hosted the 2004 South-Central Tri-Beta Regional Meeting at the University of Oklahoma's Lake Texoma Biological Station.

Nine student members and organization sponsors **Dr. David Bass** and **Dr. Greg Wilson** attended the Tri-Beta South Central Regional Meeting held April 2-3 at the OU Biological Station on Lake Texoma. Numerous student presentations were made, including that by UCO Biology major, Kendra Byrd, who presented a poster titled "Population Genetic Structure of the Bat fly, *Trichobius major* (Diptera: Streblidae), in Western Oklahoma". The UCO chapter, in only its second year of existence, co-hosted this year's event.

The students did a great job running the poster session and one of the oral presentation sections. **Dr. Bass** was the featured speaker at the awards banquet and gave a presentation titled "Freshwater Habitats and Macroinvertebrate Assemblages of Small Caribbean Islands". A great time was had by all and many new friends were made.



Pre-med/Health Professions Club

The club continued to excel in the area of community service during the 2003-2004 school year. Over ten different community service projects were completed by the group during the school year. Over two

hundred dollars in food was collected during the Halloween Can Food Drive and the Feed the Children warehouse was visited three times throughout the year.

Meetings were held twice a month and had a wide range of Health Professionals speak at the meetings. Such areas as Anesthesiology, Obstetrics and Gynecology, Internal Medicine, Pediatrics, and Podiatric Surgery. During the month of January the Annual Health Careers Opportunity Fair was hosted by the club with over twenty organizations attending.

The officers for this year were President- Tyson Sjulín; Vice-President- Tara Martin; Secretary- Anita Patel; Treasurer- Gina Gianfiliappo; Senator- Erin Tilliotson, and House Representative- Krista Clifton.

Student awards and grants

Department of Environmental Quality (DEQ) Environmental Award

Through the efforts of a former biology student and lawyer with the Oklahoma Department of Environmental Quality, The Biology Department received funds to encourage the education toward a career in environmental biology. We were able to award three scholarships to Biology students who have an interest in an environmental career. The awards can be used for tuition, fees and books and were presented at the first Tri Beta meeting on January 22, 2004.

First recipients of this award are:

Rory Telemeco, from Harrah received \$500.00. He is a sophomore student with a 4.0 GPA, whose education plans include a doctorate in Biology to pursue a career in teaching and research.

Adam Sermershein, a sophomore from Edmond who also has earned a 4.0 GPA. He is interested in teaching and working as a herpetologist at a zoo. He likes reptiles and fieldwork. Adam also received \$500.00

Melisha Kenedy, a 4.0 GPA student from Edmond, is a senior biology major. Her special interest is desert ecology. Her career plans include a Ph.D. in biology so that she too can fulfill her two passions, research and teaching. Melisha received a \$1000.00 award.

Shana Shanto from Chandler is a senior Biology major. She is interested in research, particularly as it pertains to sustaining threatened populations. Shana also received a \$1000.00 Award

21st Annual College of Mathematic and Science Award Banquet

Outstanding Graduating Senior - Kevin Pargeter

Kevin is an Oklahoma City native and graduate of Putnam city high school, 2003 Rothbaum Scholar awardee and President of Tri Beta Biology Club. Kevin is the designated student leader for the biology students. He has been the “Heart and Sole” of the biology club for the past three years. He is a writer and has his work published in a UCO literary journal. His career plan is to be a physician.

Outstanding Graduate Student – Marie Babb

Marie is from Cushing, Oklahoma and completed her B.S. at UCO. She successfully defended her thesis, “Behavior and Ecology in Male Red-eared Slider Turtles”, with Dr. Paul Stone, this semester (see Master’s Defense above). Marie has three presentations and one paper in review. She has served as a Graduate Assistant and a Research Assistant in the Biology Department. She will be teaching for us in the fall.

