Magazine Winter 2012

Austin Co

A Century of Science

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Travels and Adventures

One of the best things about being a part of "Kangaroo Nation" is that there are friends in every port. I recently traveled to London with Larry (he had been invited to give several performances and lectures). While there, I was able to have dinner with several of our current students who are spending the semester abroad. We were joined by a few expatriate alumni, too. It was fascinating to see the Austin College commitment to global education in action.

It always amazes me that when Kangaroos gather—no matter their generation or the location—the communication always turns to the incredible foundation Austin College provides for its students. Over and over again, I hear stories about special professors, incredibly challenging but rewarding courses, and great adventures in foreign lands. Even more meaningful are the stories I hear that begin, "I never could have attended Austin College without scholarship support ..."

I hope you will take a moment following this holiday season to reflect on the way financial aid or scholarships made possible an Austin College education for you or a classmate. And I hope you will be moved to "pay this gift forward" by making or increasing your donation to Austin College this year. As a private institution, we are not in line for any bailouts or handouts—the present and future of Austin College lives in our own collective spirit and actions. Our current generation of students needs you.

You will be glad to know that the strengths of Austin College are becoming increasingly visible to others. As you will read in this magazine, the College is again ranked #1 for study abroad participation. No other college surpassed us for the percentage of students with international experience.

Too, Austin College is a top producer of student Fulbright awards among bachelor's institutions. With six current Fulbright students around the globe, the College leads the pack among Texas schools. Well, the University of Texas *did* field seven awardees, but then they do have more than 50,000 students as potential candidates. We are very proud of the individual attention and support our faculty provides to prepare students for success in these very competitive awards, and so pleased that our students obviously shine in the written and oral portions of the selection process.

In other accolades through the fall term, the College was recognized in several college listings for offering a quality education at an affordable price, something definitely at the foundation of our mission to allow qualified students access to an Austin College education regardless of ability to pay.

This month, our students and faculty have set out on several international adventures—with courses in China, France, Japan, England, Malta, Spain, Costa Rica, Scotland, and Guatemala. Many students are studying architecture and art in New York City and another group is exploring the ecosystem of the Florida Everglades. With many other internships and interesting oncampus courses, January Term continues to be a highlight of the academic year.

As this new year unfolds, I wish you, too, many adventures and highlights in the days ahead.

Gratefully,

Maijone Haso

Marjorie Hass, President Austin College





FEATURES

2 For the Children

Marian Wright Edelman has been selected as the recipient of the 2012 Austin College Posey Leadership Award. The founder and president of the Children's Defense Fund will be honored in April and share her experiences in events on campus and in Dallas.

4 Austin College Is Top Fulbright Producer

The six Austin College graduates awarded Fulbright grants for 2011-2012 travel to South Korea, Columbia, Germany, and Croatia were enough to place the College among the top producers in the nation.

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Texas plant expert George Diggs, professor of biology, set out to Antarctica to see what examples he might find there to connect his students with their coursework.

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Sciences always were a significant part of the Austin College education but in 1911 as the curriculum expanded separate departments developed. With new improvements—like electricity!— science education continued to grow, and in 2011-2012 is celebrated at 100 years of educating men and women for success.

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The IDEA Center observatory with its custom-built telescope will set Austin College apart for top-notch undergraduate astronomical research and community outreach opportunities.

28 Celebrating the Unknown

Since his training in Einstein's general theory of relativity, physics professor Don Salisbury has sought answers to big questions. He hopes to inspire his students to similar pursuits.

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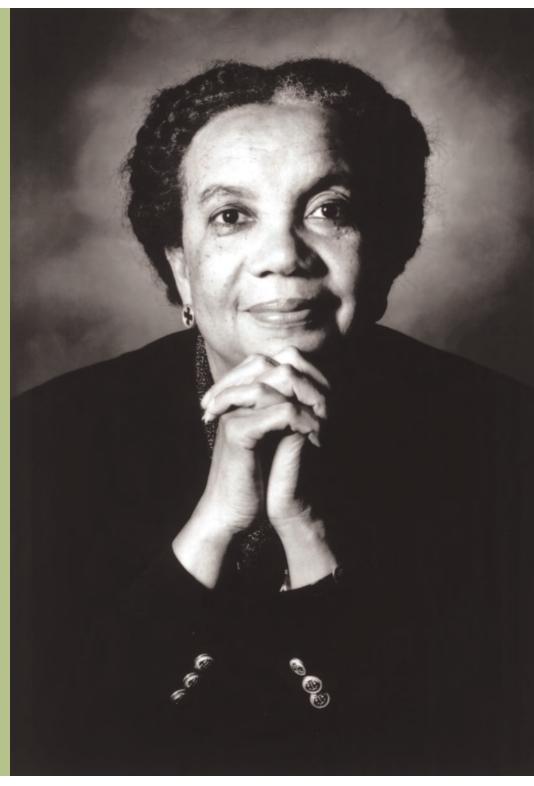
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of hope?

- Marian Wright Edelman



for the children

Marian Wright Edelman has devoted her life's work to bring equality and justice into lives and communities. As founder and president of the Children's Defense Fund, she has spent nearly four decades advocating for America's children, in whom she places her hope for the future.

Austin College will recognize Edelman's contributions to the world by presenting her the 2012 Austin College Posey Leadership Award on Thursday, April 12, 2012. She will speak to students on campus that day prior to a public lecture at 7 p.m. at the Wyly Theatre in Dallas. The award will be presented before her Dallas address.

Edelman has been described as a relentless advocate for disadvantaged Americans throughout her professional life. Under her leadership, the Children's Defense Fund (CDF) has become the nation's strongest voice for children and families. The organization's "Leave No Child Behind" mission is to ensure every child a "healthy start, a head start, a fair start, a safe start, and a moral start" in life and successful passage to adulthood with the help of caring families and communities.

For millions of children in the U.S., Edelman says, life remains about poverty, hunger, neglect, and abuse. Through CDF, Edelman's mission of hope and change continues through research, drafting of legislation, lobbying, and educational support on issues affecting children. The organization has worked on issues of childhood disease and immunization, homelessness, early childhood education, juvenile justice, child abuse, foster care, and after-school programs.

A graduate of Spelman College and Yale Law School, Edelman began her career as a civil rights attorney in the mid-1960s when, as the first black woman admitted to the Mississippi Bar, she directed the NAACP Legal Defense and Educational Fund office in Jackson, Mississippi. In 1968, she moved to Washington, D.C., as counsel for the Poor People's

Campaign that Dr. Martin Luther King, Jr., began organizing before his death. She founded the Washington Research Project, a public interest law firm and the parent body of the Children's Defense Fund. For two years, she served as the director of the Center for Law and Education at Harvard University and in 1973, founded CDF.

Edelman has received more than 100 honorary degrees and many awards including the Albert Schweitzer Humanitarian Prize, the Heinz Award, and a MacArthur Foundation Fellowship. In 2000, she received the Presidential Medal of Freedom, the nation's highest civilian award, and the Robert F. Kennedy Lifetime Achievement Award. She has been named a "Living Legend" by the Library of Congress, and *U.S. News & World Report* named her one of "America's Best Leaders" in 2008. She also received the 2011 John Jay National Leader for Justice Award. The chair of the Spelman College Board of Trustees from 1976 to 1987, Edelman was the first woman elected by alumni as a member of the Yale University Corporation, serving from 1971 to 1977.

A prolific writer, Edelman's books include the #1 New York Times bestseller The Measure of Our Success: A Letter to My Children and Yours; and Families in Peril: An Agenda for Social Change; The Sea Is So Wide and My Boat Is So Small: Charting a Course for the Next Generation; Guide My Feet: Meditations and Prayers on Loving and Working for Children; Stand for Children; Lanterns: A Memoir of Mentors; Hold My Hand: Prayers for Building a Movement to Leave No Child Behind; I'm Your Child, God: Prayers for Our Children; and I Can Make a Difference: A Treasury to Inspire Our Children.

See event details: www.austincollege.edu/poseyaward

Austin College Is Top Fulbright Producer

Austin College is the number one producer of Fulbright students among Texas bachelor's institutions for 2011-2012—and among the top in the nation, according to a list of top Fulbright producers released by the Fulbright Program and published in October 2011 by *The Chronicle of Higher Education*.

The *Chronicle* listed institutions by type, including Austin College among bachelor's institutions—the only Texas school on that list. That category includes many schools with larger student populations than Austin College's 1,350-member student body.

Additionally, with six Fulbright awards in 2011-2012, Austin College surpassed all Texas educational institutions of any type last year—bachelor's, master's, or doctoral—with the lone exception of the University of Texas at Austin, which received seven awards drawing on a student population exceeding 50,000.

"This accomplishment is a perfect example of the Austin College difference," said Austin College President **Marjorie Hass**. "From day one, we want our students to succeed and our aim is to provide the guidance and resources to allow them to meet their goals and become their best selves. A welcoming community, challenging academics, and adventurous, hands-on learning opportunities are the foundation for our students' development. Faculty and staff see students as individuals, each with strengths to be drawn upon and passions to be ignited. Our faculty members work hard to help outstanding student candidates to be prepared for great post-graduate opportunities like the Fulbright experience."

"Why does Austin College produce more Fulbright students than almost any school in Texas?" said **Patrick Duffey**, Austin College Fulbright program advisor and dean of Humanities. "Our students are bright when they arrive at Austin College. Our goal as faculty and staff is to help them shine as brightly as possible while they are with us and help them to shine even more after they graduate. Our students have more international experience; more than 70 percent of our students study abroad before they graduate. Too, our language department is particularly strong, and this makes our students more competitive for the Fulbright. Because of the various types of internships and service work our students have internationally, they have 'real world' experiences that make them attractive to the Fulbright program."

The six awards for 2011-2012 are the highest number made to Austin College students in one year. "This success represents Austin College's commitment to international programs that enhance the cultural awareness of our graduates, and also demonstrates the extraordinary efforts of our faculty who work with students to enhance their post-graduate success," said **Mike Imhoff**, vice president for Academic Affairs and dean of the faculty. "The Fulbright program is highly competitive and selects students who not only have exceptional preparation but also are able to present themselves persuasively in writing and later in an interview. Without our faculty's guidance and energy, Austin College would not have this exemplary record of post-graduate success."



Current and Past Fulbright Recipients

Year	Name	Country
2011-2012	Christiana Bay '11	South Korea
	Cameron Behal '11	South Korea
	Erin Sweeney '11	Croatia
	Matthew Varvir '11	South Korea
	Miles Vaughn '09	Colombia
	Katherine Wilshusen '11	Germany
2010-2011	Claire Balani '10	China
	John Mark Purcell '10	South Korea
	Ashwini Shridhar '05	United Kingdom
2009-2010	Sophia Kuiper '09	Spain
	Cherie Oertel '09	Spain
2008-2009	Christine Denison '06	Uruguay
2005-2006	Blake Pierce '05	Germany
	Allison Schmitz '05	Spain
2003-2004	RonAmber Deloney '03	Germany
	Michael Kirby '03	Germany
	Catherine Richards '03	Germany
2001-2002	Gabrielle Stanco '01	Germany
2000-2001	Kari Bergman '00	Germany
	Craig Czelusta '00	Germany
	Nicole Kuiper '00	Spain
	Danielle Tarin '00	Egypt
1999-2000	Patricia Ulmer '99	Germany
1998-1999	Jodi Gaston '98	Argentina
1997-1998	James Alexander '97	Germany
1995-1996	Lora Marsh '95	Germany

#1 in Study Abroad The World Is Our Classroom

Austin College again ranks #1 in the nation for study abroad based upon percentage of participation among baccalaureate institutions in the 2011 Open Doors Report on International Educational Exchange (IEE). The report indicates an increase in U.S. students studying abroad, with nearly 10,000 more students studying abroad for credit in academic year 2009-2010 than the previous year.

Austin College has been ranked at #1 in this category four of the past six years and has developed a reputation for all things global. At least 70 percent of Austin College graduates of the past decade have had one or more study abroad experiences in college. (IEE reports 14 percent of all undergraduate students study abroad.) The Austin College numbers are quite intentional. The Center for Global Learning was



established to enhance cross-cultural learning in students' terms abroad. "We are pleased, of course that our numbers are nationally competitive," said **Truett Cates**, director of the center. "It shows that students at Austin College respond to the call to a global educational mission."

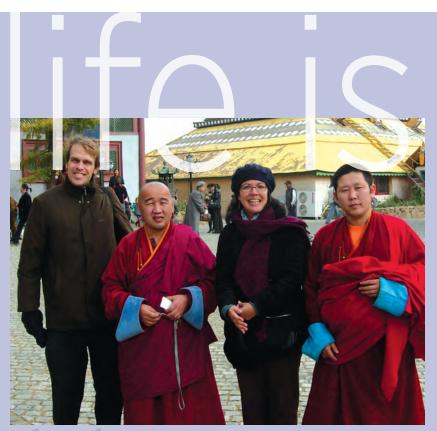
"We are so aware of how important it is that today's college students—our next generation of leaders—have global understanding and true awareness of the world around them," said Austin College President **Marjorie Hass**. "The earth is a small boat and we rise and fall together on it. In coming years our world will need to deal with environmental, economic, and societal issues that will require the broadened perspective of experience in other cultures. A new level of sophistication and experience will be required from the leaders upon whom we will depend to

create success in our businesses and communities. That is why the international focus of Austin College students is so crucial."

International travel also provides connections between coursework and reality. "It's important to find ways to connect theory and practice," Dr. Hass said. "That is, our students are not just evaluating theories about world hunger; they travel and see a hungry world with their own eyes. They not only see it, but they learn what it looks like from other cultures' perspectives. With that experience, they really can interpret and evaluate how to address world hunger."

