

WILLAMETTE

SCENE

SUMMER 1993

Teaching Science for the 21st Century

Excellence As a Matter of Balance

—o—
"One of the reasons that I am so unabashedly proud and vocal about Willamette's quality is because of the superbly balanced experience we offer."
—o—



Is there any group around that doesn't claim a commitment to quality? Educational institutions are no different, with each of us describing ourselves in terms of "aca-

ademic excellence," "superior student," and "first-rate faculty."

Good public relations suggests that each college or university should "put its best foot forward." But what about the other foot?

Truly excellent colleges and universities are those that have balance. The best institutions have quality teaching and research; they have superior curricula and extra-curricular programs.

Willamette University is very public about the academic excellence of its students. For example:

- The University is consistently ranked among the best and most selective liberal arts institutions in the nation.

- In recent years, undergraduate freshman classes have entered with an average high school g.p.a. in solid subjects of 3.5 and an average SAT score of 1100.

- In seven of the last eight years, Willamette has enrolled more National

Merit Scholars in its entering class than any other school in the Northwest.

- Three of the past four years, a Willamette student has been awarded one of the 10 national General Motors Liberal Arts Excellence Awards.

- In 1992, a team of eight Atkinson Graduate School of Management students was selected by the American Society for Public Administration as having written the best graduate paper in the nation.

- The winners of the College of Law's 1991 Labor Law Moot Court Competition went on to earn first place and best brief awards at the National Labor Moot Court Competition.

The last issue of the *Willamette Scene* featured some of the extra-curricular endeavors of the University's students. The cover highlighted the men's basketball team, national champions for 1993. Feature articles included a summary of the institution's Community Outreach Program and other service-related projects.

One of the reasons that I am so unabashedly proud and vocal about Willamette's quality is because of the superbly balanced experience we offer. The University's scholar-athletes make my point well.

A look at Willamette's successful sports teams reveals dedicated students:

- For 11 straight semesters, the men's basketball team has earned a team grade point average of at least 3.0.

- Both the men's and women's swimming teams were recently named Academic All-America teams for 1993. (Out of the nation's 782 collegiate swimming teams, only 143 teams received this prestigious designation) Of the seven NAIA Academic All-America teams, Willamette's two teams were the only ones that finished national post-season competition within the top 10.

As you can imagine, Willamette University has had more than its share of NAIA All-America Scholar-Athletes. In fact, this year's football team had six members who were so recognized — more than any other of the 135 NAIA colleges and universities in Divisions 1 and 2. Each of these players met the criteria of being a regular performer, and a junior or senior with a grade point average of at least 3.5. These six joined 24 previous NAIA Scholar-Athletes from Willamette since 1987.

True academic excellence means a balance of quality . . . a balance which comes from having more than just one good foot to put forward. It's a balance that epitomizes the healthy stride of a superior institution moving from the past to the present to the future.

Student achievements in athletics and academics are not mutually exclusive. Nor is faculty excellence in teaching and scholarship. I am very pleased that they can and do go together at Willamette University.

By Jerry E. Hudson, President

WILLAMETTE

SCENE

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A new tradition was in the making when the 1993 commencement was held on the
Quad. See story on page 3.

LETTERS TO THE EDITOR



Letter policy: Please limit length to about 125 words. We reserve the right to edit for length or clarity. Please sign your letter and include your name and address, plus your class year if you're an alumnus. Write to the Editor, *The Scene*, Willamette University, 900 State Street, Salem, OR 97301.

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Religious Identity Essay Strikes A Chord

I'm a parent of a Willamette student, John Van Doorminck. I've just finished reading, "Tradition & Definition" in the *Scene* and I want to thank and commend you [Chaplain Charles Wallace] for your ideas concerning a complex issue — religious identity. I hope that John has been able to hear you reflect on these issues from time to time.

When I was in college ('58-'62) at another small, liberal arts, church-related school, our president was called to defend a stance similar to your own against those who would have had us 'righten up' and more rigidly march to the church's drum. I've never forgotten the gist of his remarks — how there had to be room within Christianity for serious, probing questions...

...Thank goodness for voices such as yours in this era of rising fear and hostility. The world needs more liberal, open-minded, questioning people of faith — especially those who have been called to work with young people.

LINDA WHITE
Franklin, Tennessee

Your Business Card, Please

Parents, current students and even alums often ask the question, "What can you *really* do with a liberal arts education?" The short, albeit true, answer is unsatisfyingly ambiguous — Anything you want! Recently I read of an interesting and more specific way to answer this question: Michigan State University asked alums from their College of Arts and Letters, 1971-72, to send in their business cards. Responses came from all over the world, with careers ranging from a bank president, minister, a vice president for entertainment at Disneyland to a cardiovascular surgeon. All majors were represented, some in unique ways:

an English major became a breast feeding support consultant in Pennsylvania!

I'd like to ask readers, Willamette CLA grads pre-1983, to send me their business cards. On the back I'd like them to identify their undergraduate major and any additional post-graduate education. Wouldn't it be wonderful to compose a bulletin board of alumni business cards from all over the world, with hundreds of occupations represented? Thank you for including my letter.

NANCY M. NORTON
Career Development Coordinator
Willamette University

Outreach Program Praised

I am writing to commend some special people at Willamette University. Their generous sharing of talents, time and intentions have benefited Salem Outreach Shelter, our community's family-oriented transitional shelter for homeless folks.

The person most responsible for making the initial contact this year is your Community Outreach staff person, Kent Koth. Through his office...five to seven students come to our shelter every Saturday morning and spend good, fun time with the children living here. They have dubbed themselves the "Saturday Cartoon Club." This endeavor has been coordinated by a student, Carol McElroy. Most recently they chaperoned our children to the Shriner's Circus.

In addition we have a fine young woman, Laina Nixon, serving an internship at the shelter. She experiences several hours a week learning about shelter

life and spends some hours helping to case manage one of our families.

The most recent addition to our volunteer program has been the result of generous effort by Jerry Gray of the economics department. He has come out to the shelter himself as a volunteer, and he has brought six to eight young people from his Labor-Econ class to observe the economic impact of volunteerism. Six young men have taken our boys to the YMCA for recreation, played basketball with our lads and gals here, and most recently assisted our youngsters in fabric painting on shirts. One girl helps with our Girl Scout group. Dr. Gray also solicited one young man to offer his talents as a Spanish-speaking interpreter for S.O.S.'s Hispanic population.

Finally, another young woman comes out every a.m. five days a week to do child care for...some wage. Several times this same young woman, Jennifer Leland, and her WU friend have helped tutor some of our youth.

Altogether, we at S.O.S., and I in the volunteer program particularly, want to offer a thank you to Willamette University for providing an academic community in which these fine young people are acting on their convictions of a service with the motivation and role-modeling of good faculty. What a gift to Salem and to Salem Outreach Shelter.

DONNA ARMSTRONG '57
Volunteer Coordinator,
Salem Outreach Shelter

Mission and the Professions

In Willamette's new statement regarding mission, little mention is made of education for the professions. It seems to me that this type of education has been an important part of Willamette's mission for many, many years.

TYRUS HILLWAY '34
(formerly a resident of Kimball Hall)
Estes Park, Colorado



WILLAMETTE UPCLOSE

Skies Clear for Commencement on the Quad



Buzz Yocom '49 leads the procession.

UMBRELLAS WERE OPEN all around the Quad as friends and family gathered to celebrate Commencement on May 16, not for the rain-drenched ceremonies that had been expected, but rather to protect those attending from an intensely sunny spring day.

This was the first year that Commencement had been held in the Quad. In previous years graduation ceremonies were held in McCulloch Stadium. There were 374 degrees given this year in the undergraduate College of Liberal Arts, 60 graduates from the Master of Arts in Teaching program, 60 Master of Management degrees, and 160 graduated from the College of Law.

Honorary degrees were awarded to Maribeth Collins, Tony Lee Hopson '77 and Taul Watanabe '41.

Collins, who received an honorary Doctor of Humanities degree, has been a

member of the board of trustees since 1964, and has given generous support to Willamette, as well others, for many years. Collins has been president of The Collins Foundation since her husband's death in 1964. She is also a director of Collins Pine Company, Collins Holding Company, and Ostrander Resources Company.

Hopson, a Doctor of Public Service recipient, received a standing ovation from many of the graduating students when he encouraged them to look for success in public service rather than six-figure incomes and material possessions. Hopson has worked as a counselor and services coordinator in Portland's high schools and is the founder of Self-Enhancement Incorporated. Initially a basketball camp, Self-Enhancement has grown (with the help of grants from Albina Ministerial Alliance and the Meyer Memorial Trust) to include classes within the secondary schools, which are geared to developing positive mental attitudes; drug, alcohol and human sexuality counseling; and employment, communication and study skills development.

Watanabe received an honorary Doctor of Laws degree. The bombing of Pearl Harbor interrupted his education at Willamette's College of Law, when he was interned in a relocation camp. Bruce Baxter, then Willamette president, was able to get Watanabe enrolled at the University of

Denver Law school where he completed his law degree. He has served as executive vice president of Burlington Northern Railway, and in 1978 he received the Third Order Sacred Treasure, the highest Japanese government award for citizens of other countries. In Los Angeles, he negotiated the first container ship trade with Japan in 1968, and he later assisted the Port of Seattle to bring container trade there.

Commencement speaker Senator Mark O. Hatfield '43 opened his talk by reminiscing about his years at Willamette. Hatfield was a professor of political science at Willamette and also dean of students from 1950 to 1956. In 1950 he was elected to the Oregon State Legislature and for six years he integrated his academic life with his political life. In 1956 he was elected Oregon's secretary of state and in 1958 and 1962 he was elected governor of Oregon. Since 1966 he has served in the U.S. Senate.

By Melaney Moisan



Taul Watanabe '41, honorary degree recipient (left), and Jerry Hudson, president.

NAMES Project AIDS Memorial Quilt Viewed by Thousands at Sparks Center in April

Jerry Adams, Al, Anna, Daniel
Arnot, Lee Atwater, Billy Baldwin,
Bob Beil...

MORE THAN 4,500 people visited Willamette's campus the week before Easter to see a special memorial—the NAMES Project AIDS Memorial Quilt. This event raised more than \$5,000 for local AIDS support services; \$1111 of this came from a student-directed performance of the play *All Our Lives*; \$375 from a Quilt Aid concert, and the remainder from personal donations and the sale of merchandise.
...Tracy Brown, Mike C., Eddie Coombs, Trevor Daniels...

Three by six foot panels—a size meant to represent an average human body—covered the floor and walls, naming more than 520 people who have died of AIDS, many from the Pacific Northwest.
...David, Harry, Barbara Healy, Paul Gjeffe, Paul Gjeffe, Jr., Christopher Hall...

Each panel was a personal message from the friend, lover, husband, wife, brother, sister, mother, father, caregiver, grandfather, grandmother, classmate, student of that person—"For my brother who was born on the Fourth of July. Fireworks will be lighting up the sky forever in honor of your birth"—an individual and unique tribute to the life each had lived.

...Judi-Ann, Amani Jabari, Craig Kim, Daisy Keys, Taunya Davis, Donna Kay Dockery, Sabrina Gayle Kripps...

Some panels were elaborate creations, others were simple expressions of love, like the plain black and white panel that merely read, In memory of Bill, a biker.

Sewn to the quilt panels were photos, ties, t-shirts, stuffed animals, sequins, flow-



*The tide recedes but leaves behind
Bright seashells on the sand.*

*The sun goes down, but gentle warmth
Still lingers on the land.*

*The music stops and yet it echoes on
In sweet refrains.*

*For every joy that passes,
Something beautiful remains.*

—from the quilt

ers, poems, cards, almost anything you can imagine—little symbols and mementos left behind by those who died. Although some—the babies and children—were so young they could leave little more than names and memories.

...Uncle Jack, Uncle Pete, Elena V., Gary Van Kirk, Hank Vilas, Nancy K. Lawson, W. Barry Long, Joe Maloney, Papi...

The AIDS Memorial Quilt was brought to Willamette after students spent an Alternative Break in the spring of 1992 working in San Francisco with The NAMES Project.

"At one time or another AIDS will affect everyone's life, whether it is someone we know who has AIDS or whether it is ourselves that get it," said Crayton Webb '94, one of the students who spent an Alternative Break working for The NAMES Project. "The quilt is a

very moving memorial to those who have died of AIDS, and there is no better way to create an awareness of how real the disease is, and how real the people who died of AIDS were; they're just like us."

Almost 200 volunteers from communities around Oregon as well as the Willamette community helped coordinate the event and staff the display while it was here.

...Del Payne, Tom R., Stan Ray, David Quajas, Fr. Bryan Emory McNeill, Eddie Medina...

The NAMES Project began in 1987 in San Francisco. Today the quilt is a powerful visual reminder of the AIDS pandemic. As of Dec. 10, 1992, the number of panels was 23,728, and more are added each day. The quilt measures more than 9 acres and weighs 27.5 tons.

Goals of The NAMES Project are to illustrate the enormity of the AIDS pandemic, to provide a positive and creative means of expression for those whose lives have been touched by AIDS, to raise funds and encourage support for people living with HIV and AIDS and their loved ones, and—as is stated on many of the

buttons worn by volunteers—to keep the names alive.

...Vickie Lanette Marshall, Vincent Francis O'Brien, Bob Rich, Richard, Ron, Bob S., John Schott...

All you hear at a display of the quilt, besides a little music, are the names. During opening ceremonies the names were read continuously by guest readers who included Governor Barbara Roberts; Chief Justice of the Oregon Supreme Court Wallace Carson, Jr. L'62; Bill Bradbury, president of the Oregon senate; Speaker of the House Larry Campbell; R. G. Anderson-Wyckoff, mayor of Salem; WU President Jerry Hudson; and Jim Randall, vice president at Salem Hospital, which co-sponsored the event. In addition names were read for 10 minutes each hour when the display was open to the public.

...Lauren Searle, R. Kirk Seaton, M.D., Roger Shipley, Willie Short, David Silva, Sister Reete, Amy Sloane, Ann Smith...

Four new panels were added to the quilt over the weekend, including one with a picture of Waller Hall on it and dedicated to Paul Wynne '65, who produced a journal on KGO-TV in San Francisco in the 1980s about his daily struggle with AIDS.

...Gary Smith, Isabel Soria, Spig, Curt Steele, Sunny, Terry, David Thomas...

One panel had been covered to protect the privacy of the family, and by the end of the display it was strewn with cards and flowers. These mementos will go into the file for this person at The NAMES Project. The quiltmaker or members of the family can look at this file any time.

...Larry Ticol, Tim, Tony, Jack Townsend, Will Tucker, Bill Tynes, William J. Urch...

*Names. Each one loved
by someone who cared enough
to see that they weren't forgotten.
Don't forget me.
Mention my name now and then.*

—Willie Short

And for four days at Willamette, Willie was remembered. And Larry Ticol was remembered, and Tim and Tony and Nancy and Bill and David and Sunny.....

By Melaney Moisan

Dean Misner Resigns



Robert L. Misner has chosen to make the next academic year his final year as dean of the College of Law. Misner, who will complete seven years as College of Law dean, wishes to devote full-time to his teaching responsibilities in the law school.

University President Jerry E. Hudson expressed the institution's gratitude for Misner's service and contributions. "The College of Law has made great progress during Bob Misner's tenure as dean," said Hudson. "Willamette University thanks him for his leadership, which has helped result in a student body of higher quality, additional faculty positions, a redesigned curriculum, and a newly expanded and renovated facility." President Hudson also announced that a search would begin in the next several months to select a new dean for the College of Law.

Misner commented, "The past six years have been times of great challenge and great personal satisfaction for me. I look forward in the next year to completing a number of projects and making preparations for my successor. Thanks to the University and to the College of Law for the confidence they have placed in me."

Upon completing his seventh and final year as dean, Robert Misner will spend the 1994-95 academic year on sabbatical. Afterwards, he will resume his teaching at the Willamette University College of Law on a full-time basis.

Trustees Elect Five New Members

Willamette's board of trustees has elected five new members. Each member is elected for a three-year term. Elected as new board members are two Portland residents, Ralph Bolliger, an attorney with Hampton, Bolliger and McCobb, and Ronald Timpe, president of Standard Insurance. Carol G. Thompson from Monroe, Ore., pastor of the Monroe United Methodist Church, and Robert Bothman, Portland, retired director of the Department of Transportation, have been chosen as the representatives from the Methodist Conference. They replace Gary Powell and Jay Kent.

Elected as Alumni Board representative replacing Alan Shiffer M'76 is S. Michael Rodgers L'68, Bellevue, Wash., an attorney with Rodgers and Deutsch.

4.8 Percent Increase In Tuition Approved

Willamette University board of trustees has approved a 4.8 percent tuition increase for the College of Liberal Arts.

Some of the factors leading to the increase were: loss of state scholarship funding, less endowment income because of lower interest rates and yields, a continuing need to pay competitive salaries in order to attract and retain excellent faculty, and additional instructional expenditures for computer technology and library acquisitions. The 1993-94 tuition rate of \$13,575 will still be less than comparable institutions.

The room and board rate at Willamette will increase by \$135 per semester. This is the result of greater energy and maintenance costs, coupled with a modest inflationary increase in food prices.

Tuition at the College of Law will increase by 6.7 percent to \$12,800 for 1993-94; and at the Arkinson Graduate School of Management, it will increase by 5.9 percent to \$11,700.

Honors, Awards and Appointments Announced

President Jerry Hudson has been elected to the board of directors of the National Association of Independent Colleges and Universities.

Robert Dash, political science, was selected as a Fulbright Senior Scholar to study in five South American countries during the summer.

John Doan, music, performed with Burl Ives this winter. Their performance was to benefit the Greater Skagit Community Enhancement Foundation. He also recorded with Ives on an upcoming children's record.

