



Department of Botany

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College of Arts and Sciences

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Bluestem is published annually to inform alumni, faculty and friends about the issues, activities, and news of the Botany Department.

Comments and inquires should be directed to Editor, Botany Department, 104 LSE, Stillwater, OK., 405-744-5559 or Email jdownby@osuunx.ucc.okstate.edu

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Some Things Haven't Changed

Tyrl Begins 23rd Year at OSU

Some things haven't changed in the Department of Botany. After more than two decades on the job, plant taxonomist Ron Tyrl still wears his cowboy boots. He still hurries up and down the hall, and he still provides botany students with interesting and enlightening lectures on the plant life of Oklahoma. And he's still working on his *magnum opus*, the Grassflora of Oklahoma!

Since Ron became Curator of the OSU Herbarium in 1972, over 20,000 specimens have been added to the collection. Life at OSU, however, hasn't been just pressing plants and trying to coax another year out of the Botany bus. In 1983-84, Ron spent a sabbatical at the Royal Botanical Gardens in Kew, near London. He enjoyed it so much that he returned for a second time in 1990-91.

Other projects that have taken Ron far afield are USDA-sponsored trips to China, in 1987 and 1993. There he and Charlie Taliaferro of the

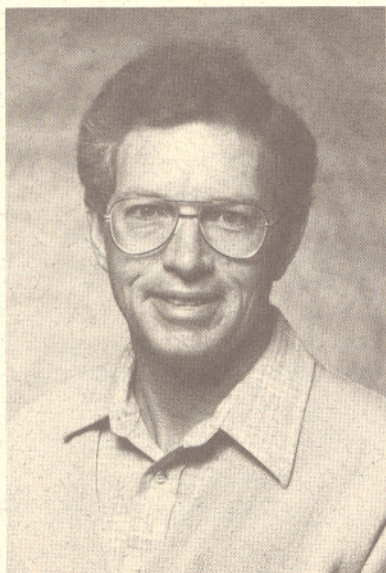
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In Memorium

James K. McPherson

1937–1994



The Botany department was deeply saddened to learn that Emeritus Professor James King McPherson died of a heart attack on July 11, 1994. Jim McPherson was a plant ecologist in the Botany Department from 1968 until his retirement in 1992. He will be sorely missed among the community of botanists in Oklahoma.

Jim was born in Tucson, Arizona and grew up in southern California. He received his Ph.D. under C.H. Muller at the University of California at Santa Barbara in 1968. During his tenure at OSU he distinguished himself as a scholar, training

students in areas ranging from vegetational surveys to allelopathy in sunflowers. Besides his teaching and research duties Jim served as acting Department Head in 1981, and was chairman of the University Academic Appeals Board in 1983-84. He was President of the Oklahoma Academy of Science from 1990-92.

After his retirement Jim kept a busy schedule. In addition to managing the Springer Prairie Preserve in Garfield County, he was completing a floral survey of Black Mesa for the Nature Conservancy. He had just been notified that he would receive the President's Award at the national meeting of the Nature Conservancy this year.

Shortly after moving to Oklahoma, Jim and his wife Iris built a charming home overlooking a wooded ravine east of Perkins. Here they hosted many Botany picnics and parties. All of us who attended these gatherings remember the pleasant surroundings and the warm friendship that Jim and Iris provided.

Continued from page 1

OSU Agronomy Department established contacts with Chinese grass taxonomists and forage breeders. They also collected germplasm of Chinese grasses, especially the old world bluestem *Bothriochloa*.

When it comes to publishing, no one can say that Ron lacks ambition. He is currently working on the Grassflora of Oklahoma with

Jim Estes at OU. He is also working with other colleagues at OSU and around the state on three other books describing the complete flora, the range plants, and the toxic plants of Oklahoma. These works, when completed, will have a major impact on plant taxonomy in the Great Plains for many decades to come.

Memorial Fund

A Memorial Fund for Jim McPherson has been set up in the Botany Department. This fund will be used to support travel by graduate students doing field work, and also to finance graduate student travel to regional and national meetings. We invite all who knew Jim as a scientist, teacher, and friend to make donations to the Jim McPherson Memorial Fund, OSU Foundation, H100 Student Union, Oklahoma State University, Stillwater, OK 74078. Please indicate on your check that your donation is for the Jim McPherson Memorial Fund in the Botany Department.