During the 2009-2010 academic year, which the latest IEE data represents, Austin College January Term and traditional study abroad programs sent students to Argentina, Australia, Belgium, Brazil, Chile, China, Costa Rica, Czech Republic, England, France, Germany, Greece, Ireland, Italy, Japan, Malaysia, Mexico, New Zealand, Oman, Scotland, Singapore, South Africa, Spain, Switzerland, Taiwan, Tanzania, and Uruguay.





the

Our own life has to be our message.



Message

Buddhist monk Thich Nhat Hanh said, "Our own life has to be our message." **Ivette Vargas-O'Bryan**'s message has had many elements over the past two years, serving as a Fulbright Scholar in Hong Kong, doing sabbatical work, and teaching at two Chinese institutions. "Residing in Asia reinforced my knowledge, updated my research, and developed my teaching during health epidemics, political struggles, and religious reformations," said Ivette, associate professor of religious studies.

The two-year adventure began during the H1N1 epidemic in Hong Kong when the public wore masks and entrance signs reassured "sterilisation hourly," foreshadowing Ivette's sabbatical work on religion and medicine. As a 2009-2010 Fulbrighter, Ivette taught at City University of Hong Kong, co-headed "Health in Asia" at the HKU/ Li Ka Shing Faculty of Medicine Centre for the Humanities and Medicine (CHM), served as consultant/lecturer for the Fulbright GE program, participated in a Hong Kong radio talk show interview, presented lectures, and organized conferences. Hosted by the U.S. Embassy and American Center for Mongolian Studies in Mongolia, she examined manuscripts, witnessed Buddhist reformation, and discussed Austin College study abroad opportunities. And, she came upon the unexpected: "Never have I encountered a sacrifice being offered in a Buddhist temple with practitioners intoxicated on fermented mare's milk (*airaq*)."

"This was a lifetime of work condensed into two years," Ivette said. In Bhutan, she presented on klu disease. She was affiliate researcher at the Institut Français de Pondichéry in India. After organizing the Hong Kong Religion, Illness, and Medicine conference, she became

scholar-in-residence at Dharmacakra Academic Center in Nepal. While Maoist rebel groups shut down the country, Ivette updated work on Nun Palmo, an 11th century leper nun, and Buddhist conceptions of illness and medicine. "I traced the mythical-historical traditions of Nun Palmo from India, Nepal, Tibet, and Bhutan to Mongolia," she said. "It was humbling to see leper caves where Nun Palmo sought refuge." Ivette and her husband walked medieval streets past temples; in Shangri-La and Lhasa, she climbed mountains, rode on horseback, and walked past army vehicles. Her research culminated in Dharamsala, India, the base of the Dalai Lama and where the government-in-exile maintains a research library.

Teaching at two Chinese institutions provided insights into Chinesestyle liberal arts, outcome-based education, and internationalization initiatives. "My United International College students in Zhuhai, China, hungered for knowledge about their own culture and the traditions of India, Japan, and the U.S.," Ivette said. "It was touching to see students tearfully grateful for their experience."

As a result of the experience, Ivette is publishing her first book with Hong Kong University Press, has published seven articles and has four forthcoming publications, and now is on the Fulbright Peer Review Committee. "This was the most productive time of my life; I am grateful for these opportunities," Ivette said. "In retrospect, all that we are is the result of what we have experienced. We are what we do."

Read and see more about Ivette's experiences in the online version of Austin College Magazine Winter 2012.

Texoma Women Make Connections

Austin College has hosted Women Get Connected events in several cities over the past few years, recognizing the prominent roles of women in the life of the College, from the initial land gift made by Emily Austin, sister of Stephen F. Austin, to the accomplishments of hundreds of alumnae to the inauguration of **Marjorie Hass** as its first woman president in 2009.

The events are designed to engage women in the academic and cultural life of Austin College, to inspire women to create social change in their communities, and to support scholarships for the next generations of Austin College women.

The Texoma Women Get Connected events have included alumni, staff, faculty, students, and friends, many of whom have given to the Texoma Women Get Connected Academic Honors Scholarship at Austin College for a female student from the Texoma community. The group's leadership already has set goals to support January Term study, Austin College Teacher Program participants, and Global Outreach service projects.

At the October 2011 Texoma Women Get Connected event, group leaders addressed another area of scholarship support that also honors a beloved member of the Texoma community, announcing the creation of an endowed **Sara Bernice Moseley** Scholarship for Presbyterian Students. The Sara Bernice Moseley Scholarship program was established in 1996 as a tribute to Sara Bernice's leadership, and many of these scholarships have been created and named for a donor or honoree. This is the first individual scholarship that names her as the honoree. For the women of Texoma, the former first lady of the College and longtime supporter was the obvious choice for the group's first named scholarship.



The construction phase for the College's long-anticipated IDEA Center has begun! Preparation of the site began with the arrival of the first heavy equipment in November 2011 and continued throughout December.

The three-story science facility, scheduled for completion by fall 2013, is the next significant step in Austin College's strategy to integrate science and technology into the liberal arts curriculum and maintain a competitive program in these fields, said Austin College President **Marjorie Hass**. "A liberal arts education fosters and develops an inquisitive mind, a thirst and excitement for discovery, and a fearless, entrepreneurial spirit. Our goal is to make this type of education accessible to all our students to equip them to be successful throughout their lives," she said.

Hunt Construction Group, general contractor for the project, is "renowned for expertise in LEED/green initiatives and building bio-medical research facilities nationwide," said **Heidi Ellis**, Austin College vice president for Business Affairs. Other major partners for this effort include American Bank of Texas in Sherman, Dallasbased Pritchard Associates as project management consultants, and Page Southerland

> Page, also based in Dallas, as the architect of record. Conceptual design for the building was completed by Shepley Bulfinch Richardson & Abbott of Boston, Massachusetts.

Building On An IDEA



Good News for Others:

The Service Station Celebrates 20 Years of Leadership

More than 16,000 hours of service were recorded by the Austin College Service Station during 2010-2011—likely surpassing anything the Service Station founders imagined when it was created 20 years ago.

Service on campus has a long history. Many campus organizations regularly take part in volunteer projects and individual campus members have been involved with organizations and individuals in need in the Texoma area for years.

Twenty years ago, that emphasis was enhanced through the creation of the Service Station to coordinate and support service efforts. Operated by a student board, the Service Station matches needs in the community with individuals and groups seeking volunteer opportunities. With the number of volunteer hours increasing every year, the system seems to work quite well.

The 20th anniversary of the program was marked with a brief celebration during Homecoming. Established in 1991 with a grant from the Priddy Foundation of Wichita Falls, Texas, the program has grown every year, gaining support from foundations, corporations, alumni, friends, and churches, most notably the Oliver Dewey Mayor Foundation, the Captain H.T. Hastings Charitable Trust, and Bob and Laura Dies Campbell '73.

The Service Station operates as part of chapel programming, overseen by College chaplain **John Williams** '84. "For 20 years, the Service Station has helped develop a culture of service at Austin College by focusing the attention of the entire campus on the importance and value of service—on our campus, in our community, and throughout the world," Williams said. "Through their participation in the Service Station, students from a variety of backgrounds and academic interests work together to ensure that their giftedness is good news for others."



Past and present Service Station professional staff members are, left to right, Jeanie Graber, 1991–2000; Nikki Bitzer, 2001–2004; Melanie Oelfke, 2005–2008; and Nancy Morgan, director since fall 2008. Not pictured is Carol Millerick, interim director 2004–2005.



President Marjorie Hass and President Emeritus Oscar Page pose in front of the portrait of Page unveiled during the Service Station celebration. Upon Page's retirement in 2009, the Service Station renamed its annual award so that a deserving student is recognized as the Oscar C. Page Servant of the Year each spring.

At the Top of the List

While Austin College faculty and staff have set our own benchmarks and don't measure our success upon placement in rankings, we certainly appreciate the affirmation of our hard work in providing an outstanding education and supporting access for students.

-- President Marjorie Hass

The number of prospective students and parents visiting Austin College has grown substantially over the last few years and admission applications are at an all-time high. (Alumni and friends always are encouraged to be on the lookout for talented students!) Leadership at the College believes those advances signify more people are becoming aware of the quality educational opportunities that have been the tradition at Austin College.

The College also has been included for many years by a number of outlets that rank colleges or publish annual listings of top educational institutions. In fall 2011, those outlets included:

- Forbes magazine: included Austin College in "America's Top Colleges" for quality of teaching, great career prospects, graduation rates, and low levels of debt.
- The Princeton Review: included Austin College among *The 376 Best Colleges* and Best in the West, and ranked in the top 15 for Most Popular Study Abroad, Professors Get High Marks, and Easiest Campus to Get Around.
- "Great Colleges to Work For" national survey conducted by The Chronicle of Higher Education included Austin College.
- Fiske Guide to Colleges: named Austin College one of 25 private "Best Buy" colleges that offer outstanding academics as well as moderate prices.
- Kiplinger's Personal Finance: listed Austin College among the top 100 liberal arts colleges providing a high-quality education at an affordable price.
- U.S. News & World Report 2012: included Austin College in "America's Best Colleges" among National Liberal Arts Colleges and as a Best Value School.

Find more information about Austin College guidebook listings and the College's inclusion in the book *Colleges That Change Lives* on the College website at www.austincollege.edu/admission/guidebooks.



A Study in Success

An elbow to the face during a friendly game of basketball helped determine a career path for **Neema Dad** '12. He long had been interested in healthcare, but losing a front tooth gave him a chance to take a closer look—literally—at dentistry.

He liked what he saw: a commitment to healthcare, interpersonal communication, continuity of patient care, and the opportunity to establish a sense of community. Neema has had several acceptances for professional school and will enroll this fall to prepare for a career in dentistry, with an interest in orthodontics.

Already, however, he has taken an entrepreneurial step, last fall launching Elements to Success Tutoring Services, offering tutoring in math, physics, biology, and chemistry for high school and college students in Collin County and Dallas.

A business and biology major, Neema has the foundation for both efforts-

and experience in the area of tutoring, both as a client and a tutor. He participated in study sessions at the Austin College Academic Skills Center before becoming a peer tutor himself in biology, chemistry, business, and economics.

He has observed that the highest demand for tutoring seems to be in chemistry, math, biology, and physics—the areas his company addresses. difference in education in America. Reductions in education budgets, he knows, mean increased class sizes and limited individual attention. He sees his company as a means to fill the gap. "Our goal is to develop a knowledge base for the student, a foundational, fundamental understanding. We don't focus on format but build skills, motivate, and teach to the level needed." Also, the company will donate 10 percent of the cost of each tutoring

session to further education through a program such as Donors Choose, which will directly benefit teachers, students, and schools across America. "My motto," Neema said, "is that at Elements to Success we help 'build education by building education."

But Neema is not looking just for profits or simply to add another

competitor in the tutoring business. He is concerned with providing

better learning opportunities for students and ultimately, making a

Neema completed courses for his Austin College degree in December. He will focus on building the tutoring business until he begins dental school this fall. Neema said lessons learned through the Posey Leadership Institute also are crucial aspects of his preparation.



Law Symposium Set for March

The annual Kenneth Street Law Symposium will be held March 2, 2012, on campus, with a focus on "Law and Ethics." The event, hosted by the Alumni "L" Law Association and the Austin College Pre-Law Society, is additionally supported by the Hatton W. Sumners Foundation of Dallas and Austin College Student Assembly.

Keynote speaker will be The Honorable Barbara Lynn, judge of the Federal District Court for the Northern District of Texas.

Distinguished panelists will include Jim Coleman, Jim McCormack, and Chuck Herring as well as Austin College alumni **Charla Aldous** '82, **Chris Elliott** '84, **Buck Files** '60, **David Mee** '89, and **Jim Walker** '82. The day's schedule, registration fee, and anticipated CLE credit will

be announced as available. Check the Austin College website in February for more details.

Once in a Lifetime

Members of the 1981 team attending the Kangaroos' opening game and serving as honorary coaches were, left to right, Sam Boatman, All-American Rory Dukes, Bill Magers, Russ Roden, David Adams, TIAA Defensive Player of the Year and defensive back Chris Luper, Rex Baker, David Simmons, Don Parnell, Jim Curry, All-American Ed Holt, Tim Kay, John Henderson, Greg Cason, Mark Richards, All-American quarterback and TIAA Offensive Player of the Year Larry Shillings, David Norman, and All-American Stuart Oliphint.

* NAIA NATIONAL * FOOTBALL CHAMPIONS * DIVISION II-1981 *

Members of the Austin College 1981 NAIA National Championship football team came to campus in September 2011 to celebrate the 30th anniversary of the team's historic season, capturing the only national title in Kangaroo athletics. The football program reached new heights in 1981 when, after trailing Concordia University of Minnesota 24-21, the Kangaroos managed to tie the score for a share of the NAIA title and a lifetime of bragging rights on an 11-1-1 season.

Some of the facts—like All-American **Gene Branum's** 57-yard field goal that tied the game—need no elaboration, but between the team's induction in to the College's Athletic Hall of Honor at the Legends celebration in July and the recognition day in September, plenty of stories were told and retold of larger-than-life memories for this groups of champions.

David Baker, Austin College associate professor of physics, was included among "The Most Creative Teachers in the South" in the August 2011 *Oxford American* magazine.

The article preface reported, "We hunted in colleges throughout the region to find influential educators admired by their students and colleagues, whose classrooms serve as forums for social change, whose homes become their classrooms, and, in some cases, whose assignments become homes."