Richard Ellis, political science, was asked by the international Centre for the Study of Global Governance to take part in their upcoming conference on "Global Governance" in London. He also received a postdoctoral fellowship from the Lynde and Harry Bradley Foundation for fall 1993. Ellis was also the recipient of an award from the George and Eliza Howard Foundation to complete work on his fourth book. Only eight such awards each year are given nationally.

Peter Harmer, exercise science, was selected as athletic trainer for the Cadet and Junior World Fencing Championships.

The theatre department was recognized nationally by the Kennedy Center for the Performing Arts for their playbill and lobby display of *Are You Now or Have You Ever Been*.

The publications and staff of the office of news and publications have been recognized for excellence with awards from three organizations. The *President's Annual Report* with the theme "A Time to Reflect" received a silver award from District 8 of the Council for the Advancement and Support of Education (CASE). **Betty O'Brien** received first place awards from

Oregon Press Women for the spring 1992 *Willamette Scene* and for the *President's Annual Report* with the theme "A Time to Celebrate!" both of which she edited.

Melaney Moisan received five Oregon Press Women awards: first place for photography, non-daily newspaper, feature photo; first place, manuals and handbooks; first place, media kit; third place, feature, internal publications; and third place, feature, special publications. Finally, CAMPY awards from Capital Area News and Public Relations Organization (CAMPRO) were received for **Susan Blettell's** designs for a theatre program, and for both the cover and overall design of the *President's Annual Report*, "A Time to Celebrate!"

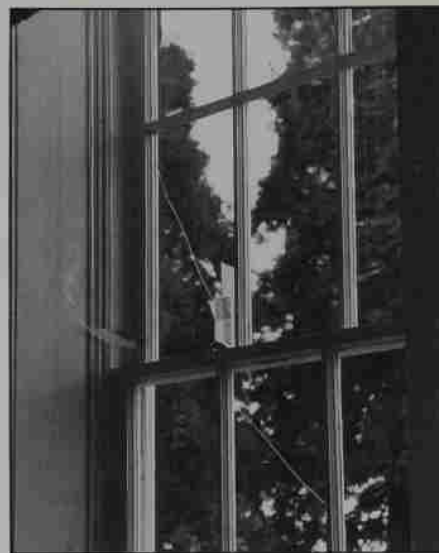
STUDENTS

Brian Newman has been named a 1993 Harry S. Truman Scholar. This prestigious award recognizes his commitment to a career in public service and leadership potential, academic achievements and concern for others. He will receive up to \$30,000 in scholarship support.

Elissaveta Ivanova has been accepted to study at Columbia University's School of International and Public Affairs. She has been awarded a fellowship for full tuition and fees for four years. She is from Bulgaria.

Michael Lysobey has received a fellowship to attend Harvard University. He will pursue graduate studies in Russian language.

Todor Petev will attend the Master's program at Tufts University, an Ivy League school in Medford, Mass. He will study art history in museum studies. Petev, who is also from Bulgaria, received a tuition waiver and a resident assistantship in the slide collection of the art department.



Waller Hall Sustains Only Minor Damage in March Earthquake

Historic Waller Hall remains firm after an earthquake measuring 5.3 on the Richter Scale shook Oregon's mid-Willamette Valley on March 25 shortly after 5 a.m. Thanks to spring vacation and the time of day, few if any Willamette University buildings were occupied at the time.

The only significant damage report at Willamette involved 42 windows in Waller Hall and two small window panes in Lausanne Hall. Various small cracks appeared to have been caused or affected.

During the renovation completed in 1989, Waller Hall was reinforced to withstand an earthquake of 5.5.

The State Capitol across the street from Waller Hall did not fare as well; the dome supporting the gold pioneer was severely damaged, and the rotunda was placed off limits to all use pending extensive repairs.

Numerous aftershocks were recorded, including one measuring 3.0 on June 7. Since this was after graduation—and after 5 p.m.—few buildings were occupied. One staff member in Waller Hall reported experiencing a substantial single jolt.

Prominent Panelists Share Varied Opinions During Conference on Entrepreneurship

"...Leadership is the ability to have the vision as to where the challenges and opportunities lie in the future and to be able to forge a consensus about how to...make that happen...It sometimes revolves around one individual like a Glenn Jackson," Will Glasgow, senior vice president, PacifiCorp, commented at a breakfast forum organized to commemorate the 10th anniversary of the Willamette University Conference on Entrepreneurship.

Other panelists were Casey Powell, founder and chairman, president and CEO, Sequent Computer Systems; Bill McCormick, founder and CEO, McCormick & Schmick's; and Jerome Chicvara, founder and vice president, Full Sail Brewing Company. They were questioned by Jonathan Nicholas, columnist for *The Oregonian*; Judy Rooks, business editor for *The Oregonian*; Kathy Dimond, *Oregon Business Magazine* editor; and Steven D. Jones, *The Business Journal* editor.

The panelists expressed varied opinions in a lively exchange on the state of entrepreneurship in Oregon both 10 years ago and today. They acknowledged that inadequate capitalization remains a key reason for business failures, that financing is even more difficult to obtain today, and that the climate for women entrepreneurs remains less hospitable. However, a better infrastructure for entrepreneurial ventures is now in place in Oregon. Flexibility and the ability to move quickly were cited as keys to success.

"There's very little incentive for a business person to go off into public service today," Powell said. "And whether it was right or wrong, if you witness what people have gone through in appointments to ... positions, you know, it's just easier to not do it."

Celebration of Entrepreneurship The State of Entrepreneurship in the Pacific Northwest



(Left to right) Johnathan Nicholas, columnist for *The Oregonian*, introduces panelists, including Casey Powell of Sequent Computer Systems and Jerome Chicvara of Full Sail Brewing Company.

A differentiation in service seems to exist between voluntary service to community groups—which these business leaders provide as their time allows—and elected or appointed government positions.

Henry Swigert, chairman of ESCO Corporation, received the Glenn Jackson Award which goes to an individual who has demonstrated extraordinary public and private leadership in the Pacific Northwest. Presenters were Gerry Frank and Cynthia Jackson Ford, both Willamette University trustees. Ford is the daughter of the late Glenn Jackson, for whom the award is named.

President Bill Clinton sent greetings which were read at the breakfast. "The Willamette University students who organized the Conference on Entrepreneurship in 1983 had a vision to promote economic development in the Pacific Northwest," he said. "The prominence of the group assembled here reflects the success of their vision. You are the leaders of your region's economy. As entre-

preneurs, you are the pioneers of our business community. You exemplify the determination, hard work and community involvement that is so essential to our free enterprise system."

"In Celebration of Entrepreneurship" was held in Portland and attended by 700 people. Co-sponsors with Willamette University and the Atkinson Graduate School of Management were U.S. Bank of Oregon, the Stanford and MIT business school alumni associations, the Oregon Enterprise Forum and the Oregon Young Entrepreneurs Association. Don Krahmer '81 M/L '87, co-founder of the first Conference on Entrepreneurship, led efforts to organize the breakfast.

Highlights of the breakfast were published in a supplement distributed with *The Business Journal* on May 31. A tape of the entire forum was also aired on six television community access cable outlets in Oregon and Washington.

By Betty M. O'Brien

Chemistry Professor Reaches New Heights

By Andrea G. Dailey



IT WAS FRANCES CHAPPLE'S love of high places that brought her to Willamette (elev. 154 feet) nearly 30 years ago, where her evident love of her subject and of teaching has long since won her a high place in the affections of the Willamette community.

Chapple, an avid mountaineer and outdoorswoman, found Willamette and an opening in its chemistry faculty through a chance conversation with a fellow member of the Oregon State University Mountain Club. She had earned her Ph.D. in England, completed one post-doctoral fellowship at Arizona State University, and was nearing the end of another at Oregon State when on a hike one day she casually mentioned to Dick Crittenden '57 that she was tiring of basic research and might want to do a bit of teaching.

"And Dick said, 'Oh, if you're interested in teaching, you should look into Willamette,'" recalls Chapple. "So you see, I was not the result of a national search!"

She began teaching in midyear with no teacher training or experience, which she says made her feel just one small step ahead of her students all semester. "But over the summer I got it together, and I felt pretty comfortable when the fall semester came 'round." Her comfort level increased when after a few years of teaching introductory, organic, and analytical chemistry she was able to take

over the physical chemistry courses, her special interest.

Besides those, Chapple still does teach a section of introductory chemistry on a regular basis and with other faculty she teaches a unified

lab course. The latter is a four-semester, project-oriented laboratory course that brings together skills, techniques and equipment from a variety of chemistry subdisciplines.

On sabbatical this past year, Chapple worked at University of British Columbia and at Darwin College, Cambridge, to expand the unit she teaches on statistical mechanics as part of her two-semester course in physical chemistry.

Statistical mechanics is the mathematical approach chemists use to bridge "the gap between the microscopic level of matter, which is described by quantum theory, and the macroscopic — bulk — properties of matter, which is the field of classical thermodynamics," Chapple explains. In the classroom, statistical mechanics helps explain how the molecular properties of a given chemical relate to the properties one can observe in the bulk form of the chemical during laboratory experiments.

"Many graduate schools like to see a little more statistical mechanics [than Willamette has had] at the undergraduate level, but I did want to strike a balance and not go overboard," says Chapple. An Atkinson-grant-funded visit to several small liberal arts colleges in the East in the spring of 1992 helped Chapple decide on a correct balance for her course; a semester at UBC auditing a statistical mechanics course helped her fill in the outlines.

At Darwin College, she finished writing the curriculum, then delved with

great delight into Cambridge life. After three sabbaticals there, she has concluded that "Cambridge comes the closest to being all things to all people. It's the perfect sabbatical for someone in a liberal arts university."

She spent many hours at Darwin reading on her own in quantum theory and quantum mechanics, "partly for my own benefit and partly to build on and considerably change the [senior-level] Advanced Topics course I give." She also was part of a mathematical and physical sciences group that met regularly at Darwin for lectures, discussions, and a field trip to the celebrated Cavendish Laboratory to look at current research in low-temperature superconductivity.

The icing on the Darwin cake is, "you have a chance to talk with people in your field and related fields, but you also meet people in other disciplines. You just sort of sit down and introduce yourself and say 'what are you doing?' and start talking about so many things, you learn an enormous amount. It's really wonderful."

Chapple planned to end her sabbatical in typically energetic fashion, hiking and cycling. First, a short trip to Sicily to explore Greek and Roman archaeological sites as part of an organized tour, which is not her usual method of travel — "tours are usually a little too organized" — but chosen this time for safety, on friends' advice. Then, travel through Italy into France for her fourth cycling tour there, and finally a good hike through the French and Swiss Alps.

Reviewing the year as a whole, Chapple says happily, "I've really got an enormous amount of work done as well as having an awfully good time. You can't beat that, can you?"



WILLAMETTE SPORTS

HALL OF FAME

1968 Football Team, Five Athletes Comprise Next Group of Inductees

The Willamette University Athletics Hall of Fame will induct its first team along with five individuals at its third annual banquet on Friday, Oct. 1.

The banquet will be held in Cat Cayern in the George H. Putnam University Center. The reception area will open at 6 p.m., dinner will be served at 7 p.m., and the program will begin at 8 p.m.

Until the 1992-93 men's basketball team won the school's first-ever national championship in March, the 1968 football team came the closest to an NAIA crown. That team—led by Hall of Fame coach Ted Ogdahl—went 9-0 during the regular season and was ranked No. 3 in the final national poll before losing in an NAIA semifinal game at Troy State, Ala.

The '68 Bearcats were led by quarterback Mike Shinn, wide receiver/punter Gib Gilmore, linebacker Calvin Lee—who was inducted individually last year—safety Chris Powers, defensive end Tom (OT, for Old Tom) Williams and defensive back Tom (YT, for Young Tom) Williams, who are not related.

Other prominent team members were four-year letterman middle guard Al Ellis, senior running back Jim 'Tiger' Nicholson, sophomore center Gary Scrivner and junior defensive end Tom Weathers.

The individual athletes to be inducted are: Dick Weisgerber '38; Gilmore '69; Joe Story '76; Brenda Hansen '81 and Steve Koga '82.

The football team was as potent offensively as it was stingy on the defensive



The '68 football team advanced to the NAIA semifinals and was ranked No. 3 in the nation.

side. Shinn threw for 1,508 yards and 18 touchdowns, Gilmore caught 51 passes, and eight ball carriers each netted over 100 yards.

Powers accounted for six of WU's 17 interceptions and the presence of Lee and the Williamses, among others, allowed opponents to average only 14.1 points a game. The nationally-rated Bearcat defense shut out the University of British Columbia (40-0), Lewis & Clark (7-0) and Linfield (6-0). The offense generated 25.1 points per game and four times scored 40 points or more.

Also on that 1968 team was Gordy Wiseman, whose son, Casey, will play Bearcat football for the third year this fall.

Weisgerber was a 1936 Associated Press Little All-America in football and later played for the Green Bay Packers.

Gilmore was drafted by the New York Yankees and tried out for the Dallas Cowboys after a stellar three-year, two-sport career.

Story was a four-time all-conference football player, who later became captain of the 1988 U.S. Olympic Team Handball squad.

Hansen twice led the conference in scoring in basketball and was on the 1979 volleyball team that went to regionals before finishing 31-9.

Koga won five individual NAIA championships in swimming, the most by any WU athlete.

Help! We've Lost Some Teammates

If you know the whereabouts of any of the following Willamette football players from 1968, please call (503) 370-6340 and ask for Sheri Martin.

They are: Bob Bloom, Mike Houck, Bill Mozoch, Larry Ramsay and Ed Sales.

SPRING WRAP-UP

Tennis, Baseball Teams Lead Way During Successful Spring Season

April showers only seemed to bring May showers, but the rainiest spring in over 50 years didn't put a damper on Willamette's spring sports teams.

Both men's and women's tennis teams won NAIA District 2 championships and the baseball and softball teams had their greatest success in nearly a decade.

The highlight of the spring was third-year coach Molly Sigado's women's tennis team, which won its first-ever District title before going on to finish in a surprising 16th-place tie at nationals.

Sigado hinted last fall that, with the addition of four newcomers, the Bearcats would be able to challenge for both the Northwest Conference and District crowns. She was right.

The Bearcats were edged 55-50 by Pacific Lutheran in the Conference meet, but rebounded to garner the District championship by eight points (50-42) over Linfield and defending champ Albertson (formerly College of Idaho).

Sophomore transfer Carrie Bellandi and freshman Brooke Gannon led the way for Willamette the entire season. Bellandi won two singles matches at nationals and teamed with Gannon to win two more in doubles. Gannon and Kim Yokoyama, both freshmen from Hawaii, each won a singles match to account for the Bearcats' six points.

Bellandi was named Player of the Year in both the Conference and District.

Coach Russ Beaton's men's tennis team had another strong season, finishing second in the Conference before breezing to its eighth-straight District title by winning all 27 matches.

Senior Erik Norland repeated as the District 2 Player of the Year.

But the Bearcats were unlucky in the open-draw NAIA tournament. All three doubles teams drew seeded pairs and were eliminated in their first matches.

Norland and junior Ian Sigmund were



Molly Sigado

the Bearcats' only winners in singles play and WU tied for 40th place with two points.

Bearcat baseball had its most successful season since 1986, when

Willamette won the

District title. This spring, coach David Wong's club set a school record for wins in a season with a 24-13-1 record.

The senior-laden Bearcats rebounded from a terrific midseason slump, going 12-2-1 in the final three weeks to finish second in the Conference at 11-6 behind Linfield (17-1). That earned them a berth into the six-team District tournament for the second-straight year.

Willamette lost to eventual champion George Fox in the opener, but bounced back to defeat NCIC champion Linfield and rival Western Oregon to stay alive in the double-elimination tourney. Linfield got revenge though, beating WU in a loser-out game and the Bearcats finished third.

Senior outfielder/pitcher Jason Till led WU in both hitting (.347) and earned run average (3.72) and was named to the 15-player Far West Region all-star team.

Senior first baseman/catcher Derek Lamprecht (.331, 30 RBI) and senior pitcher Jon Lewis (7-1) made the District's honorable mention list.

The softball team had a similar campaign with the school's first winning season since 1984 and its best postseason showing since that same year.

Seniors Tausha White, Shannon Bertrand and Shanda Strode led the Bearcats to a 17-13 season and second place in the District 2 tournament behind defending champion Pacific.

White led the team in hitting (.429)

and pitching (10-5, 1.80 earned run average) to cap off a brilliant four-year career that ended with a .313 average and a 2.17 ERA.

Bertrand hit .271 for the second-straight season and threw out 23 of 36 (64 percent) baserunners from behind the plate. Strode had the best season of her career, hitting .309 with 11 RBI.

Coach Brad Victor's track & field teams were hampered somewhat by the construction of a new football field at McCulloch Stadium and therefore had an average year.

Senior Andrew Hermann earned All-America honors by placing fifth in the 5,000-meter racewalk at nationals to lead the way. But junior Mea Frantz finished a disappointing 11th in the javelin after winning the title in 1992.

Sophomore Amy Carlson advanced to the semifinals in the intermediate hurdles but couldn't duplicate her school-record time of 1:04.29 set earlier in the year. Another sophomore hurdler, Justin Lydon, had career-bests of 14.94 in the highs and 54.36 in the intermediates, but did not advance at nationals in the latter with a time of 55.95.

The golf team placed second in both the NCIC and District tournaments—the latter by just one stroke to Pacific, missing out on a trip to nationals.

Junior Kent Clark won his third-straight Pacific Northwest Small College Golf Classic, topped the District field by 12 strokes and tied for 41st at the NAIA tournament. He missed the 36-hole cut by just one shot with a 151 total.

Three spring athletes were named to their respective NAIA All-America Scholar-Athlete teams: senior Annie Akita (3.59 g.p.a. in humanities) was one of 44 women's tennis players honored; junior Jeremy Larson (3.95 g.p.a. in math) was one of 53 men's tennis players to make the team; and junior Kent Clark (3.76 in religious studies) was one of 19 golfers to be honored.