New Faculty Member

Biao Ding

The newest member of the Botany Department is Dr. Biao Ding, a plant cell biologist who joined the faculty in August, 1994. Biao comes to us from the University of California at Davis, where he completed three years of post-doctoral training in the laboratory of Dr. Bill Lucas. His field of study is the role of plasmodesmata in intercellular movement in plants, which he plans to continue at OSU. With the aid of a microinjection system and fluorescent probes, Biao is able to follow the cell-to-cell movement of viruses and proteins through plasmodesmata.

Shown at right with his wife Yan Xun and their son Arthur, Biao

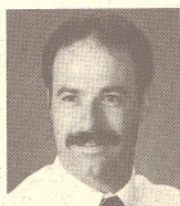
was born in Kunming, China. He received his Ph.D. degree in 1991 in M.V. Parthasarathy's laboratory at Cornell University, where he studied developmental aspects of plasmodesmata and the cytoskeleton in tobacco.

Yan is completing her M.A. degree in education. She is analyzing assessment methods in teaching Chinese in American universities. In addition to caring for young Arthur, Biao and Yan enjoy concerts, evening walks, and cooking. We are very pleased to welcome the Dings to our community.



Biao Ding with wife Yan and son Arthur.

Meet the Botany Faculty



Dr. Bill Henley

Dr. Bill Henley and Dr. Rob Burnap in the Department of Microbiology and Molecular Genetics have a University Center for Water Research grant to study heavy metal contamination in Grand Lake. They are developing molecular markers in algae that will serve as indicators of heavy metal toxicity. Bill attended the 1994 meeting of the American Society of Limnology & Oceanography in Miami, and also a Gordon Conference on photosynthetic CO₂ fixation in Irsee, Germany in February, 1994.

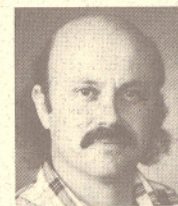
Dr. Mike Palmer and his wife, **Dr. Sue McAlister**, returned in July from a 6-month leave of absence at the University of Uppsala in Sweden. While at Uppsala Mike developed computer models to describe the co-existence of plant species. He also



Dr. Mike Palmer

gave lectures in Norway, Estonia, and the Netherlands. He will return to Europe in September as an invited speaker at a workshop in Poland for ecologists and conservationists on methods for analyzing plant communities.

Dr. Arnon Rikin continues his work on circadian changes in chilling tolerance in cotton. He was an invited speaker at a Gordon Conference on circadian rhythms in 1993. Recently he has begun a collaboration with Tim Close at UC-Riverside to study dehydrins, proteins induced by plant stress. In his spare time, Arnon breeds ornamental and bottle gourds which his wife Aya paints to create unique works of art.



Dr. Arnon Rikin

Alumni notes and news

Jim (Mac) Stewart (Ph.D. in 1968 with Gene Guinn) is Professor of Agronomy at the University of Arkansas in Fayetteville. He moved to Arkansas after 16 years as a USDA scientist at the University of Tennessee in Knoxville. Mac visited OSU in the Fall of 1993 and gave a seminar describing his trips to northern Australia to collect wild relatives of cotton for studies on drought tolerance.

Rahmona Thompson (Ph.D. in 1988 with Ron Tyrl) is Assistant Professor of Biology at East Central University in Ada, OK. Rahmona is an Associate Editor of the Southwest Naturalist and a taxon Editor for the Flora North America project with responsibility for the grasses. She is continuing to work with Ron Tyrl as an author of the Flora of Oklahoma project.

Jon Barfield (M.S. in 1989 with Dave Francko) works as an environmental consultant with Southern Natural Gas Corporation in Birmingham, Alabama.

Dave Patton (M.S. and Ph.D. with Dave Meinke) spent 3 years as a post-doc at duPont Labs in Wilmington, Delaware. This year he and his wife Lise moved to North Carolina, where Dave has a post-doc at Ciba-Geigy in Research Triangle Park. His work there involves using anti-sense RNA to block expression of biosynthetic enzymes that are putative targets of herbicides. Age appears to be taking its toll on Dave. He reports that he has given up biking and has taken up golf instead.

Harry Love, Jr. (Ph.D. in 1971 with Jerry Crockett) taught in the Department of Biology at East Central University in Ada from 1967 until his retirement in 1991. Since then he has pursued interests in geology, archeology, and Indian artifacts.

Tom Cason (M.S. in 1974 and Ph.D. in 1977 with Paul Richardson) worked in the Miticide and Pesticide Division of Shell Oil Corp. from 1978 to 1986. After 3 years at duPont and 3 years with Crop Genetics Institution, he is now Director of Technical Services for Kingston Bioremediation Environmental Services in Kansas City, Kansas.