Baker definitely is excited about teaching, which for him includes traditional physics courses as well as interdisciplinary courses in earth, environmental, and planetary sciences. "One of my goals is for science to be cool and exciting for everyone," he said in the article, "whether they will plan to pursue a career in science or a career in something else."

Baker routinely leads adventure-oriented science courses during January Term to places like the Galapagos, New Zealand, and Peru. In January 2012, he and Mike Fairley of the communication faculty had scheduled "Into the Wild Africa: Scientific & Cultural Perspectives of Nature," planning to journey with students

Making Science Cool

through the Great Rift Valley of East Africa with nature itself as their classroom. The class, cancelled due to safety concerns in the region, was to include camping on the African plains and hiking up Mount Kenya, Africa's second-highest mountain, as well as doing some roof and wall repair, and installing a new rainwater catchment system, at a school in the village below Mount Kenya.

The September 2010 release of *The 50 Most Extreme Places in Our Solar System*, cowritten by Baker and a colleague, highlights another area of Baker's exciting interests.

From the physics lab to the wilds of Africa to the solar system, Baker keeps finding bigger realms in which to share his love of science with his students.





antarctic

Going to the End of the World for Science

Botanist George Diggs more often might be found exploring the fields and byways of Texas, but a sabbatical trip in January 2010 took him a bit farther afield—to face the rugged conditions of Antarctica.

> Diggs, Austin College professor of biology and a member of the faculty for more than 30 years, is an expert on the plants of north Texas, but varied scientific interests also have led him to Kenya, Tanzania, Ecuador, Venezuela, Costa Rica, and Guatemala. He's inspected volcanoes, trekked rain forests, and scaled Mt. Kilimanjaro—with his students alongside him on many of those adventures.

> He's interested in pursuing his own research and exploration, but the former Carnegie Foundation Texas Professor of the Year has another important reason for the continued study: his students. "From many years of teaching I've learned that connecting with students, motivating them to really engage with the material, and getting them excited enough to want to learn more on their own all are quite important," Diggs said. "Among the goals of my trip to Antarctica was to gain first-hand knowledge about the unusual animals, the extreme conditions, and the changing climate to incorporate in a variety of my courses, including freshman biology, evolutionary biology, and nonmajors courses. I believe being able to use such new and exciting examples in classes in a way that has 'source credibility' helps me to connect with the students and get them interested and excited."

> Traveling to the end of the world, what did Diggs find? "Antarctica's vastness, raw beauty, extreme conditions, and the helplessness of humans in such an environment give a very different perspective to the real place of humans in the natural world."

PHOTOS COURTESY OF GEORGE DIGG





Centu

Science

A preeminent liberal arts education has been the foundation of Austin College since its founding in 1849. But until 1911, science courses were integrated into the curriculum without separate divisions. Since 1911, the College has continually worked to stay ahead of constant research developments, moving from Studying only external cellular Structure with sunlightpowered microscopes to analyzing cellular DNA with today's computer-linked fluorescent microscopes.

A CENTURY

Laboratory Fees for 1913-14

Sophomore Chemistry\$5		
Junior Chemistry\$10		
Senior Chemistry\$10		
Junior Physics		
Senior Physics\$2		
Biology\$7		

Tuition was \$96 per semester.



Biology Curriculum, 1922-1923

Systematic Zoology [Hegner, General Zoology] Zoology, Echinoderms-Arthropods Zoology, Vertebrates (Pre-Meds) General Botany [Densmore's College Botany] Histology Embryology – Fowl Embryology – Frog and Pig [Prentiss and Arey's Embryology] Physiology Genetics, Heredity, and Eugenics Martin's Human Body As Austin College prepared to celebrate a century of science education, faculty scanned the history books and College Archives to gain a perspective on what the last 100 years of science education at Austin College has entailed. They discovered a faculty who had been dedicated to teaching and stories of young men and women committed to learning and taking their education into their own communities as researchers, professors, business leaders, and physicians—much as today's young men and women will do.

1849-1910

In 1853, the College established an uncommon relationship with the Smithsonian Institute in Washington, D.C. In exchange for data on Texas weather and native Texan plant and animal specimens, the Smithsonian provided the College materials, books, science pamphlets, maps, and mineral specimens, giving the College a head start on a science curriculum.

Additionally, College founder Dr. **Daniel Baker** was given "not less than \$500 for chemicals and apparatus" on his fourth trip to Washington, D.C., and New York. By the late 1880s, the sciences were staffed with well-trained professors such as **George Snedecor** in mathematics. Snedecor discovered a process he called the "F Distribution," which became a key element in the analysis of statistical variance.

The first Bachelor of Science degrees were offered in 1903 to those students who took a heavier concentration of courses in the sciences. Courses of the time included surveying and navigation, differential and integral calculus, hydrodynamics, electricity, and magnetism.

1910-1920

There was a minor crisis among the faculty in the 1910s, when a student studying for ministerial work complained to the College president that evolution was included as a scientific fact in one of the textbooks. All the science faculty members were called in for questioning, and it was discovered that the book was owned by Dr. **Harry Sharp**, a physics professor. He voluntarily resigned when questions about his lack of religious faith displeased the heavily ministerial Board of Trustees.

That decade was one of great change within the College. The sciences expanded to include engineering curriculum, and the increase in courses led to the founding of a separate department for chemistry and the combined department of biology and physics. The lone classroom building was remodeled to meet the growing need for space, but before the project was complete, a homesick 15-year-old student arsonist burned Old Main in 1913. All the materials, books, and science equipment were lost in the fire.

Undaunted, President Clyce began fundraising efforts immediately, and Thompson Hall was constructed by the end of the year, replete with "modern science laboratories." In addition to having gas power as a backup, the new building was equipped with the latest modern advancement: electrical power.

Austin College already was developing a reputation as a leader in pre-medical studies. One of the first alumni to earn his medical degree was **Mandred W. Comfort**, who graduated in 1916 and became a surgeon with the famous Mayo Clinic. The College began offering specific pre-medical courses in 1919, and already had started a separate department for geology and physics. The geology courses were popular; on Saturdays, students had the opportunity to scour riverbeds in Texas and Oklahoma, looking for fossils.

1920-1930

By 1920, courses in vertebrate and invertebrate zoology became requirements for all biology students. But the biology curriculum still was not without controversy: In 1923, a Ku Klux Klansman confronted one of the biology professors on his teaching of evolution. In response, the Board of Trustees called for each faculty member to agree to a loyalty oath. Each assured the board members of his Christian faith, and promised not to teach anything "opposed to any doctrine of the standards of the Presbyterian Church," and faculty were allowed to continue their lessons.

Bradshaw Frederick Armendt, who graduated in 1921 with an emphasis in physics, was known for "two ruling passions—chemistry and girls, and he spends his time breaking beakers and hearts alternately," according to the 1921 *Chromascope*. Armendt was called back to the College as a professor a few years after graduation, and he greatly influenced students of that era.

Armendt worked with his former chemistry professor, **Charles Carrington Scott**, to refine the science curriculum, update the equipment, and expand the number of available courses. Under C.C. Scott's tutelage, the first four students to earn a Ph.D. in the sciences graduated and went on to institutions such as Yale University.

Armendt shepherded pre-medical students in particular, founding the College's first pre-medical society in 1927.

1930-1940

The stock market crash of 1929 didn't immediately impact the College, but by the mid-'30s, the math and physics departments were combined to save money. Students and faculty struggled to make ends meet during the Great Depression, the faculty shrinking to eight people at the height of the financial problems.

In 1932, after a failed business venture, alumnus **George Landolt** was hired as professor of chemistry and business manager for the College. He used his great ingenuity to keep the College afloat, willing to make unusual trades: Landolt once accepted three cows as a tuition payment. He then "paid" those cows to biology professor and dean of students **James Moorman** as his salary for the month. Moorman gave the animals to his landlord to pay his rent.

In 1935, Moorman became the dean of students following a College tragedy. Students broke into the chemistry laboratory late at night and drank the wood alcohol they found. They became violently ill and two freshmen died. When police tried to learn more about the events, they discovered that students would speak openly only to Moorman because of their great trust in him. He was promoted, and was affectionately known as "Dean" to the students.



eye on the future

Andra Troncalli: Building a Better Superconductor

Superconductors can carry an electric current with no loss—they are extremely efficient. Regular conductors, such as copper wiring, lose some of the electrical energy put into them as it changes into other forms of energy, such as heat. Superconductors are used to create powerful magnets, used in magnetic levitation trains, MRIs, and particle accelerators, and for other high-power requirements.

But there is a problem with the current superconductors: they only work at extremely low temperatures. *Extremely* low temperatures—negative 450 degrees Fahrenheit. That kind of cold is very expensive to maintain.

Andra Troncalli, associate professor of physics, is working on a possible solution. In 1986, YBa2 "high temperature" superconductors were discovered. One of these compounds, YBa2Cu307-d —yttrium barium copper oxide—becomes a superconductor at a mere negative 294 degrees Fahrenheit. That temperature, while still really cold, can be maintained with liquid nitrogen, which is much cheaper. But the YBa2Cu307-d doesn't carry as much electrical current as the "low temperature" superconductors, so Troncalli is trying to change its structure to make it into a better superconductor by creating new types of defects in the superconductor crystal.

If she succeeds, all current applications of superconductors could be built with these new materials, using less expensive "high temperature" superconductors.

A CENTURY



Kelly Reed and Keith Kisselle: Saving the Blackland Prairie from the Ground Up

North Texas once was blanketed by a lush tallgrass prairie with rich black soil and diverse plant life, but over time, the soil was destroyed by agriculture and the natural balance disrupted. Though it is clear that the natural soil had many benefits, scientists don't know how best to restore the prairie.

Kelly Reed, associate professor of biology, and Keith Kisselle, associate professor of biology and environmental science, are investigating which microbes in the soil are related to a healthy prairie ecosystem, by extracting microbial DNA to do a "census" of the soil microbes near the native plants.

"It's kind of a chicken-egg thing. Do you need the microbes to get the plants, or the plants to get the microbes?" Reed said.

They plan to continue to study the microbes in successful Blackland prairies to gather data they can compare in restoration methods at the Austin College Sneed Environmental Research Area.

Stephanie Gould: Taking Miniaturization to Extremes

With the industrial revolution came monster machines, big enough to power warehouses and produce any number of products. Now, the scale has changed: the challenge is in super-small production.

Stephanie Gould, assistant professor of chemistry, is developing nanogears: molecule-sized cogs that will operate much like the parts in a wristwatch or a car.

"The smaller you can make a machine," she said, "the more advanced the applications you can envision and create."

So far, she has created the building blocks for the gears, and soon will focus on making the gears operate properly. Ultimately, gears like those produced at Austin College could help create a cure for cancer: nano-particles could direct a precise drug dosage only to the cancer cells, leaving the rest of the body unharmed.

He once said, "I love my faculty and students. It is easy for me to get them to do whatever I want. The difficult part is having the wisdom to influence them in the right direction."

As the country slowly moved out of financial crisis by 1939, the College joined the Civilian Pilot Training Program to open the doors to more students. Science professors took on additional courses to organize the ground school courses in mathematics and meteorology, while eager pilots learned to fly at the municipal airport. The timing was fortuitous.

1940-1950

In 1941, the Japanese attacked Pearl Harbor, and every American was called to help in the war effort. The civilian pilots trained at Austin College joined the armed forces, and the College adopted a more military form of education. As the war stretched on and the young men were enlisted to the service, the College further developed programs for women. In 1943, the College joined with Wilson N. Jones Hospital to offer combined classroom and on-the-job training for nurses.

Meanwhile, 1919 alumnus **Percival Keith** had a great influence on the world as a researcher on the Manhattan Project, which led to the creation of the atomic bombs dropped on Nagasaki and Hiroshima, Japan. (*See page 24 to read more about Percival Keith*).

1950-1960

With the growth of interest in the sciences due to the "Space Race," the College sought funds to improve the buildings and curriculum. The College received a \$10,000 grant from the Ford Foundation for a comprehensive survey of the school's operations in 1952, followed the next few years with several additional gifts.

One of the improvements was a renovation of Thompson Hall in 1957; the gaspower system was removed, the electric system and plumbing replaced, and central heat and air conditioning installed. The changes to the building were matched with changes in the curriculum. The Basic Integrated Studies program combined

mathematics and the natural sciences. Professor **A.J. Carlson** noted: "Mathematics and physics courses in the first year were to lay a foundation in the second year for chemistry, geology, and biology, taught partly by television."

The 1950s also saw the College's first nonwhite professor. Professor **O. Kumar Mitter**, a foreign exchange faculty member from India, taught mathematics for several years.

1960-1970

In large part due to the changes wrought by the Ford Foundation grant, the College was highlighted as a "school to watch" in a 1960 *TIME* magazine feature. By 1961, the Basic Integrated Studies curriculum gave way to Basic Studies, and math and the sciences again were separate divisions. The curriculum also did away with the separate Bachelor of Science degree, as there were no longer many distinctions between it and the Bachelor of Arts degree.

Biology professors **Howard McCarley '48** and **"Bud" Bryant** enriched the premedical program. *Austin College: A Sesquicentennial History*, written by **Light T. Cummins** of the current history faculty, notes: "Austin College earned a reputation by the late 1960s as having one of the region's truly outstanding premedical programs."

The biggest development came in 1965 with the construction of the Moody Science building upon receipt of a \$1 million grant from the Moody Foundation. The building included such timely features as an astronomical observation platform, a greenhouse, and a room for radioactive materials. The building also was a designated safe zone in the event of a nuclear attack.