Student-athletes must be of junior or senior standing with at least a 3.50 g.p.a. to qualify.

FALL PREVIEW

Football Starts a New Era, Soccer Teams Look to Bounce Back Under New Coaches

There's little doubt that sometime next fall Dan Hawkins, Ezam Bayan and Jim Tursi will be asked if they're attending law school or the Graduate School of Management.

But each is hoping it won't be too long their young faces are recognizable for their success on the turf. All three are first-year head coaches at Willamette.

Hawkins, 32, takes over the football program. He was a defensive coordinator at Sonoma State University in Rohnert Park, Calif., last season.

Bayan, also 32, has taken over as the men's soccer coach after being an assistant for two years. Former head coach Brad Victor will remain on staff as an assistant.

Tursi, 33, replaced Jim Rilatt as women's soccer coach in February after Rilatt had to step down due to a business conflict.

Each coach is enthusiastic about his opportunity, but maybe none more so than Hawkins.

"I think the commitment of the staff and players has been tremendous," said Hawkins. "We have probably 25 guys this summer working out (in Salem). One of their goals was to improve on summer conditioning, and they are doing that."

"That has been one of our overall goals, to increase the commitment of everyone."

The new coach is also happy thus far with the recruiting process.

"Not only the on-campus coaches but the (part-time) coaches off campus have been doing a great job," he added. "That's been a real pleasing thing to see. We're real pleased with the quality of student-athletes we have coming in."

Hawkins has also been impressed and thankful for the backing he has had since



Goalkeeper Laura Matsumoto

joining the staff in January. "Everybody involved in the campus is tremendously supportive," he said. "They have been open and honest and caring. That's all anyone can ask for, because there's no way only one guy can do it."

As of June 10, the coaching staff expected 35 newcomers to join 43 returnees in the fall.

Bayan can hardly wait for his first season to begin, too.

"I foresee a lot of good results, good soccer all around," he said.

"The people we have recruited are impact players. I expect great things for us this coming year. Then again, everything depends upon injuries and the things that are out of your hands."

"What I'm going to be looking for is aggressiveness... what kind of effort they put out when they are out there on the pitch (field) playing."

The Bearcats lost only one starter to graduation (Mark Hanken) from last year's 9-6-1 team that advanced to the NAIA District 2 semifinals.

There will be several unknowns when

Tursi begins practice sessions for the women's team. The 1992 season was a series of disappointments and bad luck.

Six players who started last year and missed several games with assorted injuries are all expected back healthy this fall.

The Bearcats will be out to prove last year's 4-9-5 season was a fluke, but they'll have to do it without All-America Tiffanie Andrews, who graduated after leading WU in scoring three-straight years.

Tursi will welcome back nine starters.

The women's volleyball team will be hard-pressed to improve on last season. The Bearcats won the Northwest Conference (12-0) under second-year coach Chris Wells and advanced to the District 2 tournament, where they finished second to national power Western Oregon.

However, Wells had no seniors on last year's 40-15 squad and expects all six starters to return. He thinks he has at least two newcomers who can contribute to the team right away.

Leading returnees are senior All-America Amberly Glidewell and sophomore Brandi Row, both outside hitters.

Ken James begins his fourth year heading up the cross country teams this fall and if indeed there is strength in numbers, both Bearcat teams will be stronger this year.

James expects 13 newcomers on the women's side, which is more than he had on the women's roster in 1992. They will join a maturing group led by Marisa Nickle, Melisa Schuette, Carrie Cole and Teresa Johnson.

Six new men are expected to join the fold to go along with top returnees Shawn Welo, Adrien Ladum and Dan Noyes.

R

RESEARCH CRITICAL TO SCIENCE CURRICULUM

IN A FOGGY SALT MARSH in the Salmon River estuary last summer, some Willamette students and their professor made a puzzling find: fungi common to forest soils were present on the roots of certain marsh grasses. Were the fungi active in that very different environment? If so, what, exactly, were they doing?

Not far away, on the windswept meadows of Cascade Head, other students worked with their professors to map 12 plant species and to note especially how the forest is moving to fill in the open spaces. The area's natural state is as forest, but it is being preserved and managed as grassland. The scientists considered, what are the implications of that management policy for the flora of the site?

Thousands of miles away, at Argonne National Laboratory near Chicago, students and professor wrestled with the data from an experiment in which neutrons bombard special glasses to reveal aspects of their atomic structure. Somewhere in the millions and millions of bytes of data the experiment generates, the scientists hoped to find out why the glasses' atoms are in more or less random arrangements, so different from crystals' strict order.

More and more, experiences like these are enriching the academic and professional lives of Willamette students and faculty as research becomes an increasingly important part of their natural sciences curriculum.

The University has been winning more opportunities for field research through grant-funded projects, such as a long-term ecology project at Cascade Head that began last summer with the support of the Murdock Foundation. And, on-campus research possibilities have expanded sharply thanks to grants and donations for major new scientific equipment.

In the physics department, for instance, the arrival of the \$175,000 x-ray diffractometer

this summer will permit for the first time research to be done on campus in the area of materials science, says physics Professor Dan Montague, for whom that is a field of special interest and

the one in which he works summers at Argonne. Now, says Montague, students will be able to do work at Willamette that closely relates to the work they or others have done at Argonne, extending the value of the off-campus experience.

Students will find the new equipment exciting, predicts physics Professor Roberta Bigelow, "because it's obviously sophisticated, and they can get their hands on it. When they see they can effectively use

equipment like that, it gives them confidence they can use other sophisticated instruments when they encounter them later on, in grad school or on the job."

High-tech equipment has taken to the field, too, as in the case of the ecology project on Cascade Head. With part of the \$75,000 Murdock grant, geography and environmental science Professor Peter Eilers bought components of a geographic information system (GIS) that will be a tremendous aid in collecting, analyzing, and reporting ecological data.

The system includes a hand-held computer that consults with 21 navigational satellites circling the globe and in seconds tells the person holding the computer his or her exact position (within a couple of meters) on earth. Eilers and students will use that position-finding computer with a computer "notebook" in which they enter their findings at each location within the site they're mapping — angle of slope, for example, and types of plants growing there. Then, with a sophisticated new computer drafting program, they can report out the data in spatial form, generating a map of the site showing, for instance, all areas having a certain number of spruce seedlings on north-facing slopes in soils of pH 6 or less.

Not only will the new equipment make field work vastly easier and faster, says Eilers, but students who know how to use it will have an advantage in the job market.

"All the kinds of places our students go to work and study — the Forest Service, plan-

By Andrea G. Dailey

ning departments, you name it — they're all using the GIS method and these [computer] programs," says Eilers. "Because it's so new a lot of the people already in the workplace don't know how to use it, so the employers tend to hire new people on the basis of whether they know it or not. This is a way, potentially, for our students to get a foothold."

Hands-on experience in primary research is hardly a new part of the natural sciences program at Willamette. For years the four science departments have required a Senior Project of each major, a research study culminating in a written report and an oral presentation. Often, a student will choose to do independent work in addition to and sometimes as a preliminary to the Senior Project.

"A fairly high percentage of our students opt to go off to other institutions in the summer to do research," says chemistry Professor Norm Hudak. They go to schools such as Oregon Health Sciences University, Vanderbilt, University of North Carolina and Brown, to cite some recent examples. Back at Willamette, these students can choose to use their summer experiences as the basis for completing their Senior Projects.

Yi Zhang '94, a chemistry major, is one of those working off campus this summer. He is among 20 students selected nationwide to work at University of Texas Southwest Medical Center in Dallas, where he is studying transplantation immunology. "We want to look particularly at the activity of individual cells in transplant rejection reactions," says Zhang. "It's one of the top places in the country for that kind of research."

Zhang's previous research experience at Willamette was helpful in winning him the spot in Texas, he believes. He had worked with chemistry Professor Todd Silverstein and the Murdock-funded team last summer; Zhang and Silverstein's focus was soils chemistry, in particular the mobility of cyanide solutions in various types of soils. The question arises in discussions of heap-leach gold mining operations such as one proposed in eastern Oregon.

Zhang also had worked with chemistry Professor Art Payton during his sophomore and junior years on Payton's decades-long research into thermoelectric powers.

Payton has afforded many WU students their first opportunity to do basic research. For nearly 30 years he's been experimenting with the effects that temperature differentials have on electromagnetic forces in certain kinds of electrolytes, mostly strong acids

such as hydrochloric acid. If a student finds that kind of work "catches his fancy," as Payton phrases it, then he or she is welcome to join the project for a time, usually a school year but occasionally as long as two years.

The collaboration pays off not only in research skills but, for some students, in published articles. Payton and students have co-authored articles published in recent years in the *Journal of Physical Chemistry*, the *Journal of the Electromagnetic Society*, and the *English Journal of the Chemical Society Faraday Transactions 1*. Payton is working now with Zhang on another article which they will submit soon to the *Journal of Solution Chemistry*.

"I wish the journals were quicker in their publication process,"

says Payton, "because then students could point to [their published work] when they applied to graduate school or medical school. It's very unusual that an undergraduate has a 'real' publication with his name on it."

It's routine, however, for Willamette students to communicate with the scientific community in Oregon on the results of their work. Students make presentations annually at the Conference for Undergraduate Research. From time to time, students and faculty also report on their work to the Oregon Academy of Science and other forums; for instance, last year those involved in the Murdock ecology project made presentations both to the Academy and to a special colloquium convened by the Murdock Foundation for all those who had received its support.

Being at the Academy conference was a lot of fun, says Ethan Smith '93, and it nicely capped the spirit of collegiality that had grown among the students on the project. Smith, an environmental science major, had worked with Professor Eilers

and Diana Dry '94 to map the Cascade Head site. At the beginning of the summer, Smith says he was a bit disappointed to find each team working quite separately from the others in the field. "I thought we'd all be working together at the site, and there would be this big-team feeling where everybody got together to share results and things," says Smith.

The team feeling did happen, but off-site rather than on, when the students gathered in the university-provided housing they shared over the summer. "We built a sense of community, seeing and talking to each other about our work," says Smith. "It was really good because we could ask ourselves questions that we as



Above: (Top to bottom) Jim Osmer '90, Mark Nockleby '89, Corrine Grande '91, Professor Dan Montague and Chris Knotz '90 work on the prototype instrument, GLAD, the Glass Liquid and Amorphous Materials Diffractometer. The Intense Pulsed Neutron Source, Argonne National Laboratory.

individuals didn't have the answer to. [For instance] I'd ask a botanist which species of mallow I'd seen at this certain map point, and I could answer the botanist's questions about physical geography."

Peer-group learning was an important benefit for Krista Schauer '94, too, but "the most rewarding thing was to work one-on-one with a professor and be able to get into a project in depth," Schauer says. She worked at Cascade Head with the Murdock project director, biology Professor Sharon Rose, assisting Rose in studying the mycorrhizal fungi infecting the tufted hairgrass, *Deschampsia cespitosa*. They verified the fungi's presence, which had been suspected, and tried to figure out whether they operate as mediators between the hairgrass and the marsh environment in which it grows.

Results were inconclusive, Schauer says. She had planned to work on the project again this summer, with Rose, but during finals week learned she'd been picked as one of 10 students from across the United States to participate in a National Science Foundation-funded ecology project in the H. J. Andrews experimental forest near Eugene. Again, she'll work one-on-one with a professor, this time on a project of her own choosing and design.

Other students will continue research begun a year ago under the Murdock grant. Jennifer Butler '94 and Andrea Faust '94 began last summer helping biology Professor Susan Kephart with the 10-year monitoring of populations of the Cascade Head catchfly, *Silene douglasii* var. *oraria*, which may be eligible for federal listing as a threatened species. Kephart has studied and tracked *Silene* there for 10 years to see whether there are genetic variations in individual plants growing in the different microenvironments within the Cascade Head preserve.

Helping out on the monitoring gave Butler and Faust a chance "to see how a field project is actually done," says Kephart. "Then I encouraged them to pursue projects on their own, which they did very effectively." Butler and Faust studied the effect of color variations in *Clarkia amoena* var. *pacifica* on pollinators and reproductive success. A third student, Karen Hill '94, investigated the genetic relationship between a coastal mallow, *Sidalcea hirtipes*, and other mallows found in the Willamette Valley.

While Butler and Faust continue their work this summer with Kephart as mentor, the two young women will be mentors themselves to two high school students in an expansion of a program Kephart began last year.

"I decided one of the best ways to encourage better relationships among students, also to encourage students from high school to become involved in science, was if you had people from different backgrounds working together on a common project," says Kephart. "I thought we ought to be able to provide some opportunities for high school students in the area, some of whom might be minority, to be involved with our undergraduate students."

With a small grant from the Hardman Foundation of Monterey, California, Kephart canvassed area high schools to recruit applications and screen candidates. Two young men, one born in Cambodia and the other Hispanic-American, were selected to work with Kephart, Butler, and Hill.

It was a successful beginning, Kephart believes. "The high

school students began to get a lot better sense of what college is all about, what it's like to actually pursue a science project. The college students learned what it's like to try and teach somebody and learn at the same time." This year Kephart is continuing the program through a link-up with the Apprenticeships for Science and Engineering, a statewide program of the Saturday Academy and the Oregon Graduate Institute. Four high school students were selected to work over the summer, two with Kephart on botany and two with WU biology Professor John Koprowski whose special interest is vertebrate evolution.

Again this summer physics Professor Dan Montague has headed east to work in the Intense Pulse Neutron division of Argonne National Laboratory. With Montague is Amy Pierce '94, the latest of more than a dozen Willamette students to have had exposure to cutting-edge research in Argonne's world-renowned laboratories. Pierce has the option of working with Montague's team to study the behavior of alcohol under high pressure, or she can work with a colleague of Montague's from Penn State who is studying the behavior of supercooled helium.

In previous summers Montague and his students have experimented with certain kinds of glasses to better understand their atomic structure. The challenge is not in running the experiment itself — that consists of putting a cubic inch or so of material in a huge machine, pushing a couple of buttons, and going away for eight hours. The challenge lies in analyzing the data that come out of the experiment, which in turn means working with computers.

Each run of the experiment generates millions of bytes of data. Students first must sort through them and "correct to the point it's presentable from a scientific viewpoint," says Montague. "Then they have to do the calculations that convert the data into a picture that tells them the structure of the materials they're dealing with."

Because so much of the work is on computers, the students could do virtually as much problem solving if they stayed here and used Willamette's computers. But then they'd miss perhaps the most important part of the whole experience, Montague believes.

"What we cannot do here [on campus] is have contact with the other scientists, who come from all over the world, and discuss and argue and get involved with them," he says.

Nor could stay-at-home students enjoy the rest of the Argonne program. "Students are expected to see other things than just the office where they're doing calculations," Montague says. "They're encouraged very strongly to attend seminars, to go on tours. Fermi National Laboratory, the large, high-energy physics laboratory, is about 25 miles away, and trips to science museums, universities, and cultural events are there for them, too."

Naturally, students who want to get in on the Argonne summer program need to have studied physics, but a year is enough, says Montague, and not all are physics majors. In keeping with the liberal arts spirit, faculty emphasize that "this is an experience, an educational thing, and although we want to give physicists an opportunity to experience the research situation, we're also quite happy to have students who see something else and want to diverge to another field." ❧



Science Courses Seek to Develop True Understanding

SOCIAL,

ETHICAL

ISSUES

EMERGE

Above: Sharon Rose

By Andrea G. Dailey

The way science is taught and practiced at Willamette is changing significantly.

- Lower-level courses are moving decisively away from the old emphasis on learning a great many facts and being nimble at calculations and toward developing a true understanding of the basic scientific concepts.
- Nonmajors who take introductory chemistry or biology mainly to satisfy graduation requirements will this fall for the first time be in courses designed especially for their needs and interests.
- Field and lab research work is coming earlier in the science major's course of study, as soon as the sophomore year for some students.
- And throughout the science curriculum, especially in physics, the ever-growing number of ever more sophisticated computers is making old ways of learning unnecessary and new, exciting ways possible.

The equivalent of half the freshman class took the first semester biology course last year. Only 20 percent or fewer are likely to opt for a major or minor in science, yet Willamette like most schools had designed the course for that small minority.

This fall, nonmajors will have another option. "Instead of having a course that's information driven, which is traditionally the way it's taught, [Principles of Biology] will be a course that will give a lot of attention to the implications of biology — the social, ethical kinds of issues where there's a biology linkage," says Professor Scott Hawke, chair of the biology department. "We can talk about the environment, about cutting down the forests in the Amazon or the old growth here, and what biology has to say about that. Part of the course deals with body systems, so we can talk there about clean air, food and how it's treated, waste disposal."

Students who want to major or minor in science can take the more classically styled introductory courses, but they too have been recast. "We will engage students in the process of science," says Hawke. "We won't let the information load mask our view of how science is actually done — the scientific method [and] problem solving."

Science in action includes five new courses in biology research methods, which students can take in their sophomore or junior years. Each of the one-semester courses focuses on a different area of biology: molecular genetics, animal physiology, plant systematics and evolution, behavioral ecology, and microbial ecology. For juniors, a research methods course can be a direct lead-in to the independent research projects they're required to complete in their senior year. For sophomores and juniors, the courses are valuable preparation for summer research projects they often pursue, at Willamette and elsewhere.

If traditionalists are concerned that the new introductory course for nonmajors loses rigor because it changes focus, Professor Sharon Rose can reassure them. Rose, one of the faculty eventually teaching the course, says, "I don't see it as a rigor question as much as the direction the course is going to take. The students still will be learning science but they'll be learning, for instance, what's the implication of DNA sequencing so that [in later years] when they as voters are voting taxes for the human genome project,

they'll know about DNA.... It's more science literacy, if you will."