Ethel Derrick Outstanding Zoology Student – Kendra Byrd

Kendra, Alva native, is completing her sophomore year at UCO. She is a biology major who has a special interest in research. She has already completed research projects with Dr. Greg Wilson in biology and at the University of Wyoming in Chemistry. She will be spending her summer at OMRF labs studying cancer at the cell level. Her hobbies include travel and reading.

Outstanding Biology Education Student – Kara Kilgore

Kara is a graduate of West Moore High School and recipient of several biology tuition waivers. She has earned a 3.81 GPA in her college work. She is doing her student teaching at Putnam City North High School and will be married two weeks after graduation. Her special interest is in ecology and she is considering graduate school.

Lothar Hornuff Outstanding Field Biology Student – Justin Griffith

Justin, an Oklahoma City native, and Under Graduate Research Assistant working with Dr. John Barthell, has given seven oral presentations including three major field study projects. His formal demononstrable experiences have looked at the Behavioral Ecology of a Carpenter Bee, Pollination Biology of an Invasive weed, and Field Trials on heat stress in Invasive Solitary Bees.

Lothar Hornuff Outstanding Field Biology Student – Brian Stanila

Brian, Senior Biology major from Edmond, has been working with Dr. Paul Stone in his turtle research for the past two years. Brian has spent time working in the Herpetology collection at the UCO Vertebrate Museum where he prepares, catalogues, and curates specimens. He is our monitor for the Mediterranean gecko population that inhabits Howell Hall. He hopes to enter a graduate program studying marine invertebrates.

Biology Academic Achievement Award – Melisha Kenedy

Melisha has earned a 4.0 for her college work and is from Edmond. She is a recipient of one of the first Environmental Biology Scholarships presented by the Biology Department in conjunction with the OK Department of Environmental Quality. Her special interest is desert ecology. Her career plans include a Ph.D. in Biology so that she can fulfill her two passions, research and teaching.

Biology Academic Achievement Award – Stacy Meek

Stacy is from Broken Arrow, OK. She has excelled in athletics as well as academics. She has been recognized by COSIDA Academic All-American College Division Volleyball Team, the only UCO student athlete to receive this 2003 academic honor in an sport. Stacey has been a member of the UCO varsity Volleyball team during her four years at UCO. She enjoys sports and working out whenever time allows.

Who's Who among students in American Universities and colleges —Lauran Scott.

Lauran is a biology major, French horn player and future dentist. She has experience in Biology and Chemistry Labs as a student assistant and is also active in several student organizations on campus where she has assumed leadership roles. She has been accepted for the Fall 2004 entering class to the University of Oklahoma, College of Dentistry.

Who's Who among students in American Universities and colleges — Kevin Pargeter

Seen the outstanding Biology Graduating Senior award (above) and the Outstanding Graduating Senior for the College of Mathematics and Sciences (below)

Outstanding graduating Senior for the College of Mathematics and Science. — **Kevin Pargeter.**

Kevin just keeps on reaping the awards. This was a banner semester for him. He was chosen one of four Rothbaum Scholars for the College of Math/Science and then won the over-all University award. Kevin is President of Tri-Beta, the Biology Honor Club. The club received two trophies at the Sponsor Appreciation Dinner, one for the 2004 Outstanding Student Organization and one for the Outstanding Community Service by a student organization.



Biology Tuition Waivers

The following students received Biology Tuition Waivers:

DeKada Bost, Robert Crane, Yolanda Duffy, Richard Fair, Justin Garrison, Kaleigh Kilmartin, Thomas Jarvis, Shannon Paulk, Benjamin Spall, and Jeremy Woodson

Biology Merit Awards

Two students received Biology Merit Awards, this is for outstanding academic achievement

Amada Norvell and Adam Sermersheim



Alumni

Dear Alumni, with Dr. Guthrie's retirement a major source of information on all of you is gone. Dr. Guthrie was always receiving e-mails from those of you in the health professions. I hope you will continue to keep us updated on your lives. My e-mail is Jhellack@ucok.edu. Thanks for everything. Jenna Hellack

Campbell, Bruce H. (BS Biology, 1974) Bruce has accepted the position of Landowner Incentive Program Coordinator with the Oregon Dept. of Fish and Wildlife. He recently had a book "Restoring Rare Native Habitats in the Willamette Valley" published by the Defenders of Wildlife. We hope Bruce enjoys his new job.