The Biology Department was the best-prepared for the move into the new building. Faculty organized the football team to help; players ran up the stairs of the Administration building, picked up a box, ran down the stairs and across the lawn, up to the third floor of Moody Science Center to leave the box, only to return and pick up another.

With the construction of Moody Science came the founding of the Computer Science Department. The Hoblitzelle Computer Center, located in the first floor and basement of the building, housed an IBM 1620 "digital computing system" with up to eight terminals for student workers. The computer was the size of a large desk and was used mainly for administrative data entry.

The Basic Decisions Program in 1967 introduced January Term. Early on-campus offerings consisted mostly of lectures: a chemistry course dealing with laboratory procedures included 20 hours of lecture and 100 hours of laboratory time.

1970-1980

The changes in the curriculum extended into the next decade. In their first semester, students now took two courses for seven weeks, meaning the science curriculum had to be completely rethought.

Michael Imhoff, currently vice president for Academic Affairs and dean of the faculty, joined the chemistry department faculty in 1970. "The faculty members took the curriculum and dumped it on a table and re-concepted everything," he said. They created a new kind of teaching: "paradigm chemistry," which changed the emphasis from memorization to basic concepts. "It was a challenge because it was very work-intensive and all these students came in without any prior experience," Imhoff said.

Students in the era had some strange proclivities: it was customary for students in anatomy classes to celebrate the end of the semester by "decorating" the campus with their dissected laboratory carcasses. Once, a new librarian had not been warned of the practice, and panicked, believing there to be a rogue cat-killer on campus, before the prank was explained.

The '70s also saw the growth of the Health Sciences Club, which attracted a large student membership for those interested in medical and dental careers. The club brought speakers to campus and aided in medical school applications. The Society of Physics Students promoted "an interest in the field of physics through meetings, presenting guest lectures, field trips, films, and projects."

The first American black professor also joined the Austin College sciences, with the inclusion of **Abraham Nelson, Jr.**, in mathematics in 1972.

Brad Smucker: Paint to Capture Solar Power

White paint reflects visible light and absorbs harmful ultraviolet waves—that's one of the reasons fences and other outdoor materials are painted white.

Brad Smucker, associate professor of chemistry, wants to take paint's absorption ability a step further—to harness even the visible light.

"We want to add a dye that is going to harvest visible light and use that energy, and transfer that energy to this pigment that is found in white paint," Smucker said. The white pigment in paint is a semiconductor, so it can pass on electrical current.

His research involves building a self-assembling molecule that will absorb light from the visible spectrum; the dye would appear black to the human eye, but on the molecular level, would be made up of two or more types of complimentary-colored molecules. For example, when yellow and blue paint are mixed together, they make green, but the yellow and blue still are both in the mix, on a molecular level.

He is working to build structures that are like satellites, on the molecular scale, that can "funnel" energy from sunlight through titanium dioxide paint molecules, creating a cheap and efficient form of solar power.



A CENTURY



Construction is underway on the dome for the new IDEA Center observatory.

eye on the future

1980-1990

"Students in the '80s were a little more uptight, more career-focused, than the students in the '70s," Imhoff said. To adapt to the changing needs of students, the curriculum shifted to the modern schedule. In 1984, the Heritage of Western Culture sequence was revised to require a science-oriented course, which introduced students to four or five fundamental scientific topics, such as evolution, modern physics, genetics, and the environment. For the first time, students participated in molecular biology courses.

1990-2000

By the '90s, the Heritage course no longer was ideal. "It was a great course on principle, but we just didn't have the resources to do the reinforcement," Imhoff said. "Two hundred students introduced to the theory of relativity for the first time who are just hanging on ... you lose them when it gets more complicated." The Heritage course ended, and students took separate science requirements instead.

In 1995, faculty and campus offices were connected to the internet, and email became a primary mode of communication. The student resident halls were modified over the next few years to provide internet access in each room.

From the sounding of the digital alarm clock, science impacts modern society every day. The clean—and hot—water in the shower is provided by scientific process as is the electricity that powers the home, as well as its cooling and heating methods. Fixing the eggs for breakfast is a chemical process (as is the added toast and a microwaved sausage link.) A piece of fruit likely was impacted by high-yield agricultural techniques. What plants are safe to eat? What ones are most nutritious? What do you do when one creates an allergic reaction? Check science.

Need the weather predictions? That's science. The car—its engine and gasoline and safe-as-possible carbon dioxide emissions—plus the asphalt it drives on, the plastic lid on the

2000-2011

Austin College has maintained its reputation for excellence in the sciences, with an 80 percent acceptance rate to health sciences programs. Student research in the sciences, often in conjunction with faculty, has become a thriving program and outgrown available laboratory space. The Center for Environmental Studies has added a new area of study and new opportunities in the sciences. Faculty positions were added to bring the sciences faculty total to 26.

The Future

Austin College administrators broke ground on a new science building, the IDEA Center, on June 3, 2011. The IDEA Center emphasizes inquiry, discovery, entrepreneurship, and access. Plans include 16 classrooms, 32 advanced laboratory-classrooms, 40 faculty offices, a 108-seat auditorium, and an observatory with a state-of-the-art telescope. The center will provide the educational home of the departments of biology, chemistry, computer science, environmental studies, mathematics, and physics. The building will be LEED Silver certified for environmentally friendly construction.

The new building, scheduled to open in fall 2013, will allow continued modern science teaching and learning and position the College for another 100 years of excellence in the sciences.



Ground preparation began at the site of the IDEA Center in November 2011.

eye on the future

coffee cup, and the ever-present cellphones all are evidence of the place of science in everyday living.

The airport, the hospital, the power plant—temples to science. The justice system relies on forensics that might address anything from identifying skin cells to plants grown only in certain parts of the world. Live near an earthquake fault line or in the path of hurricanes? Science provides information for safer living.

Children are safe to go to school because of vaccinations and the eradication of life-threatening disease, plus the availability of antibiotics. The nation's defense system is based upon science.

How many children complain about studying science, sure they'll never use it outside a classroom? They should think again.



Alumnus Integral To The Manhattan Project

The 1919 СНКОМАЅСОРЕ included a "prophecy" for each graduating senior. Among them was the prediction that Percival Cleveland Keith, Jr., would become a prize fighter and "his fame was to spread across the waters."



Jack Mealy: Pushing the Boundaries of Geometry

The geometry taught in high school seems rational, straightforward, and natural. But in non-Euclidean geometries, when it comes to something you think you know, as the old song goes, "it ain't necessarily so."

For example, in contrast to the oft-repeated line, "The angles of a triangle add up to 180 degrees," that generally isn't the case in non-Euclidean geometries. "In these systems there are numerous things that might seem obvious, but are untrue—but a different set of things that seem absurd are now true!" said Jack Mealy, associate professor of mathematics. These systems are among the many "Wonderlands" in the mathematics field, he said.

Along with a number of student researchers over the past few years, Mealy is investigating a subset of non-Euclidean geometry that has received very little attention from mathematicians. He has used both computer modeling and theoretical arguments to demonstrate the existence of, and investigate the properties of, a number of strange objects, such as 'discs' with a radius of one inch and an infinite circumference.

"It's Forrest-Gump-like; there's this infinite box of chocolates out there, and you never fully know what you're going to get," Mealy said. "But there's a good chance it'll be interesting, even surprising."

Because it's theoretical, there currently aren't any practical uses for this research, but historically, "what has started out as evidently 'only' theoretical, at times ultimately has turned out to be useful," Mealy said. "One occasionally hopes for that sort of thing; but regardless, we'll have learned new and fascinating things in the process." His classmates were half right: Though Keith didn't become a prize fighter, he received acclaim as a chemist and worked on The Manhattan Project, which ultimately led to the creation of the atomic bomb.

Keith graduated from Austin College in 1919 with an English degree, but the rigor of his overall education at the time allowed him to study chemistry at MIT.

"Dobie," as he was known as an adult, had no formal education before enrolling at Austin College as a 16-year-old. Tuition at the College at that time was about \$96 a semester, and he finished school within three years. He was among the first group of students to take courses in the separate chemistry, biology, and physics laboratories.

At the time, the College curriculum placed a heavy emphasis on the study of Greek and Roman classic literature, as well as foreign language. Keith was president of the Sherman Club and the Philennoian Literary Society, was advertising manager for the 1919 *Chromascope*, and was listed as a "Science Veteran" for all three years of his attendance. Keith likely attended the highlight event of the year, when former President William Taft visited the College to speak in favor of the creation of the League of Nations.

After graduation, Keith immediately enrolled at MIT, where he began his fastrising career in chemistry, particularly in oil refining. He developed a catalytic reforming process, known as Hydroforming, which was the major source of toluene for the production of TNT during the early years of World War II. Before 1946, Keith had more than 40 patents on petroleum refining processes.

Immediately after the attack on Pearl Harbor in 1941, Keith was invited to join the planning board of the Committee of the Office of Scientific Research and Development. He directed the development of the gaseous diffusion process for separating uranium-235, one of several processes being considered to produce materials for the atomic bomb. He was asked to form a company, Kellex Corporation, to complete the development and engineering of a full-scale diffusion plant to produce uranium-235.

This task required the invention of new tools, innovation in production, and completion in less than two years. It was a monumental job, but Keith succeeded—as of 1984 (when source material was published), the gaseous diffusion process he pioneered was the most widely used process for enriching uranium-235.

After the war, Keith turned his attention to domestic energy needs, founding his own company and developing processes to create liquid fuels from natural gas and coal. By the time of his death in 1976, he held more than 70 patents.

His home life also was busy; he kept an apple orchard and raised sheep, cattle, chickens, and turkeys at Windfall, his family home. He kept horses and rode with Essex fox hounds. He also was a gourmet cook, and had five children.

Austin College recognized his dedication to science with an honorary Ph.D. in 1946. Keith also was honored with a memorial produced by the National Academy of Engineering.

Fission and The Science of Nuclear Physics

In 1945, as decisions were made about the use of the atomic bomb, U.S. Secretary of War Henry L. Stimson said that the men involved were not discussing just another weapon but "a new relationship of man to the universe."

Percival Keith led the engineering and development of the K-25 plant that separated fissionable uranium isotope U-235 from U-238. His work in the industrial design and implementation of this facility, in what was at the time the largest building in the world under one roof, established a new model of large-scale interaction between scientists and engineers.

After the war this complex became a part of the Oak Ridge National Laboratory, the nation's premier laboratory devoted to the peaceful use of nuclear energy and the development of spinoff technologies, from the synthesis of new alloys and ceramics to tool and engine design. Oak Ridge has been a leader in nuclear medicine with its transformation of radioisotopes into agents for diagnosing and treating diseases. Radioactive isotopes are used, for example, to detect faulty heart muscle, reduce inflammation in arthritis patients, and destroy cancerous human cells.

The Manhattan Project certainly achieved far more than a bomb, and Percival Keith's accomplishments were

indeed, as his classmates predicted, far-reaching.



Physics professor Don Salisbury assisted in preparing this information.

Α

1903

First flight at Kitty Hawk; First silent movie; **Bachelor of Science** degree first offered

1905

Albert Einstein develops his theory of special relativity

1906

Third law of thermodynamics established

1908

Ford introduces the Model-T

1909 Plastic is invented

1910 Halley's Comet visible; Physics professor resigns over evolution controversy

1911 Structure of an atom is

discovered; Separate chemistry, biology, and physics departments established

1913

Atomic number is defined and a model of the atom created

1914 **Thompson Hall completed**

1917 **College begins offering** pre-medical courses

1918

First female undergraduate admitted; **Physics Department** organized

1919

College offers geology field trips

1920

First commercial radio broadcast aired

1922 Insulin discovered

1923 A complaint is made about the teaching of evolution

1924

Discovery that the Milky Way is just one of many galaxies

1925 The Scopes (Monkey) trial

1927

First talking movie; "Big Bang" theory formulated

1928 Penicillin discovered

1929 Stock market crash triggers the Great Depression

1930 Math and physics courses combined to save money

1932 Scientists split the atom

1937 Hindinburg disaster

1939

First commercial flight over the Atlantic; **College participates in** pilot training



1941

Manhattan Project begins; Attack on Pearl Harbor

1943

DNA found to be the genetic material of the chromosome; College offers nurse training program

1945

First computer (ENIAC) built

1947 First transistor invented 1951

Color TV introduced; HeLa cell line established from cells from Henrietta Lacks

1952

Polio vaccine created

1953 Helical structure of DNA

discovered 1954

Brown vs. Board of Education

1957 Sputnik satellite launched

1958 NASA founded

Austin College milestones in bold

1900



1920

1930

1940



1960 **Pierre Shamba becomes** first black undergraduate

1962 Silent Spring published

1963 Evidence of plate tectonics documented

1965

Moody Science building completed, housing an IBM 1620 digital computing system

1967

Discovery of the first pulsar

1969

Neil Armstrong is the first man on the Moon

1971 Floppy disk available 1981

1984

1985

1986

explodes;

Personal computers

Sneed Environmental

Hole in the Ozone Layer

Research Area

established

discovered

introduced by IBM

1972 Pocket calculators are introduced

1976 Apple Computer formed

1978 First test-tube baby born

1979 Nuclear accident at Three Mile Island

Chernobyl nuclear accident; **USSR** launches Mir Space station

Challenger space shuttle

1989 Creation of the World Wide Web



Hubble telescope launched into space

1995

All students and faculty have access to the Internet through campus computer network

1997 Pathfinder sends back images of Mars;

Dolly the sheep is cloned; **Center for Environmental Studies established**

2005 YouTube launched

Facebook launched

2000

2001

Human genome is mapped

The iPod is announced;

National Academy of

Sciences report global

Toyota launches a hybrid car

warming is on

the rise

2003

2004

2006 Pluto is reclassified as a dwarf planet

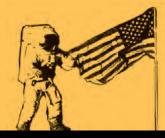
2007

iPhone introduced; First courses in bioinformatics offered

2008

Large Hadron Collider is built

2009 Evidence of water is found on the Moon





1980 1990 1960 1970 2000 2010

College celebrated a

Century of Science

Starry nights



Austin College's new telescope will open vistas for students and the community

The observatory of the new IDEA Center will house a state-of-the-art custom-built telescope, made possible by a grant from the John & Patricia Adams Family Foundation. The 24-inch telescope will be on par with the research telescopes at larger institutions, and will have an ultra-sensitive, high-resolution camera to capture digital images of the moon, planets, and deep space as well as a high-resolution spectrometer to measure light intensity at several wavelengths.