Giving students the ability to gauge the implications of scientific questions and policies is a goal of the environmental science curriculum as well. Professors Gil LaFreniere and Peter Eilers are reconsidering the core of the curriculum now to see whether any changes need to be made.

It hasn't changed much in the last decade, says LaFreniere; what has changed is the humanities component of the program with the addition of courses in environmental ethics and history and systems under stress. These he sees as "synthesizing" agents, "keystones that hold the whole structure of the program together."

LaFreniere is determined that the curriculum give majors a critical world-view approach to their discipline. "The unfortunate thing that happens to science majors is they lose track of the nature of their own culture.... So they do what we call 'normal' science, science based on the assumed paradigm of the discipline. They practice normal science without a cultural context from which to evaluate the consequences of the science they practice.... Without that, you're basically giving an environmental technology curriculum. Most of the curricula of the state universities are precisely that.... They've turned out environmental technicians whose function is to clean up the messes that result from the activities of the industrial-technological society."

Willamette's environmental science program has between 50 and 60 majors at the moment, says LaFreniere, a big jump from the mid-80s when there were as few as three. "This is a boom period, partly because as things have become worse in the environment there's been a lot of media [attention] about it, along with some of the fuss about a more environmental presidency."

The Chemistry Department also has an abundance of majors, so it wasn't a desire for more that prompted its faculty to embark four years ago on a comprehensive reevaluation of the introductory courses. The product of their labors, the "spiral approach" to first-year chemistry, debuts this fall.

The spiral replaces the straight-line, hierarchical approach science courses usually take. Introductory chemistry, like introductory biology, had been taught as if all students in the class intended to major in the subject, says chemistry Professor Norm Hudak, but in reality, "of the 100 or so students we have every year in [that course], perhaps 10 to 12 percent become majors."

"Furthermore, many [nonmajors] do not complete a whole year but choose to take only the first semester. Yet our course has been taught as a year sequence, and those students who don't take second semester have a somewhat warped picture of what chemistry is all about."

In the spiral approach, students in the first semester survey "most of the concerns of modern chemistry — chemical bonding, buffer solutions, chemical equilibrium, electrochemistry. Obviously we can't do that in great depth," says Hudak, "but we want students to have an understanding of what modern chemistry is about. The trade-off we are willing to make is to minimize the amount of mathematics that go with that but maximize the applications of it."

In second semester, students will travel the spiral back to the major topics they greeted earlier, this time studying them in greater depth which includes more math.

The spiral approach is so novel that no text on the market was suitable, so the Willamette chemistry faculty developed its own. Working last summer under a grant from the National Science Foundation, professors refashioned an existing basic text into a 265-page guide to first-semester chemistry, spiral style. For the second semester of the new curriculum, they developed another, entirely new book comprising eight case studies of chemistry principles in various applications. Both Willamette products will be packaged and sold together with the traditional text from which the elements of the spiral were extracted.

"We view this as a pilot project which might be used by other institutions across the country," says Hudak. "This is the reason, I'm sure, that the National Science Foundation was willing to support us." The rest of the country learns of the spiral approach in August, when Hudak reports on it to the national meeting of the American Chemical Society.

Lab sessions for introductory chemistry have been revamped completely, too. Until now, the labs have been "pretty much what you'd call cookbook labs," says chemistry Professor David Goodney. "We have laboratory instructions, and ... a student makes measurements and does calculations to see if [experiment results] match up with what they would predict from theory. We wanted to get away from that."

Instead, faculty have created what are called discovery labs, "where you make measurements and try to figure out what those measurements mean," Goodney says. A discovery-style lab gives students more flexibility in deciding how to proceed with the experiment and more responsibility for assessing results and drawing conclusions from the data.

"Discovery" and "meaning" are signal words also in the Physics Department's full-scale review of its curriculum which began last year. Though the review isn't complete, the department chair, Professor Roberta Bigelow, expects to see a new introductory course and probably new math requirements for higher level courses.

The new first-year course will be so different, Bigelow expects, it shouldn't be called introductory physics. "Rather, it's [a course] a person would take to become literate in physics, a knowledgeable reader of things we see all the time in the newspapers, magazines, and the best-seller list."

"If you read the mission statement of our school, a lot of the things it says about critical thinking and a foundation for learning, these are exactly the things a physics course does for you," Bigelow believes.

Beginning courses for physics majors also would change dramatically if they were modeled on Professor Maurice Stewart's view of the ideal.

Stewart is a passionate advocate of the less-is-more principle of teaching introductory physics. The principle holds that reducing course content by as much as 80 percent is essential to students'

developing a true understanding of basic physics.

"If you teach introductory physics for very long," says Stewart, who has been doing so at Willamette since 1958, "you don't have to be very alert to notice that the students are not getting it." The reason, he thinks, is the plethora of facts and the prizing of what he calls declarative knowledge, or, less kindly, parroting.

"The job of science education, which is done extremely badly in most places, is a strictly declarative thing. You memorize all the muscles of the arm, or the densities of various chemicals — all this stuff that's totally irrelevant since the invention of the book. It seems to me that our job, if we're going to provide liberal education in science, is to give the students operational knowledge."

Operational knowledge, Stewart says, is a profound understanding which most people can gain only slowly after long study and reflection. Therefore, the curriculum must be completely revamped and its coverage drastically reduced. That might result in students' having gaps in their view of the field. "They may never have dealt with, say, the elastic properties of materials, for example. But they have learned the analytical approaches, the mathematical techniques, the means of testing themselves to verify understanding, so that they're able to go out and learn these other things on their own."

While physics faculty debate the architecture of the ideal curriculum, none of them question the great and growing importance of the computer as a pedagogical tool.

"Computers are having the same sort of effect on the classroom as hand-held calculators did," says physics Professor Dan Montague. "Students can do much more detailed and realistic problems, using processes they can apply when they go on to grad school or into work situations."

A \$45,000 grant from the Meyer Memorial Trust last year went to buy 12 powerful personal computers and sophisticated software for the physics I and II labs. The system is "flexible enough, it's just what the [beginning] students need," says Bigelow, "and it's sophisticated enough it allows students to become progressively more involved in programming, to the point that as seniors they can use it in their senior projects."

Computers also vastly expand the resources readily available to Willamette scientists beyond campus bounds. Through Internet, an international computer network, students and faculty can do research worldwide and participate in projects and share data with colleagues anywhere. For instance, Bigelow in her Collins office can work virtually alongside physicists at George Mason University and University of Maryland with whom she is developing new simulation programs for nuclear and particle physics courses like the one she teaches at Willamette. Bigelow's team is part of a National Science Foundation-funded consortium of 30 physicists from all over the country. "It's been very exciting, very stimulating for me professionally," she says, "not only because the project is the first of its kind but because of the close contact with a very diverse group of people." ❧

Kresge Challenge Nets \$600,000

The arrival of several major pieces of advanced science equipment recently and over the next few months, made possible by the University's successful completion of the Kresge Challenge this spring, has Biology Professor Scott Hawke, among others, optimistic about the future of the sciences at Willamette University.

Hawke is optimistic because the University will receive six different pieces of major science equipment worth more than \$600,000. These instruments include:

- A Fourier-Transform Nuclear Magnetic Resonance (FT-NMR), used to obtain information about the structure of biological macromolecules;
- A Gas Chromatograph/Mass Spectrometer (GC/MS), used in a variety of laboratory experiments because it is required for the isolation and structural determination of any active compound;
- A Scanning Electron Microscope (SEM), used for specimen identification of a wide variety of biological and geological samples;
- A Spectrometer System, used in the measurement of emission spectra from a few nanometers to a few millimeters;
- An Ultracentrifuge, used to isolate and purify cell membrane fractions, artificial membrane preparations, and cell DNA and RNA; and
- An X-ray Apparatus, used for direct measurements of the structure of materials through the use of diffraction.

Even though most of the new equipment has yet to be used by students, it is already helping facilitate major improvements in the sciences at Willamette. With the new equipment, the University's laboratory sciences will be able to implement better a new curriculum which will be more collaborative and experiential in nature. This curriculum change from passive to more active learning, according to Hawke, "takes us out of the 19th century and into the 21st."

"We've made substantial progress, in terms of what Willamette is doing in the sciences, in the 20 years I've been here," continues Hawke. "Compared to two decades ago, it's like night and day. This Kresge equipment will only help further that progress."

By Chris Roche

In Science Education and Research Alumni Barbara Bentley and Joseph Stewart Are on the Cutting Edge



*"I love teaching. I
daydream about teaching.
When I'm on the
Stairmaster or walking
down the street, I'm always
thinking of things to do
in my classes."*

By Andrea G. Dailey

Barbara Bentley '64

"Study lupines and see the world" could serve aptly as Barbara Morse Bentley's motto.

The ecological interactions of *Lupinus*, a leguminous plant species, are a special research interest of Bentley '64, who is a professor of ecology and evolution at State University of New York—Stony Brook. Her work takes her regularly to what she calls her second home, Bodega Marine Lab, and the lupines in the coastal prairie of Bodega Bay, about 40 miles north of San Francisco, and to Duke University in North Carolina where she is cultivating test plots of lupines. Occasionally, her research also takes her to Chile and Australia where a certain variety of lupine is grown commercially.

Last year, for instance, as part of her sabbatical she spent several months on a 4,000-hectare farm in western Australia, studying the sweet lupine crops growing there. In particular she was interested in insect predation of the crop, which is grown for its nutritious seed as soybeans are grown in this country. Even though the leaves of that variety of lupine contain no toxins—hence the distinction "sweet"—Bentley found very little insect damage to the plants.

"Basically the insects have yet to discover that it's food," she says. "It's a relatively new crop there, about 10 years or so, and insect feeding patterns don't change very fast. What it really means is the farmers there are on borrowed time. When the insects figure it out, watch out."

Life on the isolated farm, where her daughter's school was 35 miles away and even the school bus stop was five miles from the house, was in "wonderful" contrast to Bentley's usual high-speed life as a Long-Island-based teacher and researcher.

At Stony Brook, a research university, the pressure is always on to do research, she says. Yet, "I love teaching. I daydream about teaching. When I'm on the Stairmaster or walking down the street, I'm always thinking of things to do in my classes."

This coming school year she'll teach an upper-division ecology course to about 100 students and will lead a new honors

section in general biology for freshmen and sophomores. She helped develop the honors curriculum as a partial antidote to the ills of having 800 students in the introductory biology course. "We hope to take the most highly motivated, focused students from that large group and give them a more rigorous, interesting introduction to biology," she says. "Yes, it's half a loaf, but —."

Bentley also is part of a team rewriting the labs for the introductory course in order to emphasize scientific method rather than simply present facts. To illustrate the problem with the latter, traditional approach, she cites a study she's recently read: "Students who take introductory biology have more new words to learn in a semester than students who take introductory French. That puts it in perspective, doesn't it!"

Bentley's current research with lupines includes a large study of the possible effects of global warming, which results from excess carbon dioxide in the atmosphere. In test chambers at Duke University she's growing lupines in atmospheres with various concentrations of carbon dioxide. Earth's atmosphere today has about 350 parts per million (ppm) of carbon dioxide; at the present rate of increase, scientists estimate the ratio will rise to 500 ppm in 25 to 50 years and to 600 ppm in 75 to 100 years. Bentley's research indicates that up to a point, "global change will be wonderful from the perspective of *Lupinus*. The plants grow absolutely huge and get very toxic [to insect predators] at 500 ppm [of carbon dioxide]. But at 600 ppm, the plants don't do any better than at 500. We think it's because the plants are suffering damage from very high rates of photosynthesis. It appears the cell walls are being damaged from too much starch."

The research implies profound disturbances in the existing order should global warming reach those levels. About 75 percent of species in tropical forests are, like lupines, legumes, says Bentley; any major change in their growth rates or well-being would have serious consequences for the planet. In agronomy, the competitive relationship would change between leguminous plants like clovers which can fix their own nitrogen and those that can't, like wheat; so leguminous weeds would become a greater problem. Changes also would affect the nutritive value of grasses so that cattle would have to eat more to get the nutrition they need.

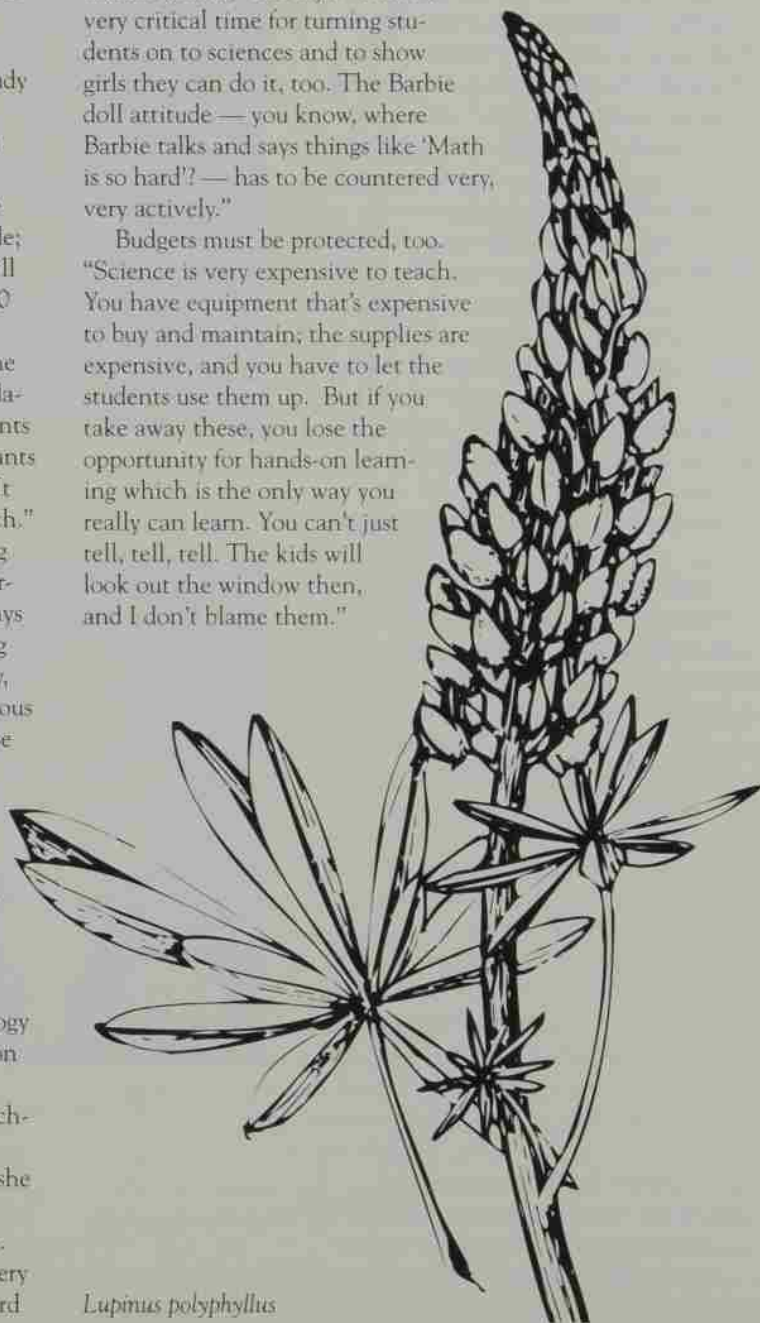
Bentley's scientific interest in the tropics and the legumes that live there was ignited when she was a graduate student in zoology at UCLA. She happened into an eight-week advanced field biology expedition to Costa Rica, and it "absolutely turned my life around, being around people doing biology 24 hours a day and loving it, and I loved it! If I hadn't gone on that trip, I probably would have been a high school science teacher." Instead, she spent two years in the Peace Corps teaching biology at a Liberia, West Africa, college. Later, for her Ph.D. in systematics and ecology from University of Kansas, she returned to Costa Rica to do more research, which she completed while toting her newborn son around in his hammock.

She remains keenly interested in tropical ecology and is very active in the Organization for Tropical Studies on whose board

she has served since 1974. Among other current leadership roles, she chairs an Ecological Society of America committee on recruiting and retaining women and minorities in ecology. "Ecology as a discipline is steps ahead of, say, chemistry or physics," she says, "but even so we should be doing better than we are. Ecology, the subject, is attractive to many people, especially kids, and we think it could well serve as a conduit for people into any of the natural sciences, not just ours."

Bentley is deeply concerned about science education at the precollege level, not the least because her daughter is now in middle school. "Most schools don't really offer science until middle school," she says. "That's a very critical time for turning students on to sciences and to show girls they can do it, too. The Barbie doll attitude — you know, where Barbie talks and says things like 'Math is so hard?' — has to be countered very, very actively."

Budgets must be protected, too. "Science is very expensive to teach. You have equipment that's expensive to buy and maintain; the supplies are expensive, and you have to let the students use them up. But if you take away these, you lose the opportunity for hands-on learning which is the only way you really can learn. You can't just tell, tell, tell. The kids will look out the window then, and I don't blame them."



Lupinus polyphyllus

Joseph Stewart '59

As a college physics professor for nearly 30 years, Joseph Stewart '59 had a close-up view of the inadequacies, limitations, and just plain wrong-headedness in elementary and high school science in America. Now, he's in a position to help change all that for the better.

Stewart, a section head in the teacher enhancement division of the National Science Foundation (NSF) in Washington, clearly remembers the nadir of science education in this generation. "When Reagan came in...by '83, '84 things were pretty bad. The program...was not revitalized until the Bush administration. By '89 the NSF was trying to rebuild. They asked me to be a part of it, and I jumped at the chance."

Up to that point, Stewart had spent his career in small colleges and universities teaching physics to undergraduates and serving in various roles in the schools' administrations. After taking his master's degree at Stanford and his Ph.D. at University of Rochester, he returned to Oregon, to Pacific University, to teach and administer. He blended those areas in subsequent posts as well, at Keene State College in New Hampshire, University of Dubuque in Iowa, and Juniata College in Pennsylvania. It was at Juniata that the NSF found him in 1989.