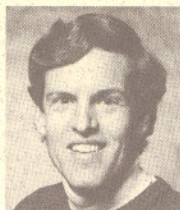
Barbara Reed (M.S. in 1974 and Ph.D. in 1977 with Paul Richardson) has lived in the Corvallis, Oregon area for the past 17 years. She is currently a research plant physiologist with the Agricultural Research Service there. Barbara does tissue culture with hazelnuts, mint, and hops, which she assures us are crop plants in that part of the country.



Dr. Jim Ownby

Dr. Jim Ownby presented papers at two conferences, one on acid soils and the other on plant mineral nutrition, in Australia in September, 1993. In between meetings he hiked the temperate rainforest in southern Queensland and also enjoyed the spring wildflower spectacle in the Stirling Range in Western Australia. In August of 1994 he presented a paper at the annual meeting of the American Society of Plant Physiologists in Portland, Oregon, describing acid phosphatases as biomarkers of phosphate deficiency in wheat and soybeans.

Dr. David Meinke is administrator of a 3-year NSF ESPCoR (Experimental Program to Stimulate Competitive Research) program that has brought \$1.85M in state and federal funds to OSU. He is an Associate Editor of Plant Molecular Biology and serves on the multinational steering committee for the Arabidopsis Genome Project.



Dr. David Meinke

This summer Dave wrote a review article on the molecular genetics of plant embryogenesis that will appear in Annual Review of Plant Physiology and Molecular Biology. He also chaired a session of the 4th International Congress of Plant Molecular Biology held in Amsterdam in June. His wife, **Dr. Deborah Meinke**, serves as an advisor to biology majors and teaches introductory biology. Somehow they found spare time to add a room onto their house to make more room for their children's toys.



Dr. Deborah Meinke

Dr. Joanna Ledford has taught everything from Plant Anatomy to Plants and People in her capacity as Adjunct Assistant Professor in the department. She presented work on a new method for assessing greenbug aphid damage using light and scanning electron microscopy at the Botanical Society of America meetings this year.



Dr. Joanna Ledford

Becky Johnson Now Dean of Undergraduate Studies

Dr Becky Johnson is a good example of how one can advance through hard work. Beginning as a part-time instructor in the BiSci program in 1972, she is now Dean of Undergraduate Studies and Director of Admissions at OSU. Becky was a member of the Botany Department from 1978 to 1992, when she moved to her present position. Her research in the Botany Department was devoted to developing methods for tissue culture of such plants as peanuts, and she collaborated with a number of scientists in the College of Agriculture. She continues to teach an Honors course on scientific inquiry for non-majors, and joins us frequently for morning coffee, which enables us to get caught up on the latest from Whitehurst.



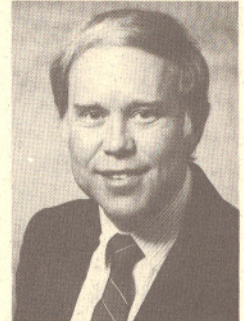
Glenn Todd Retires

Jim Ownby New Department Head

After 35 years at Oklahoma State University, Glenn Todd retired in Spring, 1993. In August of 1993, Glenn and wife Elise moved to Kyoto, Japan, where Glenn began a year at OSU's sister institution, OSU-Kyoto in Kameoka. He taught an introductory biology course during the 1993-94 school year. While in the Orient he paid a call on a former student, Chokwang Yi, in Seoul, South Korea. In May Glenn visited another former student, Bao-gan Wu, and gave lectures at several venues in China. The lectures must have been very interesting because both translators have since applied to the Botany Program at OSU!

Because of budget limitations, Dean Smith Holt of the College of Arts and Sciences decided that the Botany Department should select an internal Head when Glenn Todd retired. Jim Ownby, who joined the department in 1975, took the assignment. During Jim's first year on the job the department hired a new cell biologist (see related story in this newsletter) and got on the "information superhighway." All computers in the department are now connected to the OSU mainframe computer, which gives faculty and graduate students access to Internet. They can also access, from their desks, the library holdings at OSU and OU and communicate with colleagues by E-mail.

In other administrative news, James Halligan became the 16th president of Oklahoma State University on August 1, 1994. Halligan, who is 57, earned a Ph.D. degree in chemical engineering at Iowa State in 1967. He had been President of New Mexico State University for the past 10 years.



Dr. Jim Ownby



Dr. Glenn Todd

Alumni information requested

The department is currently updating information from alumni. Please take a moment to complete the questionnaire and return it to the address below.

name

home address

home phone

current professional position

business address

business phone

achievements and awards

additional education/degrees

areas of distinction

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