With this new equipment, students will be able to monitor the weather on Mars, track near-Earth asteroids, and possibly even measure the spin of other galaxies in deep space.

"There's a possibility student researchers will be able to discover new asteroids, or to detect comet impacts on Jupiter," said **David Baker**, associate professor of physics.

In addition to providing top-notch research opportunities for science majors—"once a student is trained on the telescope, they'll get free reign with it," Baker said—the observatory will support a new course offering. An astronomy course for non-majors will offer hands-on work with the telescope, and, students even may be able to build their own (small) telescopes.

"They'll learn not just about the night sky, but about the equipment and the technology that is used to observe the universe," Baker said.

The observatory also will host "star parties" for the community and secondary school students. A room set aside on the third floor of the IDEA Center will allow groups to see images from the telescope on a large screen, guided by physics students.

Having this telescope will "better prepare our students to become astrophysicists," said Baker. He hopes it also makes Austin College the destination for future scientists, and sets the College apart for high quality undergraduate astronomical research.





telling



How did you choose your career path?

I think my career chose me. When I started my undergraduate education, I was the only female taking calculus. There was not a real support system, no women mentors or female role models, but I like to learn and really flourished in college. Biology was something I really connected with. After a couple years, I began to talk to the biology faculty about a career in college teaching. I enrolled in a graduate program that required a broad set of courses as well as bench research.

Who inspired you?

The biology faculty at Quincy University in Quincy, Illinois, Fr. John Ostdiek, Mr. George Schneider, and Dr. Al Pogge, who believed in a firstgeneration female college student who wanted to go to graduate school in genetics and microbiology. Dr. Herman Brockman, my Ph.D. advisor at Illinois State University in Normal, Illinois, understood my desire to teach at a small undergraduate liberal arts institution.

How did you begin your career at Austin College?

I was teaching in a tenure-track position at a small women's college, Wilson College, in Pennsylvania. The president closed the college in spring 1979; a one-year position was advertised here. By August, I had moved to Sherman and Wilson had reopened following a lawsuit (and remains open today). So, I had two teaching jobs. I made the decision to stay here. Over the years, I've worked with extremely supportive colleagues; I was able to teach the courses here I wanted to teach. Initially, I was the only woman on the biology faculty. I've been able to move in the last decade from biology major courses to more interdisciplinary classes, which I've really enjoyed. Now that I'm phasing down to retirement, I still enjoy the day-to-day work with my students.

What has changed about science education during your career?

I was taught science in college and graduate school through lecture and it was assumed that everyone learned that way. We now realize that students learn in different ways. Today, science education has moved away from "the sage on the stage." I do very little lecturing now, but serve as a guide to the course material.

In my non-majors classes, I want to make the courses very current, addressing topics in the news right now. In the fall we discussed the global eradication of polio, and we spent part of each week discussing the latest news items from Africa and Asia. I want the students to open the science section of the *New York Times* or pick up a copy of *Scientific American* and understand what they read, to know where to find additional information and to evaluate the truthfulness of material. I hope I have instilled in them an appreciation for lifelong learning.

What is your favorite interaction with your students?

My last group of mentees graduated in 2011, and my aim was to help them work their way through the curriculum for a solid academic foundation and to make sure they had the appropriate

Professor of biology Peggy Redshaw came to Austin College in 1979 with a specialty in genetics, particularly the genetics of Streptomyces. Now in the second year of a four-year phased retirement plan, she shares answers to a handful of questions about her students, her profession, and her experiences.

internships and opportunities to make them competitive for the work force or professional and graduate school. I also wanted to position them to do study abroad. Those students all had extremely interesting college careers and, very importantly, they all finished on time. Today those students are in medical school, veterinary school, pharmacy school, and other graduate and professional programs.

What are your current projects?

After preparing for a course a few years ago on the 1918 Spanish Flu, I became interested in what happened in Sherman during that time. My students and I did some initial research during the class as to what might have happened. Later I did a more comprehensive study of newspaper archives and funeral home records to piece together a picture of Sherman in 1918—the key players who were struck down with the flu, what the medical care was like, etc. I have presented my research to my non-majors class as well as the Sherman community, the East Texas Historical Association, and the Texas Folklore Society.

What do you see yourself working on in the next few years?

I will teach one non-major course each term until I fully retire. I will continue work on Century of Science library exhibits with **John Richardson** of the chemistry faculty and **Pat Means** of the Abell Library staff. We open an exhibit in the fall that includes the 1940-1970 era. Even after I retire completely, I will continue research and writing on frontier naturalist and physician Gideon Lincecum, especially his medical practice in Mississippi and Texas.

And, the Telling Our Stories autobiographical project will go on as it has since 1990. Our very devoted writers wouldn't allow us to stop. We will continue to publish books from that effort; we have done 11 so far. Our 12th anthology will be published in fall 2012. See the website at **www.austincollege.edu/alumni/telling-our-stories**/.

Several of your projects seem to have a historical element.

Yes, I am aware that my research has become a mixture of science and history. The beginnings of this developed in the research I did in collaboration with **Jerry Lincecum**, emeritus professor of English (my husband), and the late **Edward H. Phillips**, emeritus professor of history, on the book *Science on the Texas Frontier: Observations of Dr. Gideon Lincecum*. The three of us worked as a team sharing our expertise and research approaches. We also co-edited *Gideon Lincecum's Sword: Civil War Letters from the Texas Home Front*.

Your last book, the 11th in the Telling Our Stories series, is a bit different than earlier publications.

Yes, the book *Collected and New Stories of Miss Ima and Mr. Bill* tells the crazy antics and serious episodes of the past 10 years of our lives through the eyes and voices of our dogs. I was an observer and served as their scribe. Writing it tapped into a whimsical side of me.

Read about other science faculty in short interviews prepared for Century of Science celebrations: www.austincollege.edu/academics/new-century-of-science/meet-your-professors/

celebrating

All of **Don Salisbury**'s 34 years of research boil down to two simple questions: Who are we? What is our place in the universe?

With every project, the professor of physics gets a little closer to an answertheoretically.

Salisbury, professor of physics and a member of the Austin College faculty since 1987, specializes in the kind of theoretical physics that deals with the nature of time and space. He tries to construct theories to explain phenomena such as black holes, dark matter, and time travel.

The best-known leaders in his field are researchers like Stephen Hawking and Albert Einstein. In fact, Salisbury's thesis advisor as a graduate student was Einstein's assistant. Salisbury's fundamental training in physics began with Einstein's general theory of relativity and has kept up ever since.

Einstein is part of Salisbury's inspiration to keep plugging at near-impossible problems. "Sure, he was a genius, but that characterization alone really doesn't illustrate the full picture. He never gave up," Salisbury said. "The essential ingredient is not so much inherent intelligence, because everyone has that, but it is persistence. I think that characterizes most scientists."

Salisbury is trying to resolve what he calls the "fundamental unsolved problem in physics: attempting to merge Einstein's theory of relativity with quantum mechanics." Quantum mechanics deals with subjects such as the structure and motion in an atom, while Einstein's theory is about massive objects like stars, galaxies, and even the whole universe. "Those two theories are inconsistent with each other, and no one has yet succeeded in synthesizing an equation that combines both," Salisbury said.

The problem is this: Einstein's theory says space and time don't exist as separate, fixed entities; time and space don't exist outside of the universe. But quantum mechanics depends upon the idea that time is an independent external parameter. General relativity says that time is meaningless without a measuring device. But quantum mechanics then says that time must be inherently uncertain. Without being sure that time is the same everywhere, the theories completely fall apart. The challenge is combining a theory with a flexible perspective of time with a theory with a constant perspective.

the unknown

The theory of relativity already impacts us: without it, global positioning systems wouldn't work. They are based on Einstein's theories of space and time.

Salisbury's research deals with a tricky question: What would our perception of time be if we had an equation that solved the quantum mechanics versus relativity problem? "That's right; I'm trying to answer what it would be like if we had a theory that doesn't currently exist," Salisbury said.

It's a challenge. "There's a sense in quantum mechanics that general obviously inconsistent observations of phenomena all can be true at the same time," he said.

As well as traveling the world to give lectures on his research—he speaks English, Spanish, German, French, and Italian—Don recently was in Pereira, Colombia, where he taught a short course on Einstein's path to relativity theory. "I've always been interested in history and the larger social context," he said. "I am convinced that the more aware one is of the path that has been taken to get to our current view of the universe, the better one can understand and be better prepared to make improvements. There is no end to the kind of improvements we could make."

For this project, he has visited many contemporary leaders in the field and read extensively about past leaders. 1911 is a centennial anniversary of Einstein's theory of relativity, and Salisbury and his colleagues have integrated that milestone into their

research. "We asked ourselves how history could have been altered, if, instead of the direction he took, he had taken the heuristic approach that led to quantum mechanics in the 1920s. It leads to some surprising conclusions," he said.

Salisbury has an unusual dedication to his research, which he thinks is beneficial to his students. "I hope I can pass that idea to students, that if there are mysteries they want to solve, they are capable. I hope to be that role model," he said.

"Keep thinking. There's no end to the mysteries out there," he said. "Celebrate the unknown. It's something we have to come to terms with as members of the human race. It's essential to progress." IN DIESEM SAAL HIELT ALBERT EINSTEIN (1879-1955) AM 2. JUNI 1915 DEN ERSTEN ÖFFENTLICHEN BERLINER VORTAGT ÜBER DIE RELATIVITÄTS THEORIE

Austin College Alumni Shine

Each year, members of the Alumni Board with the task of selecting the College's Distinguished Alumni have a difficult undertaking, not for lack of nominees, but in deciding among many deserving candidates. Austin College alumni are celebrated for accomplishment in their careers and their communities, their spirit of service, and the broadened perspectives fostered by their common educational experience. They are leaders who exemplify ethical standards and integrity, men and women concerned with creating a better way of life in their workplaces, their communities, and throughout the global neighborhood.

2011 DISTINGUISHED ALUMNI

DANIEL BREAZEALE

After graduating from Austin College in 1966, Daniel Breazeale earned a Ph.D. in philosophy at Yale University. In 1971, he joined the philosophy faculty at the University of Kentucky, where his 40-year career continues today.

During the intervening years, Daniel has received numerous teaching and research honors, including six individual research fellowships from the National Endowment for the Humanities. In 2005, he was designated Distinguished Professor of Arts and Sciences. He has written and lectured extensively and is an active participant in many international scholarly societies.

Daniel and his wife, **Vivianne (Chabas)** '66, live in Lexington, Kentucky.

JEFFREY NORTHRIDGE PHILLIPS

Involved in the Austin College community throughout his life as the son of Professor **Ed Phillips**, Jeffrey Phillips '80 completed the College's 3-2 engineering program with Washington University–St. Louis to earn an engineering degree and an Austin College degree. He also earned a

master's degree and doctoral degree, both in mechanical engineering, at Stanford University.

Jeff now works as a senior program manager at the Electric Power Research Institute (EPRI), responsible for research toward developing advanced coal-based power plants. In 2005, he received the firm's Chauncey Starr award for exemplary research.

Jeff and his wife, Mary Lynn, live in Huntersville, North Carolina.

LARRY SYKES

Larry Sykes '66 spent 32 years in the commercial real estate business in Dallas, and then found his true calling—working with homeless individuals through the Stewpot, a ministry of First Presbyterian Church of Dallas, and The Bridge.

He also brought Community Voice Mail (CVM) to Dallas, providing a phone number and voice messaging system for more than 6,000 homeless and at-risk individuals. He now serves as president of the national CVM board, which oversees service to more than 50,000 people in 400 communities.

Larry and his wife, Rebecca (Russell) '67, live in Dallas, Texas.

Distinguished Alumni honorees for 2011 are, left to right, Larry Sykes, Dan Breazeale, Jeffrey Phllipps, and First Decade honoree Vanessa Brown. At the right are Clemons awardees Paul Bean and Stephanie McDonald.







FIRST DECADE AWARD

A First Decade Award is presented only as individuals meet the same criteria as Distinguished Alumni within the first decade after graduation.

VANESSA NOËL BROWN

Since graduating from Austin College in 2000, Vanessa Noël Brown's career has been driven by her passion for human rights and social justice. Today, she is a foreign affairs officer in the Department of State's Bureau of Democracy, Human Rights, and Labor, focusing on the Middle East and North Africa.

She previously worked as a refugee officer at the Department of Homeland Security, and before that, served with several human rights and conflict management NGOs in the U.S. and around the world. Vanessa also spent time in Morocco as a David L. Boren Fellowship recipient, studying Arabic and researching conflict management initiatives.

Vanessa lives in Washington, D.C.