Stewart's focus at NSF is to improve teacher training and science curricula in kindergarten through high school, or K-12 as educators refer to it. It's a huge undertaking.

"Some elementary schools don't teach science at all. In most of the others, the kids aren't allowed to learn science in a way that means anything to them. They have cookbook labs; they learn from texts. Yet there are some very excellent curricula out there for elementary science. One unit on botany, for example, uses 'fast plants' specially bred to germinate, develop, and go to seed in just a few weeks, so that the students can see the entire life cycle of the plant right there in the classroom. These curricula let kids actually do things, see with their own eyes and touch with their hands. Then they write about the experiment and the results, so they're using language arts, too."

With wonderful alternatives to dull science, why aren't things better?

"It's tough," Stewart says. "People don't want to change. Many elementary teachers don't even know science and therefore don't want to teach it. And it's very difficult for schools to provide those opportunities [for the teachers] to learn. You can't learn this stuff in a day. Some programs are four to six weeks each summer, and you have to go for several summers to complete them. That's a big investment on the school's part and on the teachers'."

The National Science Foundation is a big partner in that investment. The 400-plus "bread and butter" programs funded

through Stewart's division each year help some 20,000 K-12 teachers throughout the country improve their knowledge and teaching skills in science.

In high school physics, for example, Stewart laments, "Kids learn how to do problems without understanding the basic concepts at all." What's needed is a major change of focus, away from "algorithmic" learning of fact upon fact and toward "a very concrete approach to concepts."

That in turn requires "more discussion, more open-ended problems," Stewart says. For instance, "the universal law of gravity says that two bodies are attracted to each other. Coulomb's law says two charges attract one another if different, repel if the same. So the question for the class is, why do two laws that look the same work so differently? Then you get into discussions of why gravitational force is always attractive, what is the nature of mass, what is the nature of charge?"

Science education would improve a great deal, too, if teachers at both the high school and undergraduate level in college realized who it is they're really teaching, Stewart says.

"About 18,000 to 20,000 high school teachers in the U.S. are teaching physics," he says.

"Each year, colleges in the U.S. give about

4,000 bachelor's degrees in physics, of which 20 percent go to students who aren't citizens and didn't go to high school here. So, each high school physics teacher has 0.2 physics majors in his class, yet he's got the entire course set out as if he were teaching all physics majors. We say, if they want to teach physics majors, let them start in their second-year courses."

College-level science needs restructuring, also, Stewart says. "It's not so bad in small schools, but in most [others] it's pretty bad." Faculty need to be trained differently, to build their skills in teaching concepts; at large universities where the focus is on research and graduate-level education, there's the need to renew commitment to undergraduate teaching.

Stewart is keeping an eye on an NSF-funded program, now in its third year, to improve introductory college physics courses. "The average course now covers so much material there simply isn't time to deal with the concepts in depth. And there the students are, in a class with 300 others, trying to handle all this stuff in a course that, again, is designed just for majors, even though fewer than 10 percent of the students will go on to major in physics."

Of course, science education does have its successes, as the Stewart family illustrates. Son Joe '87 who majored in physics at Willamette later finished at Columbia University on the 3-2 program and now is in telecommunications with Mobil Corporation in Dallas, Texas. He lives there with his wife, Judith Neeland Stewart '88, who also attended Willamette. Stewart's daughter, Katherine, earned her doctorate in biochemistry and now is doing cancer research, also in Dallas.

The 400-plus "bread and butter" programs funded through Stewart's division each year help some 20,000 K-12 teachers throughout the country improve their knowledge and teaching skills in science.

Trio of Recent Grads Study and Conduct Research About Invasions, Chaos and Swelling

Amy Austin '88

The tourist in Amy Austin '88 appreciates that the Hawaiian Islands are so hospitable to visitors. The ecologist in her worries about it.

Austin is on the Big Island this summer, studying invasions of non-native grasses and their impact on the ecosystem. Her work is part of her fellowship in the Ph.D. program in biology at Stanford University.

"Islands in general are vulnerable to invasions," she says. "They often don't have the full checks-and-balances systems that environments on the mainlands do. And invasions are a particular problem in Hawaii, the most isolated islands on Earth, because so many species there are unique to that place. It's a very sensitive environment."

Austin began her fellowship at Stanford last fall after completing her master's degree in natural resources at Humboldt State University in northern California. Stanford's reputation in plant ecology and its generous treatment of graduate fellows — full tuition plus a nice stipend, guaranteed for four years — certainly were attractions for Austin, but it also was important to her to have an advisor whose research interests were a good fit with hers. She says she found that in Peter Vitousek, an ecosystem ecologist whose expertise includes global climate change and the effects of non-native species on native habitats.

At Humboldt State, Austin had focused her research on reconstructing the vegetation history of a particular area around Lake Earl in northern California. Taking core samples from the soil and analyzing the pollens she found there, she was able to draw a picture of how certain plants first appeared in and later disappeared from the area over time.



Amy Austin '88



Scott Feller '89

Besides field research and coursework at Stanford, Austin also has been teaching there. The past year she taught in two discussion groups, one for a sophomore course in plant and population biology and the other for a junior course in botany. The terms of her fellowship require her to teach during three quarters over the four-year period, but for her teaching is more than just doing her duty.

Her own goal is university teaching, and her time at Willamette, where she majored in environmental science, helped define that goal for her, she says.

"I've felt very good about my undergraduate education, especially this year at Stanford," she says. "I was a little intimidated when I applied here because I knew I'd be with students from Harvard and big schools. But many at Stanford say a liberal arts undergraduate education may be the best basis for graduate school."

"I look at the biology majors here — they're infused with incredible amounts of information and they've been taught by some very famous people, but I don't think they got the opportunity for the critical insights that I did at Willamette, and many of them didn't get the opportunity to work closely with professors and get to know them as role models."

"I liked the breadth of the science program at Willamette, and the faculty — Gil [LaFreniere] and Peter [Eilers] — are just terrific. I worked with Gil one summer doing library research, and I got to work on the [Martha Springer] botanical garden another summer with [biology Professor] Susan Kephart. That was one of my proudest moments, to be involved with that."

"A lot of large, research-oriented schools forget how important it is, in the undergraduate years, to ignite students' interest and enthusiasm. Willamette never forgets."

By Andrea G. Dailey

Matthew Trump '88

Chaos is an important part of Matthew Trump's life nowadays, and that's a glad-some thing to him. Trump '88 is flourishing not in a state of chaos but in the study of chaos — also known as nonlinear dynamics, a subfield of statistical mechanics — as a Ph.D. student in physics at University of Texas — Austin.

The environment in which he's studying it is as fascinating as the field itself, he says.

"This is one of the premier programs in theoretical physics, particle physics, and relativity," says Trump. "The director here is Ilya Prigogine, Nobel laureate in physics. I don't work directly with him, but he's around all the time. And there are a lot of other top researchers here, too. I feel I'm in the center of the action."

He wouldn't have been in physics at all, he believes, if he hadn't happened on Willamette and physics Professor Maurice Stewart. A Colorado native, Trump had started college at Georgetown University with the goal of entering the foreign service, but he dropped out after a while. Serendipity brought him to Willamette and handed him over to Professor Stewart as one of Stewart's advisees.

"He interested me in taking intro physics, and things just went from there," says Trump. Stewart's courses gave him "a good grip on what is essential and what is not essential — and there are so many inessential things taught to undergraduates, like how to solve lots and lots and lots of physics problems without a thought to the basic principles."

Trump's dissatisfaction is taking palpable form soon. He has written and will publish on his own *The Newtonian World*, a text for an introductory physics course for nonmajors. He's also generalizing the text in a companion piece, an "interactive study guide that will explain to anyone taking physics how to do physics problems in a logical way," he says.

"At a school like University of Texas, where there are 35,000 undergraduates, students spend so much money on supplemental study guides because the teaching they get in class and labs just isn't enough.

Stewart's courses gave him
"a good grip on what is
essential and what is not
essential..."

And the texts! The authors apparently can't figure out what's essential and what's not, if you look at the way they put their books together. I figure there's a market for books like mine as long as that's the way it is."

This summer Trump began work on his dissertation topic, chaos in special relativity, which examines behaviors of interacting particles traveling near the speed of light. "It's all theoretical physics, not experimental," he says. "My tools are pencil and paper, well, really chalk and chalkboard, not the big instruments and computers. A summer with [Willamette physics Professor] Dan Montague at Argonne [National Laboratory] taught me I'm not an experimental physicist."

He expects to receive his degree next spring but is uncertain at this time of his plans beyond that. "The post-doctoral field is jammed now with all the defense cut-backs and the influx of Russians. But I have my eye on a couple of things, and I figure I'll have fun no matter which way I go."

Scott Feller '89

Clay swells when wet and shrinks when it dries, facts that give headaches to farmers and engineers but present fascinating puzzles to researchers like Scott Feller '89.

Feller is completing his Ph.D. in physical chemistry at University of California — Davis. He has spent the past four years there studying statistical mechanics with Donald A. McQuarrie

whose texts on quantum chemistry and statistical mechanics are standard in undergraduate and graduate schools, respectively.

Feller's study at Davis is "all theoretical, but the work is fairly applied," he says. Using computers, he has been modeling the interactions of clay particles and other charged surfaces, such as water molecules. The models provide insight into the phenomena of shrinking and swelling that in the everyday world outside the laboratory cause highways to crack, landfills to drain improperly, buildings to settle, and farmers' fields to be less productive.

When Feller entered the Ph.D. program, straight out of Willamette, he discovered many of his classmates already had their master's degrees, which put him "a little behind the curve on research experience," he says. On the other hand, Feller had two journal articles to his credit, which few can claim as undergraduates. Feller had worked his senior year with Willamette chemistry Professor Art Payton, co-authoring articles on Payton's continuing research in thermoelectric powers. The articles were published in the *Journal of the Electrochemical Society*.

Feller is looking into opportunities to begin post-doctoral research soon, perhaps at a Department of Energy laboratory. "One I'm particularly interested in is dedicated to environmental cleanup," he says. "I'd be doing modeling of pollutants in soils, a very important area of research right now."

Eventually, he wants to teach. He's had more than a taste of it at Davis. His first quarter there, he was a teaching assistant for a 50-student discussion group in introductory chemistry. Last fall and again this summer he was the principal instructor in a section of introductory chemistry. The challenges were enjoyable, he says, but not what he thinks of as ideal when he considers a teaching career.

What is? "Well, something like Willamette would be nice," he says simply. ☼

FEATURE

Programs Help Build Bridges Between Willamette and Oregon's Schools



While science is alive and well at Willamette, the University has not forgotten the importance of helping develop science in the community. The University is facilitating science education progress in local public schools through a variety of out-reach efforts. Whether it be through the University's support and involvement in programs like Operation Physics and Expanding Your Horizons or through professors working with local high school students and teachers on special research projects, Willamette is making a difference in science by extending its educational influence beyond the conventional classroom and laboratory course settings.

Willamette's Operation Physics Summer Institute, for example, is an intensive one-week course for upper elementary and middle school teachers designed to improve their understanding of physics and to teach them how to teach physics better and with more confidence. In addition, participant public school teachers are provided the support necessary for sharing what they learn with other teachers in their school districts.

Karen Hamlin '75, an assistant professor in Willamette's education department, is the state director of the Institute and is one of the people who was responsible for bringing the program to Willamette last summer. Operation Physics, an American Institute of Physics program has taught more than 50,000 teachers how to better teach physics and is partially funded by the National Science Foundation. The program was brought to the attention of Willamette's education department by Barbara Bannister, an award-winning elementary school teacher. Hamlin was taken favorably by the program, applied for and received funding, and Willamette became the host of Oregon's sole Operation Physics program.

"I just thought it was an important area of concern," says Hamlin. "As a former middle school teacher, I'm aware of the need to strengthen science instruction in the middle level grades, particularly for girls and under-represented populations." Since most upper elementary and middle school teachers are women, most of Willamette's Operation Physics Institute participants are women. One benefit therein, according to Hamlin, is the increased potential for modeling that occurs when women teachers re-enter their classrooms more confident and better

WILLAMETTE'S PROFESSORS

AND FACILITIES ENABLE

OREGON'S TEACHERS

AND STUDENTS

TO LEARN MORE

ABOUT THE SCIENCES

*Above: Professor Susan Kephart (right) works with Jennifer Butler '94 and Jesse Gonzalez, a senior at McNary High School. They conducted research about the flowering and color variation of *Clarkia amoena* (Herald of Summer).*

By Chris Roche

—
“Operation Physics
has been very
successful at
Willamette because
of the efforts
of people like
Karen...”

—Bob Lee
—



Karen Hamlin '75



Bob Lee

prepared to teach science. Remarks Hamlin, “If girls see their teachers confident and having fun with science, they are more likely to be confident and enthusiastic in their approach to science.”

Last summer, in its first year, the Institute accepted 32 participants, a group composed of teams of teachers from different school districts around the state. Detailed workshops at the Institute featured magnets and magnetism, color and vision, and electricity. These workshops were taught by national physics experts Jim Stewart of Western Washington University and Patsy Ann Geise of Slippery Rock University. The Institute’s participants then were given materials to take back and use in their classrooms, as well as guidance on how to effectively present and share what they learned with their district colleagues. In October, the teachers were invited back to campus for a day-long follow-up, problem-solving session.

“Operation Physics has been very successful at Willamette because of the efforts of people like Karen,” says Bob Lee, the Salem-Keizer School District curriculum coordinator for math and science. “All of the necessary follow-up has happened, and because of that I think people feel like there’s a continual connection to the program. In fact, a very high number of the

teachers that were invited last year requested to be invited this summer, which is testimony to the success of the program.”

The Institute was funded jointly by Operation Physics, Willamette, and the participants’ school districts, since each party has a vested interest in the program. The school districts’ investments pay off in the sharing of knowledge that occurs between participants and their district colleagues. In the Salem-Keizer School District alone, for instance, participants shared information they learned through workshops given to about 300 other teachers. According to Hamlin, the benefits of the Institute to Willamette include increased exposure through the public school teachers being on campus, a public confirmation of the University’s commitment to the betterment of society, better prepared freshmen in science, and more women and under-represented populations confident in their ability to pursue and succeed in science careers.

Lee believes the Institute also has improved significantly the relationship between Willamette and the Salem-Keizer School District. “The most important thing Operation Physics is building is a connection between the school district and the University,” explains Lee. “Karen and John [Tenny, chair of the department of education] have gone to great lengths to build that relationship. You see, a great number of our teachers come from the state system, so they haven’t had much exposure to Willamette. Now, because of Operation Physics, Willamette is accessible to them... Now they see Willamette as an integral part of education, perhaps even more so than the state system given all of its budget problems.”

This year, Hamlin indicated Willamette’s Operation Physics Institute will be held August 9-13, and the workshop topics will be astronomy, simple machines, and energy. She eventually would like to expand the program, perhaps doing two weeks rather than one. Lee is optimistic about the future of the program under Hamlin. “The first year was a success, and I see it doing nothing but growing,” comments Lee. “The way it was handled, it is almost a sure-fire success.”

Another successful science program held on Willamette’s campus is Expanding Your Horizons. Designed to encourage young women to pursue careers in the fields of math and science, Expanding Your Horizons is a one-day program held each January. It annually brings hundreds of seventh and eighth grade girls and about 100 women presenters from the educational and business communities to Willamette’s campus.

Modeled after a program originally developed by the Math/Science Network at Mills College, the Expanding Your Horizons day includes a morning and an afternoon session. In the morning session, the junior high girls are involved in three separate 45-minute participatory workshops at Willamette, each of which focuses on a specific math or science career. The students choose three career workshops that interest them out of a possible 30, and each workshop is team-taught by a professional in the field of choice and an educator. Workshop topics include fields like botany, accounting, architecture, oncology, design, engineering, chemistry and dentistry. In the afternoon session,

each girl is transported to her choice of one of 15 off-campus business sites. At these business sites, the students are given the opportunity to observe a female role model in her work environment first-hand.

"This format has proved to be an excellent mix for Expanding Your Horizons," says Scott Greenwood '83, a university administrator who has been Willamette's liaison to the program since 1988. "These young women get to experience careers they may not have previously known anything about by both participating in career-related activities and observing professionals, all within the relatively short time span of one day. We believe the result is a powerful and very often positive impression."

"Expanding Your Horizons is about providing girls with successful women role models in math- and science-related careers," adds Laurie Adams, the business partnership coordinator for the Salem-Keizer School District and co-coordinator of Expanding Your Horizons along with Pat Abeene. "The intention is that these girls will be encouraged to take all the math and science classes they can in school and eventually pursue careers in those fields."

This year, Expanding Your Horizons had more than 400 seventh and eighth grade girls registered to participate from schools throughout the Willamette Valley before icy conditions forced the first-ever cancellation of the event. In planning the 1993 event, Adams and Abeene utilized 25 high school students who were former Expanding Your Horizons participants, a move which both reduced their workload and presented those students with important leadership opportunities. Next year's program is scheduled for January 8, 1994.

According to Adams, numerous members of the Willamette community have made significant contributions to Expanding Your Horizons. Students, faculty and administrators have served as educators, speakers and organizers. In addition to supporting the program through manpower and the use of facilities, Willamette supports Expanding Your Horizons by helping defray the program's marketing costs. Comments Adams, "Without all of Willamette's assistance, we wouldn't be able to have the conference. We're indebted to Willamette University."

Progress in science education for local students is also fostered by Willamette in less formal ways than through programs like Operation Physics and Expanding Your Horizons. Biology Professor Susan Kephart's quest to expose minority students to systematic and ecological studies of rare and endemic plants and to improve interracial relations through student science research projects, and her ability to secure the necessary funding for those projects, provided some Salem high school students and Willamette undergraduates with opportunities in science they otherwise might not have experienced.