Clarkson, Rachel (BS Biology, 2003) Rachel is adjusting to city life and her new job at Brigham and Women's Hospital, Boston, MA.

Cook, Chris (BS Biology, 2004) Chris has transferred back medical school course so he is receiving his BS in Biology as he finishes OU medical school. Chris has matched with the Baylor College of Medicine's Department of Anesthesiology. He also has the opportunity to stay in Oklahoma City for his traditional internship at Saint Anthony Hospital.

Cook, Randy (BS, 1999) Randy, a biology teacher at Mount St. Mary High School, received the UCO Chapter of Sigma Xi Society's 2003/2004 Distinguished High School Science Teacher Award. Randy is a dedicated teacher who has enhanced science in many students' lives.

Davis, Jeremy (BS 2002) Jeremy is in his second year of medical school at OU. He reports that it is busier than the first year.

Hill, Paige (BS Biology, 2000) Paige is in the process of obtaining a MS degree in Fish and Wildlife Management at Texas A&M.

Hinkle, Brent (BS Biology, 2002) **Brent** who is in the OSU School of Osteopathic Medicine wrote to say hi. He is busy, but having fun. He wanted to thank the UCO faculty for preparing him well for his classes.

Hossain, Tahzeeba Ph.D. (BS Biology, 1992) Tahzeeba, a Research Scientist at Donald Danforth Plant Science Center, St. Louis MO has recently published her Manuscript. "Enhancement of folates in plants through metabolic engineering" The publication is in the April 6th issue of PNAS.

Hua, Jay (BS 1997, MS Biology, 2002) Jay will finish his EPA Intern program this summer; he was part of the 2002 class. He is now finishing a two month tour in Washington DC as part of a White House Initiative on Asian Americans in the EPA.

Hubbs, Aaron (BS Biology, 1998) Aaron is in his fourth year of a six year program which will give him a "dual-degree" of Naturopathic Physician and a licensed acupuncturist (L.Ac).

Jacobs, Macara (BS Biology, 2002) Macara has been accepted into the Physician Associate Masters program at the University of Oklahoma Health Sciences Center, she will start the program in July 2004.

Miller, David (MS Biology, 2003) David is now at the School of Fisheries and Ocean Sciences at the University of Alaska Fairbanks, he writes that his Ph.D. will most likely be in Biological Oceanography.

Moad, Jeremy (BS Biology, 2003) Jeremy, who is in his first year of medical school (OU) has visited with us often relaying his experiences. This has been very informative for the faculty as well as students. He has spoken to the Pre-med Health/Professions club also. Thanks Jeremy.

Riley, Corey (BS Biology, 2000) Corey obtained a Master's in Business Administration at the end of the fall semester 2004. Corey while an undergraduate at UCO worked with Dr. Bidlack on his USDA project.

Rindler, Paul (BS Biology, 2000) Paul is in his first year of medical school came by to say hi and visit with Dr. Guthrie, good to see him.

Winters, Tyler (BS Biology, 2003) and **Tevi (Meek) Winters** (BS Biology, 2002). Tevi and Tyler (who will join Tevi in Dental School at OU in the fall) were married June 18, 2004. Congratulations.

Former students came by to visit and wish Dr. Guthrie a happy retirement.
 Front row: Dr. Ahmed Buksh, Tyson Sjulín, Tyler Winters, Tevi (Meek) Winters and Todd Gleaves.
 Back row: Dr. Chris Cook and his wife Julie (Kitchen), Jeremy Moad, Ben Lowery, Setareh Sanati, Dr. Jenna Hellack, Dr. Peggy Guthrie, Roy Rindler Tara Martin, and Josh Payne. Paul Rindler, Sara Powers Diana Stewart Jeremy Davis not pictured. It was great to visit with them.