HEYWOOD C. CLEMONS VOLUNTEER SERVICE AWARD

Austin College awards the Heywood C. Clemons Volunteer Service Award each year to alumni or friends of the College in honor of continued service and commitment. The award is named to honor longtime Austin College Board of Trustees chair **Heywood Clemons** of Fort Worth, Texas. In 2011, **Michael Paul Bean** '76 of Sherman, Texas, and **Stephanie Lee McDonald** '97 of Austin, Texas, were recognized for unselfish giving behind the scenes at numerous events of the Institutional Advancement and Institutional Enrollment offices.

SERVICE TO ALUMNI AWARD

The Alumni Board created the Service to Alumni Award in 2009 to honor a faculty or staff person who has demonstrated extraordinary commitment to the support and education of Austin College alumni around the world. The third winner of the award happens to be an alumna as well as a staff member, **Cindy Curtis Bean** '75.

CINDY CURTIS BEAN

Cindy joined the Austin College Office of Alumni Relations in 1995, most recently serving as director. In her position, she has traveled hundreds of miles for Austin College and met many of the College's graduates.

Cindy has been involved in many aspects of campus life throughout her career, including service as sponsor for Kappa Gamma Chi sorority, for which she twice has been recognized as Outstanding Greek Sponsor. She received the College's Homer P. Rainey Award in 2008, given by the Board of Trustees for outstanding achievement and service.













See all the photos from Homecoming 2011: www.austincollege.edu/homecoming-photos.

Submit a nomination for the 2012 Alumni Awards at www.austincollege.edu/alumni/awards/nominations. Deadline: February 1, 2012.



'Roo Notes

Joey's Corner

A son, Sawyer Ross, was born to **Robert** and **Kelly Pickering O'Hair** '89 on December 10, 2010. The family, including big brother Spencer, welcomed the baby home in Allen, Texas.

A daughter, Annabelle Grace, was born to Elizabeth and Strickland Tudor '98 on August 24, 2011. Annabelle is the couple's third child, joining siblings James Strickland and Claire Elizabeth. The family lives in Leawood, Kansas, a suburb of Kansas City. Strickland is the group sales manager for a division of Enterprise Holdings and recently was selected to the Greater Kansas City Chamber Centurion Leadership Program.

Chad '99 and Katharine Currie Carey '00, welcomed daughter Bernice "Birdie" Parker on March 16, 2011. In November 2010, Chad opened a San Antonio restaurant, "The Monterey," which was mentioned in the September 2011 issue of *Texas Monthly*. Katherine is the director of education at McNay Art Museum in San Antonio.

A son, Gabriel Douglas, was born to **Joe** '99 and **Meghan Wasson Jordan** '01 on June 1, 2011. Meghan received her M.B.A. from the Kellogg School of Management at Northwestern University in June and is a strategic marketing analyst with American Airlines. The family lives in Irving, Texas.

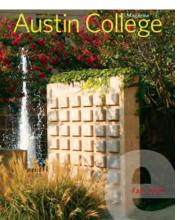
Caden Kenneth was born on August 12, 2011, to Kenneth and Leslie Woerner Drake, both '01. Kenny is a certified wound care nurse at LifeCare Hospital in Plano, Texas, and Leslie is in her sixth year of teaching physics and AP physics in Frisco ISD.

A daughter, Julienne, was born on March 18, 2011, to Nicole Kuiper '00 and Jay Kleine, who married in 2009. Jay works in Las Cruces, New Mexico, for an advertising and marketing firm. Nicole is a physician assistant and works at a neurology and sleep medicine clinic in El Paso, Texas.

S A daughter, Tessa Lynn, was born on March 22, 2011, to **Charlie** and **Kristin Orsak Robinson**, both '03. The family lives in Lewisville, Texas.

Chris and Lauren Vincent Douglas '04 welcomed their daughter, Sadie Clair, on May 5, 2011. The family, including sister Alyvia, lives in Montgomery, Texas. Austin College Magazine is printed, with extra online material, in Summer and Winter, and

published online-only in Spring and Fall. Emails will announce the availability of the online-only issues. Want more regular news through the monthly e-newsletter? Sign up to receive the newsletter or notice of online magazine availability: www.austincollege.edu/subscribe



Ben Harmon '52 spent 45 years—nearly his entire career—in the Lewisville (Texas) Independent School District, serving as history teacher, head coach, athletic director, assistant principal, principal, and assistant superintendent before his retirement in 1997.

A special honor came his way in summer 2011—his dedication was recognized when a new school in the district was named Lewisville High School Ben Harmon Campus. Public support

brought about the naming of the new school built for freshmen and sophomores.

That was just the latest honor for Harmon. He was named the district's Administrator of the Year in 1992. The 1972 Austin College Athletic Hall of Honor inductee also got plenty of accolades as a Kangaroo quarterback back in the day.

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www.austincollege.edu/connect

(7) Richard Hull is entering his seventh year as executive director of the Text and Academic Authors Association, Inc., an organization that provides professional development resources, industry news, and networking opportunities for textbook authors and authors of scholarly journal articles and books.

65

(8) Paul Pearce of Schaumburg, Illinois, has retired after a 37-year career that included service as the general manager at tennis, resort, and country clubs in Houston, Dallas, St. Louis, New Orleans, and Chicago. During the 22 years he spent as the vice president of ClubCorp, he was responsible for properties in six states and also was named ClubCorp's first "Robert H. Dedman Manager of the Year." In retirement, Paul hopes to write a book about his experience beginning the first Virginia Slims women's tennis tournament in Houston, Texas. Paul and his wife, Susan, have two adult daughters.

67

(14) Bruce McNab has retired from active ministry in the Episcopal Church after serving nearly 39 years. He served six parishes in the U.S. and overseas as a priest and served seven and a half years as rector of Christ Episcopal Church in Aspen, Colorado. He published a collection of his sermons as the book *Let Your Light Shine* in 2010. He and his wife and team ministry partner, Joan, have moved to Bozeman, Montana.

69

Bill and **Lynn Marie Mayfield Campaigne** completed their 25th annual mission trip to Honduras in summer 2011, part of a team of 32 missionaries offering veterinary treatment to some 6,000-plus domestic animals and providing public health teaching for hundreds of children who received toothbrushes and soap to put the teaching into action. The Campaignes began the service mission with five individuals and it has grown to include 26-28 veterinarians plus other staffers each year. (Read more in the Fall 2011 *Austin College Magazine* online-only issue.)

72

Brian Goesl, executive director of the Texarkana Regional Arts and Humanities Council (TRAHC), was included in the recently released book *The Suspension of Time, Reflections on Simon Dinnerstein and the Fulbright Triptych.* In the book, he discusses the Fulbright Triptych and its significance in the world of contemporary American art.

75

(6) Mark Spiers was appointed to the board of directors at Qforma, a provider of analytics and predictive modeling technologies for the health sciences industry, in May 2011. He retired from his position as president and CEO of Wolters Kluwer Pharma Solutions in April. Spiers has nearly 30 years of industry experience that also includes work with Bristol-Myers Squibb Company, Pharmacia Corporation, and Medpointe Pharmaceuticals.

76

Michael D. May retired from the Texas Department of Transportation in Bryan after 21 years and four months in the procurement and logistics management field. Stephen York was elected in May 2011 as president and chief operating officer at Treaty Energy Corporation. He also became a director of Treaty's board. York has more than 30 years of experience in many facets of the petroleum industry, from drilling, servicing, and managing more than 3,000 oil and gas wells, to consulting with major oil and gas entities and service companies.

Numbers in color within entries correspond to photos on page 40-41.

79

(15) Danny Buck has joined Lone Star Capital Bank as president and chief executive officer. He has extensive executive experience in community banking. Prior to joining Lone Star Capital Bank, he was president of The Trust Company in San Antonio, where he was responsible for all commercial and private banking activities. He has served on the boards of numerous civic organizations, including his present involvement on the board of directors for San Antonio Sports. **(5)** Jill Kerr has completed her Doctor of Nursing Practice degree at Duke University. She is a family nurse practitioner in maternal and child health and works with the Chapel Hill Carrboro City Schools Head Start program to decrease health disparities. Jill and her work with children and their families-which requires her to speak Spanish, Arabic, and French-has been honored with the Individual Recognition Award by GlaxoSmithKline Pharmaceuticals. J. Lee Whittington, professor of management at University of Dallas, was one of three faculty recognized for teaching excellence in May 2011 and was named a Haggerty Fellow. In addition to nearly 30 years of teaching, he served as dean of the Graduate School of Management from 2005-2008 and is a widely published author on many business-related topics.

80

Michael J. Herrod has been appointed by Governor Jan Brewer to the Maricopa County Superior Court in Arizona. He has practiced law in Arizona for nearly 30 years, specializing in family law. He is a founding director of the law firm Schmitt, Schneck, Smyth & Herrod, where he has practiced since 1999. (1) Marlene Llopiz, M.D., received the 2010 Outstanding Leadership Medal of Honor from Universidad Anahuac Medical School for contributions to the development of medicine in Mexico and throughout Latin America. In fall 2011, she was selected as one of the 100 Most Inspiring People by *PharmaVoice*, a magazine for life-science executives, healthcare professionals, and workers in related fields. Dr. Llopiz is CEO and president of Clinica Responsable Operativa, involved in clinical research management and operations. (Read more in the Fall 2011 *Austin College Magazine* online-only issue.) Mike Wofford, his wife, Rose, and son, Robert, are grieving the loss of their son and brother, Michael, who died April 24, 2011, at the age of 22.

82

Charla G. Aldous has been named one of 20 "Winning Women" in the Texas Lawyer list of top women lawyers in Texas. The list is based on success in high-stakes courtroom litigation, winning large monetary awards, and prevailing in cases that make law or have statewide or national impact.

83

Mike Davis and **John Clark** tested their strength and endurance with a Mount Everest climb in 2011. Mike said they spent two weeks above 15,000 feet, with some form of snow or ice for 12 days straight. He pointed out that John excelled at the high altitude and beat the rest of group to the summit by about an hour. Mike described the climb as one of the toughest of his life because of the altitude and the steep snow. (See more about their adventure on page 45.)

84

Rodney Moore has joined the international law firm Weil, Gotshal & Manges as a partner in the firm. He joined Weil from Vinson & Elkins, L.L.P., and splits his time between Weil's Houston and Dallas offices. Moore has nearly 25 years of experience representing leading private equity firms and their portfolio companies and extensive experience in representing strategic and financial participants in energy industry transactions. He is a member of Weil's private equity practice, which encompasses more than 200 private equity practitioners worldwide.

William T. Kerrigan, the Arthur G. Cole and Eloise Barnes Cole Distinguished Professor of American History at Muskingum University, was awarded the William Oxley Thompson Award for Excellence in Teaching on August 30, 2011. He joined the faculty in 1997.

86

Bobbie Drake has been elected vice president of the Frisco (Texas) Soccer Association. She previously served as girls commissioner. She is a "D" licensed coach and has coached recreational, competitive, and middle school teams. She also works as a nurse in the private practice of her husband **Tim Drake**, M.D. '69, chief of family medicine at The Medical Center of Plano.

87

David Green received his Doctor of Ministry degree from Pittsburgh Theological Seminary in June, 2011. He is minister of the First Presbyterian Church of Galveston, Texas, the first church established in Galveston and one of the oldest Presbyterian churches in the state. The church building, severely damaged during Hurricane Ike in September 2008, was reopened on May 22, 2011, and the facility was rededicated in September 2011.

88

Mike Ragain began work as the chief medical officer at University Medical Center in Lubbock, Texas, on April 1, 2011. He had served as the chair of the Texas Tech Health Sciences Center's Department of Family and Community Medicine since 2002 and as UMC chief of staff from 2008 to 2009. He holds a master's degree in education from the University of Southern California and a medical degree from UT Southwestern Medical School.

90

Rebecca Rial Harris, a founder of Baltimore-based tech startup Action = Reaction Labs, celebrated the release of her company's iPhone/iPad game, "Slug Bugs," on June 1, 2011.

91

Amanda J. Ellis joined the Kemp Smith law firm in May 2011 as an associate in the litigation department of its Austin office. Her focus is primarily health care law, administrative law, medical malpractice defense, funeral services law, and general litigation. She previously worked with an Austin healthcare firm and as an assistant attorney general in the administrative law division in the Office of the Attorney General of Texas. (10) Tommy Newsom earned a Ph.D. at the University of North Texas, with a concentration in higher education administration, in December 2010. Since 2008, he has served as president of the Art Institute of Dallas. He earned a master's degree in education at Texas A & M Commerce in 1998, with a concentration in secondary and higher education and a minor in student personnel services. (Read more about his career in the *Austin College Magazine* Fall 2011 online-only edition.)

93

Colin Dunnigan is the director of development at The Miami Valley School in Dayton, Ohio. He had served three years as the school's director of college counseling.

96

(11) Jennifer Green and Thomas Embt married on August 10, 2010, in an outdoor ceremony in Grand Island, New York. The couple lives near Buffalo, New York.

Psychologist **Mary Henning Clare** '78 has written the book *100 Voices: Americans Talk About Change*, released by Loudmouth Press in October 2011. According to an article in *The Portland Upside*, all the "change" language associated with President Barak Obama's campaign led Mary to a project that resulted in her spending the first 100 days of the Obama administration traveling the country to interview 100 Americans of all backgrounds, collecting their thoughts on the state of the country.

The article explained that she was inspired by a Studs Terkel book that captured the voices of ordinary Americans. She wrote her book "with the hope of opening a door for dialogue across our differences." Among the voices are **Juliana Anastasi Perkins** '78 and the late **Mayme Porter**, former Austin College education faculty. **Ron Kirk** '76 is mentioned as Mary happened to hear his confirmation hearings for U.S. trade representative as she drove into Washington, D.C., for interviews, and **Melanie Martin** '78 is included in the acknowledgements.