Kephart believes that, even though many people refuse to acknowledge their presence, racial tensions exist in Salem and in Oregon. To help do her part to combat these tensions and to expose students to the diversity of studies possible in the field, laboratory and greenhouse, last summer Kephart put together a research team consisting of Willamette undergraduate students

Science and the Liberal Arts Education: Thriving at Willamette

How is the specialized and focused study of science faring at Willamette within the liberal arts philosophy of broad, general knowledge acquisition and basic analytical and communicative skill development? Consider the following:

- Willamette ranks in the top seven percent nationally among approximately 1,000 similar small, selective, liberal arts institutions in terms of graduates who have earned Ph.D.s, and many of these graduates are products of the University's science programs;
- Chemistry Professor Frances Chapple was selected as the Council for the Advancement and Support of Education (CASE) Professor of the Year for the state of Oregon in 1990;
- Among the University's many distinguished science graduates are Gerald Pearson '26 and Daryl Chapin '27, co-inventors of the solar cell; Neil Hutchinson '61, Director of the Columbia Space Shuttle flights; Frank Bash '59, Chairman of the Department of Astronomy at the University of Texas; and Richard Drake '55, an inventor of the Drake Willock kidney-dialysis machine;
- Out of an undergraduate student body of approximately 1500, more than 700 students are enrolled in science courses each semester and nearly 100 of these are science majors;
- The University graduates as many chemistry and physics majors as several of the large public institutions in Oregon, and the chemistry department is second on the West Coast in terms of percentage of graduating majors in relation to the size of the school and the number of faculty in the department;
- Of the qualified science majors who have applied to medical schools over the past six years, more than 80 percent have been accepted for admission; and
- Student research has resulted in the publication of articles in *Sky & Telescope* magazine, *The Physics Teacher*, the *Journal of the Electrochemical Society*, and *The Proceedings of the Ecological Society of America*.

By Chris Roche

Karen Hill '94, Jennifer Butler '94 and Christy Paladino '93 and two minority high school students, Jerry Lor, a North Salem High student who was born in Cambodia, and Jesse Gonzales, a Hispanic-American attending McNary High. "The best way to break down ethnic tensions and to build bridges between people," says Kephart, "is by working on something together. I felt like it would be nice for our students to be mentors and for the high school students to do research so that they could begin to see the excitement of discovery in science."

Much of the research done by Kephart and her student researchers was done at Cascade Head, a grass promontory located north of Lincoln City in Tillamook County and located at the base of the Salmon River Estuary. All of the students were engaged in an ongoing study of an endemic coastal plant, *Silene douglasii* var. *oraria*. In addition to that study, Butler and Gonzales worked in a team and conducted field and laboratory research designed to understand the variability patterns in a wildflower, *Clarkia amoena* var. *pacifica*. Hill and Lor worked together and investigated variability patterns in *Sidalcea hirtipes*.

From virtually all perspectives, the summer of research coordinated by Kephart was a success. Hill and Butler benefited from the paid experience and their role as mentor to the high school students. Paladino's hard work, much of which was spent assisting Kephart in her research, looks as if it will land her co-authorship of a paper, along with Kephart, which probably will be published in a journal. At the end of the summer, the two high school students presented the results of their cooperative efforts in the form of two posters that were exhibited at an August conference for the Apprenticeships in Science and Engineering (ASE), a program sponsored by the Saturday Academy of the Oregon Graduate Institute.

If the rave reviews of Lor and Gonzales are any indication, Kephart's efforts made a difference. "I found it very interesting, and I really enjoyed it," says Lor. "I liked how we had such a small group and we could communicate easy and that really got you into the program. I think she (Kephart) is a very, very nice person and she helped me a lot.... I think they should expand the program so that people with other interests can get involved, too."

"I never really worked on a team project in high school," adds Gonzales, who hopes to become a chemical engineer. "It was also the first chance I've had to work with someone outside school; it was a new experience for me. ... I didn't really know too much about Willamette, even though it's right here in Salem, until last summer. I'd say it's a good school, and now I know why you always hear that from everyone."

Funding for the research done by Hill, Butler and Paladino was provided by grant money given to Willamette by the Murdock Charitable Trust for faculty and undergraduate research in the sciences. To fund the research of Lor and Gonzales, Kephart applied for and received grants from the Hardman Foundation and the D.A. Hoover Foundation, and Willamette contributed an amount which matched the funds

provided by those foundations.

This summer, both Kephart and Biology Assistant Professor John Koprowski put together teams of undergraduate and high school researchers for two separate projects. Kephart and Koprowski secured funding for their projects from ASE, the Forest Service, and the Oregon Independent College Foundation, and Willamette students involved received two undergraduate research grants. All together, these grants have provided enough funding for four high school students (two of whom are minority students), six undergraduates, and one field botanist from Salem to assist Kephart and Koprowski in their research projects.

Formally and informally, Willamette quietly but steadily is helping advance science in schools in many other ways as well. Willamette has made its facilities available to agencies like the Columbia Education Center, a non-profit organization which has conducted federally-sponsored Summer Institutes for teachers from the western United States on science topics at the University since 1988. Teachers like South Salem High's Ron Cross have attended science teaching workshops on-campus, have been able to bring students to Willamette to use laboratory equipment, and have benefited from equipment donated to South by Willamette.

Bea Epperson, a science teacher at McNary High, encouraged Jesse Gonzales to apply for the minority summer research project under Susan Kephart at Willamette. One of the classes she teaches at McNary is a research class in science, and over the years, with the blessings of Biology Professor Grant Thorsett, Chemistry Professor Norm Hudak, and others, Epperson has brought a number of her science students from that class to Willamette to use science equipment or to do research. All of her research students at some point also make use of the Hatfield Library.

In February of 1992, Epperson was named the Scientist of the Year by the Oregon Academy of Science at a ceremony held on Willamette's campus. She wisely has taken advantage of the University's resources and appreciates Willamette's accessibility and the prominent role it plays in science education in the community. "I think it's a wonderful institution, and the staff there is very involved in facilitating high school students in their scientific endeavors," says Epperson. "I just can't speak highly enough of the staff at Willamette and their outreach. They're not just working in their Ivory Tower, they're out there helping people, specifically students. ... We wouldn't be able to do the work we do at McNary without Willamette." ❧



Bea Epperson

Boyer Offers Six Principles to Turn Higher Education into Communities of Learning

By Cesie Delve Scheuermann



AS DR. ERNEST BOYER walked to the Cone Chapel podium, the audience knew they were in the presence of an elder statesman. And indeed, Boyer has been and continues to be a major spokesman in the educational reform movement in the United States. As the last U.S. commissioner of education before the position became cabinet-level, Boyer worked to improve the country's

educational system. Currently, as the president of the Carnegie Foundation for the Advancement of Teaching, he continues his role as the tickler of the conscience of those who view education as a peripheral to our national success.

Boyer came to Willamette to conclude the Educational Programs Committee series, "Higher Education: Revolution or Evolution." His remarks focused primarily on his 1990 book *Campus Life: In Search of Community* and were directed to the students, administrators and faculty members that made up the bulk of the audience. Boyer spoke of the six principles that should govern colleges and universities as they attempt to create communities of learning.

First, Boyer stated, it is in the classroom where the spirit of community must start. The great teachers who taught him had four common traits: they knew their subjects, they knew how to relate that material, they were active, not passive, educators, and they shared themselves with their students. Most of all, the great teachers were learners themselves. Referring to his most recent work, *Scholarship Revisited: Priorities of the Professoriate*, Boyer encouraged students to practice the same dimensions of scholarship that professors must practice: to discover knowledge, to integrate knowledge, to apply knowledge and finally to teach about the knowledge they have acquired.

The second way for a campus to create a sense of community is to encourage a climate of open communication. Boyer spoke of the need for people to listen and speak more carefully. In his book *Campus Life*, he states, "...if a higher learning institution is to fulfill a larger function — if it is to sustain a climate of reasoned discourse — the quality of communication on campus must be measured not just by clarity of expression, but by civility as well."

A campus community will also be a place where diversity is honored and will be vigorously pursued. As he recited Langston Hughes' famous poem "Dream Deferred," Boyer acknowledged that we are a nation deeply divided, specifically over the issue of race. It is critical that universities who seek to develop a sense of community encourage and affirm, in word and deed, respect for every person on campus.

A fourth principle for developing community is that there be clearly defined codes of conduct. Boyer spoke about the tension that often arises from limiting personal freedom and imposing group constraint. Historically, although the concept of *in loco parentis* (literally, in the place of a parent) was abolished in the late '60s and early '70s, nothing replaced it. Universities began to treat students as adults, able to handle all the pressure and rigors of living away from home for the first time. In our "post-*in loco parentis*" period, colleges and universities are struggling to define their governance and disciplinary structures in a more integrated fashion to provide appropriate freedom while holding students accountable for their behavior.

A caring institution, "bathed in compassion," is the fifth mark of a campus community. Of particular note, Boyer stressed that service to others is encouraged — not only to those outside the campus confines but within its walls as well. Caring needs to be first of all rooted in the classroom and must be spread to all of campus including secretaries, receptionists and resident assistants. Each of these groups, plus others, needs to be part of the community of learning by being given dignity and status.

Finally, a campus community must be a celebrative institution where milestones are measured and rites of passage are observed. Quoting the educator John Gardner, Boyer said, "A nation is never finished, it is recreated with each new community." These communities are recreated and grounded in the traditions, both old and new, and history of an institution. Commencement, new student orientation, and opportunities to affirm diversity while celebrating community are all ways in which a campus can underscore what makes it a unique and honored place.

As Boyer was ending the evening he said, "Community is not a place, it's a state of mind." Ernest Boyer's presence on campus offered us an opportunity to reflect on the things that we do well to create community. But more importantly, Boyer also gave us a chance to think about ways in which we might expand our vision of what this, the Willamette community, might be like.

Editor's Note: Cesie Delve Scheuermann is the director of student activities and the University Center at Willamette University. She is the advisor to the Educational Programs Committee.

Scientific Community Asked to Show

...although science is a powerful tool that can give us unique insights, its often reductionist approach assumes "that we can understand whole systems by focusing on the small."

TO TRANSPORT ONESELF into the mind and soul of David Suzuki is to discover a wealth of insights and perspectives not only about science but about the human condition. To do so is also to recognize that individuals, and even entire disciplines of study, are guided by what Suzuki calls "sacred truths" — ideas, attitudes, and values that are colored by "perceptual filters." Suzuki describes these filters as having arisen from personal histories and belief systems "so deeply ingrained" that we often fail to recognize that the so-called truths are in fact myths that have grown out of our own limited experiences and training.

One of the myths that Suzuki himself faced well after completing an undergraduate degree at Amherst College, and a doctoral degree from the University of Chicago was the all-powerful view of science as the one entity that "would result in great understanding and the ultimate improvement in life for all of humankind." A third-generation native-born Canadian whose ancestry is Japanese, Suzuki's education occurred during the post-Sputnik era when science was rapidly "exploding in vigor and knowledge, yet the world was not getting better and better." Suddenly his belief that nothing existed within the universe "that science couldn't ultimately attack and answer," had emerged in sharp conflict with reality.

Suzuki recognized that although science is a powerful tool that can give us unique insights, its often reductionist approach assumes "that we can understand whole systems by focusing on the small." Such an approach fails to adequately address "synergistic interactions" and an assortment of new, emergent properties "that cannot be predicted on the basis of

the individual parts." Even the many properties of something like water, he argues, are impossible to predict based simply on the known atomic structure of hydrogen and oxygen. Nor did scientists earlier in this century recognize the indirect cost of discoveries such as penicillin and DDT. Suzuki recalls how his mother sprayed DDT over the family dinner because at the time "DDT was regarded as a miracle chemical that didn't affect us," the indirect human consequences of biomagnification in the food chain were as yet unknown. How important it is then, Suzuki argues, for today's scientists to understand the limitations of their endeavors, and to move slowly with new technologies such as designer drugs and gene transfer. This way we can better anticipate and test some of the possibilities and can engineer self-contained systems that reduce the potential risks.

Another element of his disillusionment with the myth of science as strictly objective and beneficent came when Suzuki learned that he had "graduated as a fully licensed geneticist without ever being told that the eugenics of the Nazi Race Purification Act had anything to do with genetics." In fact, "what happened (in Nazi Germany) was not the work of one madman — the groundwork was laid by outstanding scientists in that country." Even North American scientists had been hesitant to call some of the eugenics work into question. Suzuki notes that similar problems have resulted from "scientific" claims made about other minority groups, including blacks and women, that are merely "value judgments having nothing to do with science." In the case of Suzuki's own education, scientists had filtered from their history aspects that were unpleasant to

By Susan Kephart

More Concern for Earth

face. Though scientists make mistakes, Suzuki comments, "one way to ensure that we have a high chance of remaking mistakes is if we selectively censor our history." History, however unpleasant, is important!

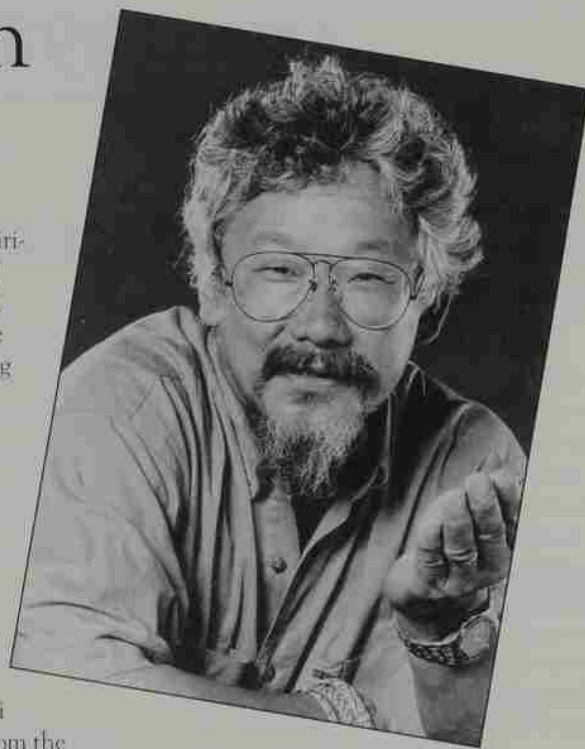
Although Suzuki has authored many scientific publications, including 17 books, his works have also touched the general public via television and public broadcasting. He began this portion of his career as an advocate for greater funding in science only to discover the tremendous impact that scientific discoveries were having on the public. He deplors the unwillingness of many scientists to become involved in public policy issues. He is further saddened that scientists, who clearly have such an interest in the organisms they study, sometimes distance themselves so greatly from their work that they "lose any sense of caring" about the impact of political decisions on the habitats and ecosystems that sustain us all. He notes that the "principles of politicism are too short for the real changes we need to make," and that although we ought to "encourage our best people to enter politics and honor them," we can't expect politicians to lead the way in making the long term changes that are needed. This role is better achieved by scientists and the public working together.

Suzuki also decries the "sacred truth" that makes "economics the *raison d'être* of our existence" and that places "air, water, soil and plants—all essential to survival—as externalities outside the GNP." He notes that some of these essential elements are also used as "garbage cans for toxic wastes." Suzuki is encouraged, however, by the "confluence that is happening between our leading elders in science and the elders of traditional people around the world."

He compares the respect and spirituality that have been accorded the natural world by indigenous cultures with the growing "sense of reverence or awe for the living world" among scientists. Many now recognize that other living species are intertwined with our own existence and are also our "genetic relatives." Humans must recognize that our existence does not "lie above or outside the natural world," nor should we "willfully use up what belongs to future generations." That Suzuki lives his own credo is evident from the family policy of walking, biking, or busing within 10 blocks of home and of reducing home garbage to one bag per month!

Finally, for all of his endeavors, as scientist and humanitarian, David Suzuki has received numerous awards, including election to the Global 500 honor roll of the United Nations Environment Program, a gold medal award from the Biological Council of Canada, and many honorary degrees. Despite his international reputation, he is thankful for his liberal arts education at Amherst College and would most like to be remembered for his children. There is "nothing I am more proud of than the fact that my children are decent and represent my major gift to my family."

Editor's Note: Susan Kephart, a professor of biology, has been at Willamette University since 1981.



Above: David Suzuki

*Suzuki decries the "sacred truth" that makes "economics the *raison d'être* of our existence" and that places "air, water, soil and plants—all essential to survival—as externalities outside the GNP."*

GIFTS AND GRANTS

Sesquicentennial Campaign Report

Propelled by a record-breaking year in which an all-time high \$11.4 million was raised, Willamette University's \$50 million Sesquicentennial Campaign is nearing the three-quarters mark with gifts and pledges totalling \$37.4 million. The chart to the right summarizes the campaign components and commitments as of May 31.

"We are delighted by the tremendous support Willamette has received from alumni and friends this fiscal year," says Barbara Mahoney, Willamette's vice president for university relations. "While there is no question the academic environment at Willamette has been enhanced tremendously by the \$37 million we already have raised in the Sesquicentennial Campaign, we must now turn our attention to the successful completion of the campaign in 1994. As the end approaches, I am particularly interested in trying to bolster some of the important campaign components that are behind our goals."

Mahoney then cited the following five Sesquicentennial Campaign component areas as being top priorities for the remainder of the campaign:

- Academic Programs Endowment (2.2 percent of goal to date): Gifts to this category give individuals an opportunity to endow a fund that meets all or part of the expenses in an academic program. Virtually any academic program can be endowed — from existing activities like the Center for Dispute Resolution, International Education, or Undergraduate Research, to new programs like the Computer Writing Laboratory or the Science and Technology Lecture Series.