UCO Distinguished Former Student

Dr. William L. Beasley, D.D.S., M.S.



Dr. Beasley was elected president of the Oklahoma Dental Association (ODA) at the organization's annual meeting on April 29, 2004, in Tulsa, Oklahoma. A life-long resident of Oklahoma City, Dr. Beasley has been in practice in Oklahoma City for the past 26 years. He specializes in endodontics, the diagnosis and treatment of problems relating to diseased and damaged teeth. He will serve a one-year term.

Dr. Beasley received a BS degree from the University of Central Oklahoma in 1969 and completed his D.D.S. degree at the University of Iowa in 1973, continuing on there to specialize in endodontics. He has served in a number of leadership capacities for local, state and national professional associations during the past few years (American Dental Association, member of the House of Delegates; Dental Political Action Committee for Oklahoma, Secretary/Treasurer) and has also received numerous professional awards during his outstanding career (2003 Richard T. Oliver Award for Outstanding Legislative Leadership; 2003 America's Top Dentists). Dr. Beasley is active in his community as well, supporting the Allied Arts, The March of Dimes and the Boy Scouts of America.

"I'm extremely honored to serve my profession and our community," said Beasley. "ODA has been a driving force for quality dental care for more than a century. Our primary goal continues to be improved access to dental care for low income and elderly people in Oklahoma."

The Oklahoma Dental Association has 1,500 dentist members and is headquartered in Oklahoma city. It was established in 1891 (then the Oklahoma Territorial Dental Association) to help foster an awareness of the obligations and responsibilities of the dental profession to society, to help advance the art and science of dentistry, and to promote public health and health services in the State of Oklahoma.

Dr. Beasley and his wife Sherry (UCO BS Ed 1996, MS 1982) have three adult sons. Bryan is a film director in Los Angeles, Justin is a dentist in Oklahoma City and Will is a computer systems management student at Ft. Lewis College in Durango, Colorado

Congratulations to the following UCO Students, who have been accepted to Professional Programs for the Fall Semester, 2004.

OSU College of Osteopathic
Medicine

Aldret, Stephanie
Caldwell, Cuyler
Damon, Mark
Hoggard, Adreane
Holsey, Laura Jane
Ingram, Russell
Jestis, Lynn
Powers, Sara
Sjulin, Tyson
Wynn, Jeremy

OU – Physician's Assistant
Program

Jacobs (Roberts), Macara
Vogel, Christian
White, Mindy

OU College of Medicine

Azarian (Couch), Maureen
Boci, Marian
Caldwell, Cuyler
Hall, Michael
Ingram, Russell
Payne, Josh

OU College of Dentistry

Edge, Kari
Fortenberry, Alan
Kierl III, T. Philip
Scott, Lauran
Torabi, Ali
Winters, Tyler

OU Health Sciences – School of
Sonography

Blue, Addison

OU Health Sciences
Center—College of Pharmacy

Gilbert, Shannon
Fain, Mark
Wood, Douglas

University of Auckland – Graduate
School

Lack, Justin

University of Health Sciences –
Kansas City, MO—College of
Osteopathic Medicine

Aldret, Stephanie

Edward Via College of Osteopathic
Medicine

Reed, Michael

University of Missouri – Kansas
City, MO —School of Dentistry
Clendenon, Llon

Creighton University – Omaha,
Nebraska—College of Dentistry
Kierl III, T. Philip

Ohio College of Podiatric Medicine
Cleveland, Ohio (Aug. 2004)
Bradshaw, Valerie J.