When not traveling the country, Mary is a professor and directs the Psychological and Cultural Studies Program in the Counseling Psychology Department at Lewis and Clark College in Portland, Oregon. For more information on the project that resulted in Clare's book, visit **www.exchange09.com**.



['roo news]

Melinda Massie and her professional home organizing company, Organizing with a Side of Fabulous, were awarded the title "Best Personal Organizer" in *Fort Worth Magazine* Best of 2011 Awards. Jenny Cureton has begun the doctoral program in counselor education at the University of Northern Colorado with the goal of becoming a counseling professor. Specializing in career development, suicide prevention, and professional transition, she continues her private practice, Evolutions Counseling and Consulting.

98

Patricia Ang moved from Chicago, Illinois, to San Mateo, California, after she was promoted to help start the women's health division for Barco Healthcare as the national women's health specialist.

99

Eric Montgomery and Lauren Odell were married May 21, 2011. Eric, who earned a master's degree in business administration from the University of Texas McCombs School of Business, is employed by Susan G. Komen for the Cure at its international headquarters in Dallas. Lauren is a land entitlement and economic development consultant in Dallas, Texas. The couple honeymooned in Thailand and now lives in Dallas.

01

(3) Ross Allen and Tiera Kendle married May 28, 2011, at Kalorama Villa in Saint John, U.S. Virgin Islands. Blake Welch and Jack Moore were in the wedding party and Aron and Marley Mackay Bautista, Eric Nordstrom '99, and Dustin Webb attended. The newlyweds, who met at the University of Denver's Josef Korbel School of International Studies in 2008, live in Washington, D.C. Ross works for the Department of Defense and Tiera works in the global health sector. **(2)** Manesh Jiten Shah was selected to participate in the 2011-2012 LeadershipSBOT (State Bar of Texas) program. Only 20 attorneys in the state are selected annually for the program. He is an associate in the Business, Finance, and Restructuring Department in the Dallas, Texas, office of global law firm Weil, Gotshal & Manges, L.L.P.

02

Kristy Peet was one of the artists who created The Houston-Area Museums Art Car in the annual Houston Art Car Parade in spring 2011. (Look for photos and details in the Spring 2012 *Austin College Magazine* online-only issue in April.) When not creating art cars, Kristy's large-format photographic work deals with psychological issues and has been shown in solo and group exhibitions across the country, including a solo exhibition at Dallas Contemporary. She also teaches photography at College of the Mainland in Texas City and is resident artist at Box 13 Artspace. Stacy Smith is the co-author of *Bless Her Heart: Life as a Young Clergy Woman*, published in October 2011 by Chalice Press. The book, written with Ashley-Anne Masters, is the first-in-a-series collaboration between Chalice Press and the Young Clergy Women Project. Stacy is a minister of the Presbyterian Church and lives in Memphis, Tennessee, where she works as the outreach supervisor at the Church Health Center and as a parish associate at Idlewild Presbyterian Church.

03

(4) Hayley Gillespie successfully defended her Ph.D. on April 18, 2011, and graduated on May 21, 2011, from the University of Texas at Austin Graduate Program in Ecology, Evolution, and Behavior. She studied the ecology and conservation of endangered Barton Springs Salamanders. Among those in attendance of the event were fellow 'Roos Cole Weatherby '04 and Sarah Demarest Allen '03, pictured with her on page 33. (Read more about her work in the Fall 2011 *Austin College Magazine* online-only issue.) **(12)** Jorge Wilson and Susan Jacob married August 18, 2011, in Kerala, India. An engagement party in May in Highland Village, Texas, included guests Sarah Demarest Allen '03, Cameron Allen '04, Jill Sanders '03, Alexi Mantas '03, Rob Bondurant '04, Maheshi Sivathasan '03, Nishan Sivathasan '02, and Rachel Marks '03.









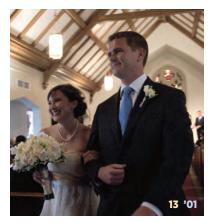


Numbers in color within entries correspond with photos on page 40-41.























Roo Notes

Kristin Austin received a Master of Divinity degree from Austin Presbyterian Theological Seminary on May 21, 2011. 4 (13) Gillian Grissom and Thomas Locke '04 were married May 21, 2011, in the Sudie George Chapel at First Presbyterian Church in Dallas Texas. The couple lives in Durham, North Carolina, where Gillian is pursuing a master's degree at the Sanford School of Public Policy at Duke University and Thomas is a development officer at a United Methodist Church-affiliated foundation. Shane and Sarah Vaal Webb celebrated graduation month in May 2011. Sarah graduated from the University of Texas with her master's degree in speech and language pathology on May 20, and Shane received his Master of Divinity from Austin Presbyterian Theological Seminary on May 21. Shane was ordained as a minister of Word and Sacrament on July 10 at the First Presbyterian Church of Pasadena. Shane and Sarah moved to Lima, Peru, in August with the Young Adult Volunteers for a year of service. Shane is serving as minister at two Presbyterian churches and Sarah is working at the Ann Sullivan Center, which serves people with different abilities (such as autism, Down syndrome, cerebral palsy, or developmental delay) and their families.

08

(16) Becca Webb and Ryan Buell married on October 10, 2010, (10/10/10) in Tyler, Texas. Members of their wedding party included Emma Wilking, Becca Harpham Mandeville '07, Emiliegh Stewart, Hunter Mandeville '07, Emmanuel Nwelue, Brian Hambrick '07, Sam McDonald, and Bucky

Brannen. Kelly Wiggins wrote a paper that was highlighted in the September 19, 2011, issue of the professional journal *Science*. A short news brief also appeared in C & E News about the mechanochemistry project. Kelly is in her fourth year of graduate study at University of Texas working toward a Ph.D. in chemistry. Steven Zaborowski has joined Austin Presbyterian Theological Seminary as development officer for the Office of Institutional Advancement, serving north Texas and Oklahoma.

09

(17) Stephen McCormick and Rebecca Tsucalas married on May 21, 2011, in Houston, Texas. Wedding guests included Hillary Luckett '09, and Merritt O'Boyle and Robert Grimm, both '11. The couple now lives in Falls Church, Virginia. (9) Alyssa Taylor Steed earned a master's degree in museum studies from Baylor University on May 14, 2011.

11

Stephanie Ray joined the staff at Texas Presbyterian Foundation as a client services administrator and is the primary relationship manager for institutional and church clients outside Texas. She lives in Dallas. **Rachel Wells** is teaching fifth through eighth grades at the Buchanan Girls School in Kerala, South India, with the Young Adult Volunteers Program of the Presbyterian Church. As a student, she took part in a January Term course in Scotland and the 2011 A Cappella Choir tour to France, but considers her year-long India trip her real study abroad experience. She returns to the U.S. in September 2012.

['roo news] Taking Command

U.S. Navy Captain **Dorian F. Jones** '84 became the 13th commanding officer of the amphibious assault ship USS Kearsarge (LHD 3) in a change of command ceremony aboard the ship on June 30, 2011.

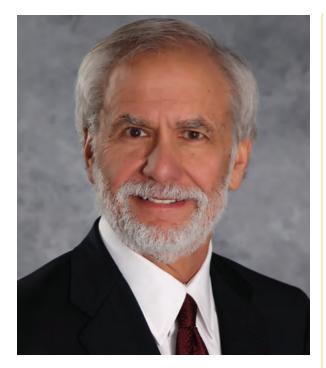
"I can think of only one thing better than serving as your executive officer for these

past 18 months, and that is serving as your commanding officer for the next 172 months," Jones said in his remarks, earning a laugh from the crew. "We have challenges ahead, and I look forward to facing them with you."

Jones had served as the ship's executive officer since February 2010. Over the past three years, the ship's crew has supported humanitarian relief operations and engaged in Operations Unified Protector and Odyssey Dawn in Libya.

After graduating from Austin College, Jones attended Army Command and Staff College and the Armed Forces Staff College. His awards include the Legion of Merit and Meritorious Service Medal as well as other personal and campaign medals.





F.R. "Buck" Files, Jr. '60 has been elected by the state's lawyers to serve as president-elect of the State Bar of Texas. Sworn in during the State Bar annual meeting in San Antonio in June 2011, he will serve as president from June 2012 to June 2013. Files is a shareholder and founding member of Bain, Files, Jarrett, Bain & Harrison, PC, in Tyler, Texas, where he practices criminal defense law. He is board certified in criminal law by the Texas Board of Legal Specialization (TBLS) and in criminal trial advocacy by the National Board of Trial Advocacy. (Read more about his leadership in the Fall 2011 *Austin College Magazine* online-only issue.)

Next Step: Retirement

Austin College alumni relations director **Cindy Curtis Bean** '75 retired from the College in December, ready to devote more time to her family, particularly her young grandsons, but leaves the College with gratitude for the past and plans for continued involvement in the future.

Cindy, who began a career in social work upon completing her Austin College degree in sociology, joined the Office of Alumni Relations in 1995, and has worked with countless alumni in the intervening years in various roles and through a variety of programs and events.

At Homecoming 2011, Cindy received the Service to Alumni Award, created by the Alumni Board in 2009 to honor a faculty or staff person exemplifying extraordinary commitment to the support and education of Austin College alumni around the world. At a retirement reception in Cindy's honor, President **Marjorie Hass** read a proclamation announcing the renaming of the award. The Cindy Curtis Bean Service to Alumni will be awarded each fall, honoring Cindy's

commitment to the College and so that others may seek to emulate her dedication in the future.

"In my position I have been fortunate to share the lives of so many in the Austin College community," Cindy said.

Involved in many aspects of campus life, Cindy long has served as a sponsor for Kappa Gamma Chi sorority and twice has been recognized as outstanding Greek sponsor. She received the College's Homer P. Rainey Award in 2008, given by the Board of Trustees for outstanding achievement and service.

Cindy and her husband, **Paul** '76, continue to live in Sherman, Texas.



Austin College GLOBAL OUTREACH FORUM

The 2012 Austin College GO! Forum presents the recipient of the 2012 POSEY LEADERSHIP AWARD AT AUSTIN COLLEGE

MARIAN WRIGHT EDELMAN

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Recognizing a visionary individual who exhibits the principles of servant leadership in advancing a humanitarian or educational purpose

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April 12, 2012 | 7:00 p.m. | Dallas, Texas AT&T Performing Arts Center | Dee and Charles Wyly Theatre Tickets \$15 | \$25 | \$35 | Private reception tickets \$125 (limited number available) Tickets and information at www.austincollege.edu/poseyaward

A Small 'Roo World



Sarah Martin '14 signed up for a mission trip with Laity Lodge Outbound in summer 2011, part of a group that would facilitate a camp for approximately 300 children and youth in Limbe, Haiti. The mission group also raised enough money to provide safe drinking water for the village, with a well installed by a professional contractor.

As traveling alumni and students have learned, regardless of itinerary, other 'Roos can be close by.

Once in Haiti, Sarah met Drs. **Paul Bunnell** '78 and **Jeanine Griffin** '79, (pictured at left), who were part of the mission team providing medical care to the Haitians. Turns out Paul was in the same Austin College class as Sarah's dad, **Dr. Jonathan Martin** '78; the two even served together as president and vice president of the student body at Austin College, but had not been in contact in many years. Sarah is pictured with camp participants.

Being an Austin College graduate is something special for Chuck Reynolds '79, Ph.D., who shared his story through success@austincollege.edu.

"I came to Austin College a little bit rough, so it really expanded my exposure to a wide range of things, including philosophy and science. I think I developed a lot of skills there that have been helpful throughout my career, in terms of critical thinking, problem solving, writing, and communication," he says.

Since graduating, Reynolds has worked at two Fortune 500 companies, a small biotech, and now is part of a new venture. "Each has been a unique challenge and learning experience. I think Austin College helps prepare you to embrace trying new things and to always want to learn something new," he says. His gifts to scholarships and the IDEA Center ensure that a new generation of students will have that experience, too.

DID A SCHOLARSHIP IMPACT YOUR LIFE?

tell us your story! success@austincollege.edu

Austin College is looking for alumni willing to share how scholarships made a difference in their lives. Please email success@austincollege.edu with your name, contact information, current employment, college major, scholarships received, and what those scholarships have helped you to achieve.

[giveback]

Teaching From the Pages

Shirley Smith Duke '73 (MA '74) never dreamed she'd be writing science books for children when she attended Austin College. She enrolled to be a teacher. After a semester of studying biology with Dr. Henry Buscher, she knew she wanted to study science.

Entering the field of science as a future elementary teacher among many enthusiastic pre-med students proved daunting, but Shirley persevered. Austin College provided a solid foundation in biology, along with a master's degree in education. She moved to San Antonio to teach elementary school. After teaching 25 years in the classroom at the elementary, middle school, and high school levels, she retired—and changed careers.

While teaching, Shirley reviewed books for her school library. Weak writing in some made her think she might do better. She began to write. Numerous rejections later, she took a class, and there she wrote her first book that sold. The picture book *No Bows!* featured an independent little girl, and that was followed by *Unthinkable*, a horror novel for young adults. Another class helped her find her niche in children's writing as she continued sending writing samples. After a few years, she received two assignments. Shirley was thrilled—she was going to write nonfiction for kids at last.

The titles arrived: *You Can't Wear These Genes* and *Infections, Infestations, and Diseases.* Horror! All she could think about was the "C" grade she'd made in genetics and the many changes in the field since that class. She took a breath, researched, and then wrote both books, exceeding the prescribed word count by 1,000 words and the reading level by three grades. How was it possible to write about genes in less than 3,500 words for fourth graders? She found out fast.