- Fine Arts Renovation (14.4 percent of goal): The Fine Arts Building, which includes Smith Auditorium, is one of the most heavily used buildings on campus. Significant improvements have been made to the Fine Arts Building in recent years, but a critical need exists to renovate or replace the existing music practice rooms in the East wing of the

SESQUICENTENNIAL CAMPAIGN NEARS THREE-QUARTERS MARK

Component	Goal	Commitment	% of Goal
I. Endowment			
Faculty Chairs	\$5,000,000	3,309,159	66.2
Scholarships	5,000,000	7,572,330	151.4
Science/Computer Equip	2,000,000	1,272,975	63.6
Faculty & Curriculum	1,000,000	474,910	47.5
Unrestricted	5,000,000	1,702,065	34.0
Academic Programs	2,000,000	43,405	2.2
II. Capital Projects			
College of Law	\$7,000,000	3,862,649	55.2
Science Building	5,000,000	0	0.0
Fine Arts Renovation	1,000,000	143,575	14.4
Athletics Facilities	1,000,000	1,456,686	145.7
Student Life	2,500,000	2,080,000	83.2
Campus Development	500,000	962,633	192.5
Miscellaneous	1,000,000	1,383,613	138.4
III. Unrestricted Annual Fund	4,000,000	3,091,131	77.3
IV. Restricted Operating Projects			
Non-Endowed Scholarships	3,000,000	3,802,292	126.7
Science Equipment	1,000,000	705,366	70.5
Instructional Technology	2,000,000	2,393,708	119.7
Library Acquisitions	1,000,000	349,697	35.0
Miscellaneous	1,000,000	2,820,926	282.1
Total	\$50,000,000	\$37,427,120	74.9

building. A new south entrance, which would open the building toward the Jackson Plaza and the main parking lot, and air-conditioning are also desirable.

- Unrestricted Endowment (34.0 percent of goal): The earnings from unrestricted endowment are applied as unrestricted operating revenue, where they are used to meet the most urgent needs in the educational budget. Start-up costs for new student-initiated activities; additional expenditures for books, materials, equipment, and scholarships; increasing minority representation on campus; and bringing distinguished visitors to campus are examples of needs that unrestricted endowment earnings help meet.

- Library Acquisitions (35.0 percent of goal): Well-stocked University libraries are critical to supporting Willamette's academic mission. Though maintaining a

quality library is expensive, libraries provide many of the tools that are needed for the curricular and research endeavors of students and faculty. Gifts to this campaign area will allow Willamette to fill thin areas within existing collections, respond to curriculum expansion and new areas of faculty and student research, and increase access to off-campus databases.

- Faculty & Curriculum Development Endowment (47.5 percent of goal): This endowed fund has been established for faculty and curriculum development projects and it is administered at the president's discretion. This endowed fund annually is providing financial support for a wide array of important academic projects.

By Chris Roche



SEMESTER CALENDAR

FACULTY COLLOQUIA

Faculty Colloquia: Work in Progress is a new series of faculty presentations of writing in progress which will take place throughout the academic year, with sessions every other Thursday, 4 p.m., in Eaton Hall 209. Each session consists of a 20- to 30-minute presentation/reading of a paper, followed by a similar period of discussion. Information: 370-6314.

❖ **Thursday, Sept. 2**

Gandhi's Ambiguous Message to Indian Women: Women's Conscience, Women's Role, Suresht Balt, Department of Politics.

❖ **Thursday, Sept. 16**

Alois Emanuel Biedermann: *A 19th Century Post-Modern Theology*, Douglas McGaughey, Department of Religion.

❖ **Thursday, Sept. 30**

Queery Theory, Frann Michel, Department of English.

❖ **Thursday, Oct. 14**

The Influence of Settler Origin on the Jewish Colonies of Entre Rios, Argentina, 1890-1910, Ellen Eisenberg, Department of History.

❖ **Thursday, Oct. 28**

Black Shoots Woman in Part: A Study of Race, Class and Gender in Three Oregon Newspapers, David Douglass, Department of Rhetoric and Media Studies.

❖ **Thursday, Nov. 11**

These Are Our Stories: Lives of Non-Traditional Women Students, Linda Heuser, Department of Sociology.

❖ **Thursday, Dec. 2**

Theorizing Theatre Space: Preserving and Transgressing Boundaries, Andrew Apter, Department of Theatre.

HOMECOMING

❖ **Oct. 1-2**

Memories for a Lifetime. Festivities will include reunions for classes ending in a "3" or "8," plus the Half Century Club. The Athletics Hall of Fame banquet is scheduled Friday, as are Greek open houses. Saturday will include the dedication of Ogdahl Field and re-dedication of McCulloch Stadium, a football game with Whitworth, and the Alumni Banquet which will feature Alumni Citation and Sparks Medallion recipients.

ATKINSON LECTURE SERIES

❖ **Monday, Oct. 4**

Author David McCullough, Smith Auditorium, 8 p.m. Tickets available two weeks before lecture at the Student Activities Desk in the University Center. 370-6463.

PARENTS WEEKEND

❖ **Oct. 8-10**

THEATRE

❖ **Oct. 8, 9, 14, 15, 16 (8 p.m.)**

Oct. 10, 17 (2 p.m.)

Terra Nova by Ted Tally, directed by Chris Harris, Kresge Theatre, 370-6222.

❖ **Nov. 12, 13, 18, 19, 20 (8 p.m.)**

Nov. 14, 21 (2 p.m.)

Women of Troy by Euripides, translated by Kenneth McLeish, directed by Rod Ceballos, Arena Theatre, 370-6222.

EPC LECTURES

The theme for the Educational Programs Committee lectures is *At the Global Crossroads: The Environment, Economy and Technology in the 21st Century*.

❖ **Thursday, Oct. 14**

Representative from the Jacques Cousteau Society, 7:30 p.m. 370-6463.

SPORTS

❖ **Football**

Sept. 18 at Simon Fraser
Sept. 25 at Western Washington
Oct. 2 Whitworth, home
Oct. 9 Pacific Lutheran, home
Oct. 16 at Eastern Oregon
Oct. 23 at Lewis and Clark
Oct. 30 Southern Oregon, home
Nov. 6 Linfield, home
Nov. 13 at Western Oregon

❖ **Women's Soccer (home games)**

Sept. 11 George Fox
Sept. 14 Linfield
Sept. 18 Alumni
Sept. 25 Whitman
Sept. 30 Pacific
Oct. 2 Albertson
Oct. 9 Pacific Lutheran
Oct. 10 Whitworth

❖ **Men's Soccer (home games)**

Sept. 10-11 Willamette Invitational
Sept. 25 Whitworth
Sept. 26 Whitman
Oct. 6 Western Baptist
Oct. 21 Westminster
Oct. 27 George Fox
Oct. 30 Pacific



ALUMNI CONNECTIONS

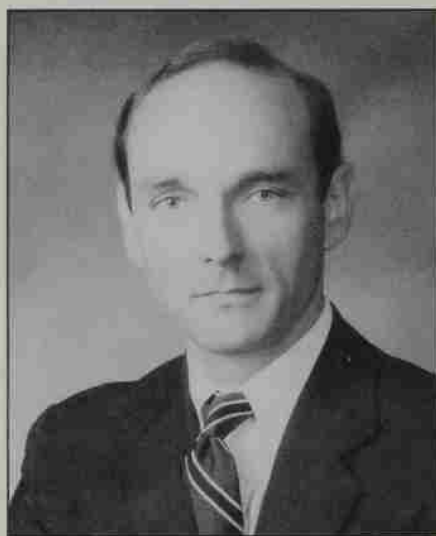
1992-1993 Alumni Annual Report

By P. Barton DeLacy '75, President, Alumni Association

LOOKING BACK, THE YEAR following our frenzied and celebrated sesquicentennial managed to maintain the pace, at least when measured by events and numbers of people involved. Your Alumni Association board of directors is pleased to have played a part in the planning and organization of many of those activities during the 1992-93 year.

The fourth biennial Alumni Leadership Conference was held this past fall during Alumni Weekend. Over 75 alumni came from as far east as New York and as far west as Hawaii to enjoy workshops on admissions, career development, reunion planning and alumni club planning. Following the Alumni Leadership Conference, many alumni attended the Greek reunions that Friday night, while over 175 assembled Saturday evening to honor new inductees into the Willamette University Athletics Hall of Fame.

Throughout the year, alumni clubs across the country (and in Japan) held receptions honoring Buzz Yocom, long-time registrar, executive assistant to the president and director of international education. No one in memory has enjoyed the extensive personal connections with so many past and present students. Clubs hosting receptions included Japan, Hawaii, New York, Washington, DC, Portland, Los Angeles, San Diego, Phoenix, Seattle, Oakland and Sacramento. (See the review of alumni club activities on page 34.)



But the big event for Buzz was his retirement dinner in Portland which was attended by over 200 alumni and friends at the Multnomah Athletic Club, where Buzz was roasted and toasted on March 12. The Community Relations Committee, chaired by Eric Fishman '88, did an excellent job of planning and organizing this dinner. A highlight was the photograph, which appeared in the spring issue of the *Scene*, of everyone holding up "Buzz masks"— Buzz said he was both amazed and terrified!

The Community Relations Committee also was active in revising the Directory of Alumni Programs and Services, helping with the Senior Party and organizing the Faculty Retirement Dinner. This year's Faculty Retirement Dinner honored Professors Bill Devery, Paule Drayton, Ted Shay, Julio Viamonte and

Libby Yocom. The Association presented each honoree with a scrapbook replete with letters and notes from alumni and friends. In addition, marble bookends were presented as mementos.

Once again the Career Development Committee was active. Continuing a new program started last year, the "What I Did With My Major" series presented alumni panels in physics, English, art and sociology, speaking to majors from those respective areas. In addition, the Committee worked on the second annual Mentor Day in Portland. Ninety-one juniors and seniors spent one-half day with an alum in a field of the student's interest, followed by a luncheon at the Multnomah Athletic Club. Committee Chair Chuck Best '75 was the M.C. and introduced trustee Stuart Hall '62 and alumna Erin Peters '88 as the featured speakers.

The Continuing Education Committee again approved a varied and interesting group of alumni tours. This year's tours included groups going to Italy, Ireland, Japan, China and Australia with additional tours to Ashland in late July, and through the Panama Canal on the cruise ship Royal Princess in November.

Jon Carder '68, president-elect of the board, has been representing alumni on a long-range University Planning Committee. There is little to report as yet but the group hopes to have its work concluded well in advance of the University's upcoming Bicentennial.

I also want to commend the work of the Alumni Products Committee and

the Admissions Committee which were effective in working with the Bookstore and the Admissions Office in carrying out their respective programs.

Finally, I want to mention internal changes which have improved the association's work. Effective this year, the board has added ex-officio membership by all of the presidents of the 24 alumni clubs, as well as the president of the Atkinson Management Society and the chairperson of the Alumni Committee of the College of Law Board of Visitors. In addition, several committees added ex-officio members. The result is to give our board greater reach on a national scale, as well as a closer connection with our professional school alumni. Indeed, your alumni board of directors continues to work hard to improve the alumni program for the benefit of the entire Willamette family. We look forward to serving you again during the 1993-94 year.

Clubs Now Number 24

Alumni clubs now total 24 with the addition of the Blue Mountain/Columbia Basin and Inland Northwest clubs. The boards for these two areas are already planning their events for the 1993-94 year.

The Puget Sound Club deserves special mention for their active board, which seems to come up with new ideas regularly. Recent innovations include organizing a participation committee (headed by Pat McLamey '63) which put out the club's first newsletter in April, and extension of the Career Mentor program to the Seattle area with the leadership of Desiree Yuzawa '84. Pat has also promoted suggestions and ideas from alumni by encouraging them to use his FAX number (206) 346-8683.

The final major alumni association event for the school year was the Faculty Retirement Dinner April 24 on campus. Professors Paule Drayton (French), Ted Shay (political science), Julio Viamonte (music), and Libby Yocom (biology) were honored for their years of service to

Willamette. Professor Bill Devery (psychology) was unable to attend the dinner but was also given the traditional gifts of engraved marble bookends and a scrapbook of letters from grateful former students. Highlights of the evening included humorous presentations by the music and biology departments, and special words of gratitude by alumni Jon Steiner '63 (for Drayton) and Jerry Watson '67 (for Shay).



Left to right: Julio Viamonte, Paule Drayton, Libby Yocom and Ted Shay.

Proposed Summer Short Course Canceled

The first Summer Short Course for alumni and friends of Willamette, scheduled for June 17-20, was canceled due to insufficient registration. The course was inspired by interest in this kind of program expressed on the 1991 alumni survey.

The proposed course was designed by CLA Associate Dean Bob Hawkinson, and was modeled after the original World Views program which focused on great books and issues of the Victorian Era. Hawkinson and the alumni office would welcome any comments or suggestions for planning a course for 1994. Please send suggestions to the Office of Alumni Relations, 900 State St., Salem, OR 97301.

Class Reunions Merge With Homecoming

A new tradition of having all class reunions during Homecoming Weekend will begin in 1993. The weekend of Oct. 1-3 promises to be a memorable one for all alumni who return, especially those whose class year ends in "3" or "8." Classes from 1933 through 1988 have organized committees to plan their weekend activities. In addition, the Half Century Club will again provide a luncheon and banquet for all alumni over 50 years, except for 1933 and 1938.

The festivities with the theme "Memories for a Lifetime" will begin with Greek open houses Friday evening, along with various dinners, a play and the bonfire. Saturday will feature lectures in the morning, reunion luncheons, the homecoming football game against Whitworth, the grand Alumni Banquet which will feature Alumni Citation winners, as well as the 25th and 50th class reunions and a dance in Jackson Plaza.

Jim Booth, director of alumni relations, suggests you plan to return to campus on this special weekend and make it extra special by calling a friend or classmate from your college days to plan a rendezvous. He adds that a bonus is in store for you if you have not been back in recent years; the grounds and buildings have never looked better!

Cruise Openings Still Available

Reservations can still be made for the 10-day cruise aboard the Royal Princess from Acapulco to San Juan via the Panama Canal. Alumni Director Jim Booth and his wife, Sandy, will escort alumni and friends on this trip from November 13-23. Call the Alumni Relations Office at (503) 375-5304 for last minute information.



Review of Alumni Club Activities June 1, 1992-May 31, 1993

Bay Area

Reception for Buzz Yocom, March 27
Golf Tourney for Alumni, March 28

Capitol/D.C.

Reception for Buzz, Jan. 10

Central California

Reception for Buzz, March 28

Central Oregon

Reception for Gordie James, WU basketball coach, and Mike Ward, Bend area player, April 18

Eugene

Student/Alumni Picnic, Aug. 23
Willamette Forum Luncheon, April 2

Hawaii

Reception for Buzz, Oct. 30

Intermountain/Boise

Alumni support at Willamette's basketball games for the men's NAIA National Championship, April 12-16

Japan

Reception for Buzz, Oct. 28

L.A.

Reception for Buzz, Feb. 2

State of Jefferson/Medford

Reception for Gordie James, dinner and play (*Joe Turner's Come and Gone*), April 10

Mountain & Plains

Denver Student/Alumni Picnic, July 18

New York

Reception for Buzz, Jan. 9

Portland

Student/Alumni Picnic, July 20
Holiday Party, Dec. 2
Willamette Forums, Sept. 24, Nov. 18, Feb. 3
Alumni After Hours, June 22, Sept. 28, April 29
Willamette vs. Lewis & Clark game, Jan. 8

Puget Sound/Seattle

Student/Alumni Picnic, Aug. 5

Holiday Party, Dec. 29

Willamette Forums, June 17, Oct. 8, Jan. 7, April 22

Reception for Buzz, March 19

Salem

Student/Alumni Picnic, Aug. 18
Alumni After Hours, June 25, Sept. 24
Greeters for Faculty Retirement Dinner; helped assemble scrapbooks, April 24

San Diego

Reception for Buzz, Feb. 13

South Central/Texas

Picnic/Baseball Game (Texas vs. Minnesota), June 6

Southeast Region/Atlanta

Reception/baseball game (Braves vs. San Diego), June 13

Southwest Region/Phoenix

Admissions Fair, Oct. 19
Reception for Buzz, Feb. 14

Five Board Members Begin Second Term

Members of the Alumni Association board of directors for the 1993-94 year include five alumni who will be serving second terms: Chuck Best '75; Eric Fishman '88; Deston Nokes '81; Jim Vidal '67; and Polly Fedge '50. Leaving the board are Grace DeHarpport '31, Nick Allis '70, Ruth Garvin '85 and Bob Voigt '42. New members will be Winsor Acton '47, Martha Peterson '59 and Courtney Lewis '90. The Alumni Association representative to the board of trustees will be S. Michael Rodgers L'68. He begins a three-year term. Officers, who are continuing for the 1993-94 year, are P. Barton DeLacy '75, president; Jon Carder '68, president-elect; Mary Ann Burk Robinson '77, secretary; and Hance Haney '85, past president.

Bylaw changes proposed, pending this publication in the *Scene* and final approval at the fall meeting include 1) designation of both the president of the Atkinson Management Society and the chair of the Alumni Committee of College of Law Board of Visitors as permanent associate members of the Alumni Association board of directors, 2) designation of the professional school representative to the board of trustees (every third year) as an associate member of the Alumni Association board of directors, and 3) submission of nominees for membership to the Alumni Association board will be submitted each year in the spring *Scene* by ballot with space for write-in candidates. Final results will be announced at the Annual Meeting and printed in the *Scene*.

All alumni are encouraged to submit nominations for the board of directors, the Distinguished Alumni Citation, and the Athletics Hall of Fame. Nomination forms are available through the Office of Alumni Relations and can be requested by filling out the coupon to the right.

ALUMNI NOMINATIONS FORM REQUEST

Name _____

Address _____

Street

City

State

Zip

Please send me nomination forms for the following:

- ☐ Distinguished Alumni Citation (due October 31 each year).
☐ Alumni Association Board of Directors (due October 31 each year).
☐ Athletics Hall of Fame (due December 31 each year).

Mail to: Willamette University, Office of Alumni Relations, 900 State Street, Salem, OR 97301 or call (503) 375-5304.