Parker College of Chiropractic
Townsend, Jeanna

Indiana University – School of
Dentistry
Torabi, Ali

UCO Medical Technology Clinical
Year—St. Francis Hospital, Tulsa,
OK
Njenga, Anthony

NEOSU Optometry
Tahlequah, OK
Edwards, Jeffery
Pakzad, Mina

Nova Southeastern University
College of Optometry
Pakzad, Mina

Ross Medical School
Dominica
Redus, Zack

Southwestern Univ. – College of
Pharmacy
Adams, Rachel

American Univ. of the Caribbean –
St. Martens
Macaway, Sara

SURE, OUHSC
Crane, Robert

Reutgers University, Graduate
School Molecular Biology
\$22,500.00 Stipend Per Year
Raincrow, Jeremy

UCC – San Juan
San Juan, Puerto Rico
Kim, Hyung Ju aka Raymond

Tufts School of Dental Medicine
(D.M.D.) Boston, MA
Abduljawad, Asaad Bin
Abdulrahman

University of Western Ontario –
London, Ontario, Canada, Faculty
of Dentistry (D.D.S.)
Abduljawad, Asaad Bin
Abdulrahman

UCO Home Coming is October 15th and 16th



Biology faculty say good bye

Campaign to Finish the First Floor Science Labs starts off with a Bang.



From left to right: Dr. W. Roger Webb, President UCO; Mr. R.L. Beasley, Dr. William L. Beasley, Dentist ; Dr. William Radke, Vice President Academic Affairs; and Dr. William Caire, Dean College M&S.

Dear Biology Alumni:

The University Of Central Oklahoma “Central” holds many fond memories of us in our youth when we were trying to complete the requirements to either enter the workforce or professional school. I think you will agree that we obtained a good science foundation that has allowed us to succeed in our chosen professions.

We spent a lot of time in Howell Hall, which has now been renovated and a laboratory annex building added in 1997. Last year, I took a tour of the new building and I was shocked to discover that nine of the laboratories remained unfinished. Due to the need for additional teaching facilities, these labs were being used and students were being taught in rooms that had concrete floors and folding tables. These conditions are not conducive to learning and do not encourage the students to continue in the science department.

I have joined with the University of Central Oklahoma in a campaign of “Investing in Excellence” to raise funds to complete these labs. As a UCO alumnus and former science student, I encourage you to become involved in this campaign and make a donation. Let’s remember where we started!

William L. Beasley, DDS
Class of 1969

----- ✂ ----- ✂ -----
YES, you can count on my support for the Investing in Excellence campaign of the UCO College of Mathematics & Science

Pledge Amount: \$_____ I pledge to give \$_____ per year for: ✂ 2 years ✂ 3 years ✂ 4 years ✂ 5 years
If your gift is a memorial or to honor someone, please let us know.

My gift is in honor of _____ My gift is in memory of _____

✂ I wish to participate anonymously
✂ My company has a matching gift program. Name of company _____

Payment Information:

✂ Check for \$_____ is enclosed (*Payable to UCO Investing in Excellence*)
✂ Please bill my credit card for \$_____ ✂ Visa ✂ MasterCard ✂ Discover
Credit Card # _____ Exp. Date _____

Signature _____

Gifts to the UCO Investing in Excellence Campaign are fully deductible as charitable contributions for income tax purposes.

Name _____

Address _____

City _____

State _____ Zip Code _____

Home Phone (_____) _____

E-Mail _____

University of Central Oklahoma College of Mathematics & Science
100 North University Drive, Box 177 • Edmond, OK 73034

(405) 974-3563 • Fax (405) 974-3824 • <http://cms.ucok.edu>

Don't forget about



UCO Home Coming is October 15th and 16th

Visit the College of Mathematics and Sciences Web Site college participation information. •
<http://cms.ucok.edu>

Attention!

Because of the cost to print and mail the newsletter, this will be the last mailing for the foreseeable future. We will continue to place it on our web site and have a downloadable PDF file available.

<http://www.biology.ucok.edu/biodream/newsletter.html>