Cutting the text and lowering the grade level took pass after pass. "Unpack this section. Rewrite chapters four and five," instructed the editor. Determined to get it right, Shirley rewrote numerous times. Glossary, index, captions, revisions, and bibliography followed. It was all worth it when she learned the publisher loved the books and she secured new assignments for the following year.

Enterprise STEM, Forces and Motion at Work, and *Environmental Disasters* went far more smoothly and were followed by *Gases*, a combination of reading and science. Two second grade science experiment books came next and freelance science writing produced a life science workbook and science flashcards.

She'll be writing again for next year's market. New titles include *The Nervous System, The Earth and the Role of Water,* and *Animal Science.* She's also writing several life science books and recently has begun editing two series of science books for her publisher.

Her writing has taken her to schools, book fairs, and libraries and she's presented at local, state, and national educational conferences. She shares her fascination with nonfiction in a weekly blog at SimplyScience and was honored by a request to guest blog last season for NOVA's "The Secret Life of Scientists" web program, where she started by writing a cheer for the periodic table of the elements.

Shirley attributes her successful transition from educator to children's writer to the liberal arts program at Austin College. A strong science background led her to a rewarding teaching career. It also provided the means by which to change job titles. She remains a teacher—she simply does it from the pages of her books.



An Adventure to Remember

Austin College classmates **Mike Davis** and **John Clark**, both '83, had quite an adventure in 2011—a trip to Nepal and a trek up Mt. Everest. John, who lives in Evergreen, Colorado, and Mike, living in San Diego, met in Los Angeles on April 22, 2011, to begin their trip. They flew from Los Angeles to Hong Kong and on to Kathmandu, Nepal, then to Lukla to begin the trek up the mountain, taking on Lobuche East, a 6000-meter peak just east of the Khumbu Glacier. The two returned to Los Angeles on May 19—after amazing experiences in the weeks away.

John wrote of the trip: "I sum up the adventure as 22 days on the trail, 100 miles of trekking, 12 days above 15,000 feet, seven nights in a tent, made the summit of 20,000-foot peak Lobuche East (13 miles south of Everest), made it to Everest Base Camp and Kala Patthar (the end of the trekking trail) for a great view of the sunrise over Mount Everest. The people, sights, sounds, smells, and experiences will last in my memory for a lifetime."

The Beta Chi Omega fraternity brothers had much more to share of their climb and a lifetime of fraternity gatherings in the Fall 2011 online-only magazine. See their story:

http://acmagazine.austincollege.edu/1941/an-adventureto-remember.

It's Not Like CSI

Televised crime dramas make it seem like lab technicians work in trendy darkened rooms, often are called to crime scenes, and can find the DNA evidence to put any criminal away for good—but forensic analyst **Amy Smuts** '95 said her job isn't much like that. "We don't do things like they do on TV," she said. "I don't watch the show [*CSI*] because it makes me angry. That's not what my life is like!"

Amy shared "The Many Trials of a Forensic Analyst" with students during Homecoming week as one element of the College's "Century of Science" celebration.

Because her job isn't like television dramas doesn't mean it is dull. Amy, who works at the Center for Human Identification at the UNT Health Science Center in Fort Worth, processed evidence and testified

in six cases in the infamous "Yearning for Zion" trials. She processed the paternity test that proved Yearning For Zion leader Warren Jeffs fathered a child born to a 15-year-old.

"We had to be escorted by armed Rangers in and out of the courthouse," Amy said of the trial. Jeffs was convicted of sexual assault and aggravated sexual assault, with a sentence of life in prison.





Up in the Sky!

Linus Wright '49 was one of 50 senior citizens who participated in a skydiving adventure in October 2011 in celebration of the 50th anniversary of The Senior Source, a Dallas nonprofit agency dedicated

to improving the quality of life of older adults in Dallas through education, advocacy, and other support.

Not only did Linus make the jump—at 84, he was the oldest to take the leap from 2.5 miles up. He had jumped once before—as a 17-yearold soldier in World War II.

He landed that first jump safely and went on to a successful career in education, serving as an administrator in Houston schools then longtime superintendent for the Dallas ISD. In 1987, he was appointed Under Secretary of Education by President Ronald Reagan, and later worked in education consulting.



IN MEMORIAM

27	Lucile Odell Cowles	January 11, 2010
'37	C. Ellis Nelson	June 9, 2011
'40	Bertha Lee Grigg McCuan	October 8, 2011
'42	Sarah Ellen Carmichael	July 28, 2011
'42	Nancy Love Anderson	July 23, 2011
'44	Katherine Bassett	May 25, 2011
'46	Dennis Arthur Cobb	August 28, 2011
'47	Howard W. Cogswell, Jr	July 12, 2011
'48	Alice Jean Munson	July 15, 2011
'50	Mary Joe Hunter	July 16, 2011
'51	Nann Neal McKinney	May 13, 2011
'52	Charles Jebez "C.J." Andrews	July 16, 2011
'53	Betty Jane Dodson Brooks	
'54	Carl Wesley Stripling	July 18, 2011
'58	Lester Dean Frank Kinkade	May 28, 2011
'59	Willie C. "Bill" Pointer	October 15, 2011
'62	Arthur Franklin "Art" Melson	October 4, 2011
'62	Harvey Randall Pierce	July 5, 2011
66	Sharon Rose Greenlin	
67	Stanley Eugene Monroe, Jr	June 21, 2011
'69	Anita Harkey	July 11, 2011
'69	Ron Hagood	
'70	Hilda Yvonne Talton Ramsay	June 15, 2011
'71	Byron Floyd Cook III	June 21, 2011
'72	Robert Hardy Falk	August 13, 2011
'74	Mary Williams McGowan	
'78	Shirley Annette Vrla	June 30, 2011
78	Joseph McMurry Owen II	July 8, 2011
78	Pamela Gail Jeffries Redfearn Holman	
'02	Christina Michelle Ellis	June 11, 2011
'06	Derek Shane Hutson	0ctober 17, 2011
'07	Thomas M. Derricks	September 17, 2011

Friends We Will Miss

Dr. Charles Hunter, sociology faculty member from 1979 to 1982, died June 12, 2011.

Donna Carnes, staff member in the Business Office and Human Resources from 1995 to 2002, died June 14, 2011.

Alice Carolyn Squires, alumna and retired staff member, died August 6, 2011. She served as administrative assistant to the dean and secretary of the College from 1954 until her retirement in 1987.

Several Kangaroos spent time during summer 2011 in Presbyterian youth ministry at Montreat Conference Center in Asheville, North Carolina, affiliated with the Presbyterian Church (U.S.A.). Pictured below, Class of 2015 freshman 'Roo Libby Wise, showing off the kangaroo hand sign, was "mobbed" by fellow 'Roos **Rachel Wells** '11, **Tim Kennedy** '98, **Michael Harper** '94/MA'95, **Steven Barnes** '97, and **Leslie Roper** '01, all serving in leadership roles.

Other 'Roos spotted were **Sarah Lien Finnerty** '93, **Noelle Castin** '95, **Amy Veatch** '85, **Eddie Hernandez** '15, and **Silas "Si" Vaughn** '49, MA '50, who has "retired" to Montreat with his wife, Catherine, between world travels and welcomes at the Montreat Front Gate.

Alumni also met up with Bruce Reyes-Chow, Austin College 2011 baccalaureate speaker and honorary doctorate recipient. Tim Kennedy, who shared the photo, was enjoying a bit of a change of pace, serving

for four weeks at Montreat before beginning Master of Divinity studies at Yale Divinity School in fall 2011. He had spent the past 13 years in Washington, D.C., working on Capitol Hill, at the White House, and at the Department of Homeland Security.

A Mob of 'Roos



GIVE NOW. PAY LATER.

Dr. Ray Stephens '50 has been a lifelong member of the Austin College community. His father graduated from Austin College in 1920, and Ray graduated in 1950. He pursued his medical education at the University of Texas – Galveston, and, while completing his residency and internship at the University of Iowa hospital, he met and married Betty, a native of Iowa and nurse at the hospital.

After his residency, Ray and Betty moved to Sherman where Ray joined an obstetrics and gynecology practice. Ray served for many years on the Austin College Board of Trustees (and now is a Senior Trustee), and three Stephens children, Susan '79, Martha '80, and John '83, graduated from Austin College, with their son David graduating from Texas A&M.

Ray and Betty long have been generous supporters of Austin College, including establishment several years ago of the Stephens Family International Studies Scholarship at Austin College in support of students who seek life-changing international opportunities.

More recently, Ray and Betty designated Austin College as a beneficiary of an IRA so that its value will pass to their children and to Austin College in support of the Stephens Family Scholarship. The estate gift will allow the family to benefit from estate tax savings and ensure that Ray and Betty's current support of scholarships continues beyond their lives.

Will your legacy positively impact the lives of young people in the future? The simplest way to confirm that your legacy wishes benefit Austin College is a gift through your will, retirement plan (401(k), 403(b), IRA, etc.), or life insurance policy. These gifts require no immediate financial commitment and can be arranged at any age.

An Austin College representative gladly will meet with you about establishing a legacy gift and becoming a member of The Covenant Society, an honor bestowed only to generous donors who name Austin College as a beneficiary in their legacy plans.



Contact: Jennifer Pearson, Executive Director of Estate Planning, 903.813.2336 or plannedgiving@austincollege.edu

Women in the Sciences ... and Other Challenges

I recently wrote Dr. Jack Pierce, thanking him for introducing me to environmental biology. I remember his genuine smile and sincere demeanor when answering my numerous questions. The course, a cutting-edge field in the early 1970s, changed the way I thought about what science meant to me. My first two test grades resulted in a "C" and a "D"—and I knew I had to get serious about my chosen subject. I managed a "B" on the next test and an "A" on the final exam to redeem myself.

I loved science, and the knowledge I learned from my area of concentration served me well as a science teacher. But it wasn't until I began writing science for children that I looked back at my science background through different eyes. It dawned on me how few women were involved in science when I attended Austin College. At the time, I was oblivious to how outnumbered women were. I was doing what I liked and never noticed. It was my environment. Times were changing, but more traditional gender roles still prevailed in the early 1970s.

Today, from the perspective of 35 years or so, it seems strange that fewer women concentrated in science, even considering the times. When I entered Austin College, only women had curfew, men and women lived in separate halls, and pantyhose were worn under dresses. I had to wait until my junior year to take the January Term "Desert Biology" course. As a lone female, I couldn't go during my sophomore year, but fortunately another woman signed up to go the next year. I appreciate Dr. Pierce for including Linda and me in that group. By the time I left Austin College, nobody had curfew, coed residence halls (with locks!) existed, and elementary school teachers could wear pantsuits. albeit with other subjects. If only STEM had been the emphasis then. Over the first 10 years I taught school, science was one of many subjects, including art and ESL. At that time, elementary schools weren't set up to focus on science as a subject, so I decided to move to middle school, with the opportunity to teach only science. Those years were some of the most exciting and memorable I spent in education.

Sparking the interest of children and young people in science is no longer a choice. It's become necessary to stay current in the world. And while I left the field of formal education, I unwittingly began to instruct through my writing. I'll always be a teacher at heart.

From the science department at Austin College I learned to focus my interest and love of this subject. I remember some of my professors from other courses, but I knew the biology professors on a far closer level. Dr. McCarley would call my residence hall to invite me to go coyote calling— I got great results. Dr. Pierce led the camping, unwashed group on "Desert Biology," while Dr. Buscher entertained with tales of parasite collecting. Looking back, I see that I have done what they did; my audience was simply younger. I received a terrific education from excellent science and education departments, and now I have a second opportunity to challenge and inspire children.

Austin College always will remain with me. The education allowed me to do what I loved.

Even now, every now and then, I'll give the coyote call to special people. And the coyotes still answer.

These days, more women are choosing STEM (Science, Technology, Engineering, and Math) fields, but men still far outnumber them. A big push is on to incorporate those subjects in schools nationwide to keep up with the demand for future jobs and to keep the U.S. competitive in the world. Beginning early in elementary schools, STEM subjects will be taught in order to catch the students' interest from an early age. Grab them young to interest them in science!

Aha! I thought. That's exactly the reason I entered elementary education with a biology degree. I wanted to share the joy of science with kids and interest them in the subject right away. In my early years of teaching, I got to do that—



Shirley Duke '73, M.A. '74 spent nearly 25 years teaching elementary and middle school in San Antonio, Dallas, and Garland schools. She now writes non-fiction science books for children and young people, her way to continue teaching beyond the classroom. Shirley and her husband split their time between their home in Garland and a cabin in the Jemez Mountains of New Mexico. In addition to writing non-fiction books, she writes for a number of blogs, including NOVA.

The opinions shared in this column are those of the writer and do not necessarily reflect the views or policy of Austin College, its administrators, or its Board of Trustees.

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#1 Again

The students and faculty pictured above were happy just to enjoy a beautiful day in Argentina last January, but they could be jumping for joy at Austin College's #1 rank in the nation for study abroad in the Open Doors Report on International Educational Exchange (IEE,) based upon percentage of participation, released in November 2011. The numbers are boosted by opportunities like January Term, in which some 300 students and faculty enrich course study through the benefit of travel around the globe. One example this January is "Comparing Democracy," with students traveling to Washington, D.C.; London, England; and Valletta, Malta. The topic of the British Monarchy will be much more alive as the students hear from local scholars, travel the London streets, visit the monarchy's palaces, and perhaps even spot a royal!