CLASS LINKS

21



Frederic Aldrich does free consulting on military and education matters for the Lake Champlain Regional Chamber of Commerce in Burlington, Vt.

He is listed in Marquis' *Who's Who in the World*, 1993-94.

22

Ramon Dimick is living in a retirement home in San Diego.

26

Earl Mootry, retired owner of Mootry's Pharmacies, lives in Salem with his wife, Hazel, and enjoys reminiscing about the years spent at WU.

27

Herbert Jasper, professor emeritus at the University of Montreal and McGill University, has two part-time jobs teaching English and French. He also attends many scientific meetings and conferences and is writing his memoirs. He and his wife, Mary Lou, live in Westmount, Quebec.

31

Ramond Waddel lives in Bowie, Md., and enjoys hearing of WU's continuing success.

32

Doris (Clarke) Hamilton travels extensively, and recently visited Venezuela's Angel Falls, the highest waterfall in the world.

Marvelle (Edwards) Mefford and her husband, Russell, celebrated their 60th anniversary in April. Marvelle was originally in the class of 1931, but because she chose to work part time and carry fewer classes, she graduated a year later, after being selected a Senior Scholar and a member of the National Social Science Honor Society Pi Gamma Mu.

33

1933 REUNION

A reunion for the class of 1933 will be held Homecoming Weekend, Oct. 1-3.

John Nelson was recognized in a recent news article for his many accomplishments as co-owner, publisher, and editor of The Springfield [Ore.] News. With the help of his wife, Ina, John operated the paper from 1954 to 1978, leading it through substantial changes in the community and the newspaper industry.

37

Jean (McElhinney) Nelson lives on her family wheat ranch in Lexington, Ore. Her son, Chuck, received the Conservation Farm of the Year award from the Oregon Wheat Growers League.

38

1938 REUNION

A reunion for the class of 1938 will be held Homecoming Weekend, Oct. 1-3.

Charlotte (Eyre) Hunt and her husband, Ivan, celebrated their 50th wedding anniversary in December at an open house with their children, grandchildren, and 120 friends and relatives.

41

Geraldine (Parker) Brown, Memphis, Tenn., recently visited Hannover, Germany, and Prague, Czechoslovakia, and is looking forward to an Elderhostel trip to France this summer.

43

1943 REUNION

A reunion for the class of 1943 will be held Homecoming Weekend, Oct. 1-3.

45

Marian (Fisher) Tillett and **Kathryn (Cranston) Williams '75** play violin in the Northwest College orchestra in Powell, Wyo. The orchestra is preparing to perform Haydn's Lord Nelson Mass with the College Master Chorale and student choir.

46

Helen (Craven) Carpenter and her husband, **Robert '45**, keep busy with volunteer work and traveling, and have encountered other Willamette alumni all over the world.

47

Winser Paul Acton returned to Salem in 1988 with his wife, Sue, after 45 years on the east coast. He is active in Willamette Valley Vineyards, and is a director of a new microbrewery venture, Willamette Valley Brewing Co.

48

1948 REUNION

A reunion for the class of 1948 will be held Homecoming Weekend, Oct. 1-3.

49

James Nickel will retire this summer as professor and chairman of mathematics and computer science at the University of Texas at Permian Basin.

Robert Rhoads retired in January from a 42-year banking career. He and his wife, Doris, live in McMinnville, Ore.

51

Janet (Gilliland) Ahrens spends time volunteering for the Woodbridge [Ill.] United Methodist Church and the Emmaus Community. Her husband, William, died in October 1991 after 33 years of marriage. Their children and grandchildren reside in Illinois.

52

Douglas Logue is enjoying life since his retirement last year. He and his wife, Patricia, live in Lacey, Wash.

53

1953 REUNION

A reunion for the class of 1953 will be held Homecoming Weekend, Oct. 1-3.

Elizabeth (Morley) Douris lives in Hawaii, and enjoys keeping in contact with WU classmates.



Bob Smith of the U.S. House of Representatives is considering running for governor of Oregon in 1994. Prior to several terms in the U.S. Congress, Smith served for many

years in the Oregon House and Senate. He is the ranking Republican member on several U.S. House committees involved with agricultural and natural resources issues.

57

Donald Lee Agnew is senior project management engineer at Eastman Kodak Co. He and his wife, Roberta, live in Fairport, N.Y.

Douglas Houser was recently elected secretary-treasurer for the Defense Research Institute and Trial Lawyers Association at their annual meeting. He is an attorney with the Portland firm of Bullivant, Houser, Bailey, Pendergrass & Hoffman.

58

1958 REUNION

A reunion for the class of 1958 will be held Homecoming Weekend, Oct. 1-3.

Chuck Marsters and his wife, Naomi, continue to live in Riyadh, Saudi Arabia, where they see Jeanne (Brougher) '57 and Gerald Kangas '56 every week.

Dixie J. Ruud, San Francisco, has been named a principal of Scudder, Stevens & Clark, a worldwide investment management firm. She is responsible for managing institutional fixed income portfolios.

59

Charlotte Means returned to Bothell, Wash., after receiving her master's degree in teaching at the School of International Training in Vermont. She teaches English as a second language at Edmonds Community College.

60

Robert Donald, Nampa, Idaho, was recently awarded the prestigious Melvin Jones Fellowship for service in the Lions Clubs International. He is the author of *From Santo Domingo to Korea*, a biography of Marine Corps Maj. Gen. Gregor A. Williams, and plans to donate Williams's uniform, medals and insignia to the Marine Corps Mustang Association museum.

Howard Nelson has turned a 15-year hobby into a vocation, practicing massage and stress release for individuals who wish to overcome "incurable" health conditions. He and his wife, Gloria, live in Madison, Wis.

61

Geraldine (Fandrich) Johnson is looking forward to her husband Dave's retirement after 30 years with Coastal Machinery Co. They plan to spend time at their cabin in Pine Hollow, Ore., do some traveling, and work together in their consulting firm.

Anthony Meeker has been appointed vice president of Spears Benzak Salomon & Farrell in Portland.

Gordon Rounds, Yorktown, Va., retired last year from a 30-year career in the U.S. Air Force, and now works as a technical consultant for NATO. His wife, Paula (Abbott) '64, teaches French. They traveled to Norway in May for their daughter's wedding.

63

1963 REUNION

A reunion for the class of 1963 will be held Homecoming Weekend, Oct. 1-3.

John E. Frank has been assistant chief pilot for Mobil Corp. for 15 years, and has been retired from the Air National Guard as a lieutenant colonel for 10 years. He and his wife, Edith, live in Great Falls, Va., and enjoy traveling, skiing and golf.

Everette Holt Williams teaches English at the economic-political science campus of the University of Kuwait. Prior to that he spent two years teaching English at a technical high school in Budapest, Hungary.

64

Heather (Goldfoot) Birnie is director of the National Endowment for Children's Educational Television in Washington, D.C.

Press Clippings

Just prior to press time for this issue, **Sam Farr '63** of Carmel, Calif., defeated six other candidates for a seat in the U.S. House. The position was vacated when Leon Panetta became director of the Office of Management and Budget for President Clinton. Farr had been a California Assemblyman.

Alex Mandl '67, a member of Willamette University's board of trustees, was featured in a Wall Street Journal article on June 8. The focus was on the changing, higher-profile role of corporate chief financial officers, a position Mandl fills for AT&T.

65



Arlene (Rice) Dietz is chairman of the Ports and Waterways Committee for the Transportation Research Board (TRB)'s National Research Council. She also chairs

the Awards Committee for the TRB Group 1 Council, and was recently selected to the National Cooperative Highway Research Program panel in charge of developing natural transportation forecasting methodology.

66

Virginia (Verity) Kimball, Pasadena, Calif., is the author of *Earthquake Ready: The Complete Preparedness Guide*, which was recently published in its third edition.

67

Janet (Loomis) Withycombe Faust and her husband, Bill, live in Lincroft, N.J., and stay busy keeping track of their four children—including **Vicky Withycombe '93**—at colleges in Delaware, New York, Illinois and Oregon.

Stephen E. Miller has been superintendent of Canby [Ore.] Union High School since 1990. Prior to that, he served as superintendent at several other Oregon schools for 15 years.

68

1968 REUNION

A reunion for the class of 1968 will be held Homecoming Weekend, Oct. 1-3.

Marlene Anderson, Portland, has been made branch manager/clinical supervisor at the Parry Center for Children.

Joan Loomis recently traveled to Egypt and Mexico, and is planning to visit Mayan pyramids in Guatemala and Belize next year.

69

Keith J. Bauer L'73, Salem, was named president of the Oregon Association of Defense Counsels for 1993. He is a partner in the firm of Parks, Bauer & Sime.

71

Brad Anderson and his wife, **Bonny (Linnell) '73**, live in Campbell, Calif., where Brad is a patent attorney.

72

Harry Watkins is an associate professor of marketing at California Polytechnic State University. He received his doctorate in marketing from the University of Oregon last year, after working for 10 years in the electronics industry. He and his wife, Carol, enjoy living on the central California coast.

73

1973 REUNION

A reunion for the class of 1973 will be held Homecoming Weekend, Oct. 1-3.

Gery Ellibee is a financial planner with Waddell & Reed in Salem. Since 1974 he has been involved with a local track and field program, and has served as jump coach for the past five years.

Rolfe Junge is the Tillicum Council advancement chairman for the Boy Scouts of America, in addition to his responsibilities as board president of Snohomish County ARC (Advocates for the Rights of Citizens with developmental disabilities) and part-time pastor for the Zion Lutheran Church.

Lucinda (Renzel) Pecota volunteers in the classroom, computer lab, library and motor skills program at her daughter's elementary school in San Jose, Calif. She is also co-president of the Home and School Club, and plans to become an elementary school aide or tutor.

75

Sherry (Witt) Snow M'78, Boulder Creek, Calif., was awarded a 1993 fellowship by the Nancy L. Nordoff Foundation to complete her book, *The Doctor in Question*. The book involves the murder of an AIDS investigator at a prominent university medical center, and explores the role of pharmaceutical firms in funding research, as well as the treatment of women in academic medicine. Sherry spent seven weeks at the Nordoff Foundation's colony on Whidbey Island, Wash.

76

Susan (Sanders) Phillips is a professor and dean at New College Berkeley. She and her husband, Steve, president of Micro Age Emeryville, enjoy raising their two sons in Kensington, Calif.

Sara (Bell) Schroeder lives with her husband, Jon, and their two children in Walnut Creek, Calif. She sees Sally (Smith) Robinson '76 on occasion, and is looking forward to an annual reunion with fellow Pi Phi's **Judy Lang '76**, **Melissa (Veroske) Williams '75**, **Mary (Schuler) Clark '75** and **Cathy Edwards-Pereich '74** at Judy's home in Ashland, Ore.

77

Richard Sherwood, Daly City, Calif., enjoys his work as director of human resources at West Coast Beauty Supply Co. He recently purchased a condo, and is planning a seven-week sabbatical in Europe this fall.

78

1978 REUNION

A reunion for the class of 1978 will be held Homecoming Weekend, Oct. 1-3.



Coralie Jewell-Jensen enjoys spending time with her one-year-old son, **Christopher Paul**. Christopher's grandparents are **Paul Jewell '53** and **Elois (Roseberry) Jewell '53**.

79

Linda (Groves) Crenshaw left her position as a music specialist with Los Angeles Unified School District in 1989, and is enjoying her "second career" as full-time homemaker and mother of two. Her husband, **Randy '77**, a studio session singer and arranger, stays busy doing television shows, movies, commercials and records, as well as concerts with his six-voice a cappella group, Vocal Nation.

Doug Peake and his wife, **Nancy**, work as missionaries in Nogales, Mexico. They are learning Spanish, and enjoy living among the Mexican people.

Nancy (Kraemer) Rhodes and her husband, **Jim**, enjoy being parents of a two-year-old son, **Casey**.

80

Kristen (Jellum) Orlando and her husband, **James**, recently opened a private law practice, J.R. Orlando. James is municipal court judge for the cities of Fircrest and Fife, Wash.

81

Susan Gill has moved to Seattle, where she works as a physical therapist for Nova Care. She is considering a future in healthcare administration.

Jean (Davenport) Henry has been promoted to the position of clinical director for the Sitka Council on Alcoholism and Other Drug Abuse. Previously, she earned a master's degree in counseling at the University of Toledo in Ohio. She lives with her husband, **Robert**, and their three children in Sitka, Alaska.

Donald Krahmer Jr. M/L'87, Portland, has been appointed to the executive committee of the Financial Institutions Section of the Oregon State Bar, along with **Danford Lloyd Bickmore M/L'83** and **Steven Rodeman L'85**. Their terms will extend to the fall of 1995.

82

Tony Meek has been hired as dean of students and athletic director of Del Norte High School in Crescent City, Calif.

Laura Noonan is a pediatrician in Chapel Hill, N.C. Her responsibilities include locum tenens work and third world medicine.

83

1983 REUNION

A reunion for the class of 1983 will be held Homecoming Weekend, Oct. 1-3.

Mark Lambert has been assigned to the U.S. Embassy in Tokyo as a political officer with the State Department. He and his wife, **Victoria (Peters) '83**, have left Bogota, Colombia, to study Japanese in Washington, D.C., for a year prior to their departure for Japan.

"The biotechnology business is not all dreams anymore—it is a hard-nosed business," says James B. Hicks '68, senior director, science, at ICOS Corporation in Bothell, Wash. "You're betting on how good your research is, so it still appeals to the betting nature of those who like to gamble. The biotech industry has become more financially rigorous and sound in the past five years. An advisory board of scientific luminaries is no longer enough to raise several million dollars."

Hicks seems very much at home in this high-stakes world, moving smoothly between discussions of such financial realities and of his scientific vision.

He was one of the science founders of ICOS, which in just over two years has raised \$70 million, publicly and privately. The goal of ICOS is to develop products to treat auto immune diseases, such as asthma, multiple sclerosis and arthritis, in which the immune system has gone awry.

"The immune system is required to maintain health, so you can't just get rid of the damaged genes, which is where the challenge is," Hicks explains.

ICOS expects to have a potential product for multiple sclerosis in official human clinical trials this year. "We'll have to fill the pipeline behind it to have a successful company," Hicks says.

Hicks credits his education at Willamette with much of his success, and his ties to the University remain strong. His sister, Judith Audley, is a 1962 alumna, and her son, David, is a 1993 graduate. Hicks' children, Courtney, 13, and Jeremy, 10, live in Portland, and Courtney also hopes to attend Willamette.

"More than any of the other parts of my education, the science experience at Willamette set ideals in place. The faculty are so committed; they...made science seem like a real career—something important. The faculty's devotion and intrinsic interest in the subject matter were something I've always used to compare later experiences."

Then, a sparkle in his eyes, he reminisced that, while he was a good student, he also had a great time at Willamette. He was "asked not to register again" for the first

Jim Hicks Seeks Biotech Solutions



James B. Hicks '68 says that robots like the one he is showing here "aren't very smart but they keep going like the Eveready rabbit. They do things the same way every time, better than a human can." Scientific laboratories and computers occupy a bulk of the space at ICOS Corporation.

term of his senior year, for a particular incident plus "accumulated unpunished offenses." When his name was submitted by his German teacher for Rhodes Scholarship consideration, he had to get special dispensation from the president to come onto campus for the interview.

Dressed in a sports jacket, bright tie and jeans, he leaned back in his chair and added, "About the time you leave, you're glad to get out." He was "more or less at war with the forces in charge, but started mellowing as an alum. The good memories gain in intensity and the bad ones just become humorous."

Hicks was a panelist at Willamette's Toward 2000 Symposium on the Future of Health Care Delivery, in 1992. He was also involved in Willamette's successful fund raising campaign to obtain a \$300,000 Kresge Challenge Grant to acquire, maintain and replace science equipment.

Biology Professor Grant Thorsett has worked with Hicks and ICOS during his sabbatical, while exploring how to design current DNA-based techniques into the curriculum at WU.

It was Thorsett who made Hicks aware of the molecular biology program at the University of Oregon, where Hicks studied on the way to earning his Ph.D. He later studied at Cornell and worked at Cold Spring Harbor.

At UofO, he got training in yeast genetics, which became an important model organism for studying human genes. "The genetics of humans is obviously more difficult," he says, adding that, "You can't tell humans to mate arbitrarily and then study the offspring."

"As yeast became a more important model, I've been able to move into studying disease through yeasts," he says. "That's been a lot of fun and makes the research less ivory tower. That's new to me; what I was doing before is very abstract."

He is organizing a meeting in Keystone, Colo., next winter, on various crossovers between human genes, including cancer, and their equivalent parts in fruit flies and invertebrates, as simpler models for understanding how human cells work.

By Betty M. O'Brien

Chrys (Odell) Randolph and her husband, **Randy '81**, live in Atlanta, Ga., with their three children. Chrys is director of member services for Sports Life, a multi-million dollar health club organization, and Randy is regional sales manager with Accu-Sort Systems Inc., which specializes in custom bar code systems.

85

Matt Colbern recently left the Navy and is a pilot with American Airlines at O'Hare Field airport. He and his wife, **Rose (Barainca) '85**, are in the process of moving to Chicago with their son, Patxi.

86

Thomas Rheuben has joined the dental practice of Dr. Steven Spear in Sisters, Ore.

87

Ethan Fuld is working toward a master's degree in public administration at the University of Colorado School of Public Affairs.

Randy Jacobs enjoys working as a ski instructor at Mammoth Mountain near Bishop, Calif. Mammoth Ski School was rated number one in North America by readers of Ski magazine.

Garret Keith successfully completed his thesis exhibition for a master's degree in fine arts at the Maryland Institute College of Art. His wife, **Robin (Craggs) '87**, also finished work for a master's degree in international education at American University.

88

1988 REUNION

A reunion for the class of 1988 will be held Homecoming Weekend, Oct. 1-3.

Leanne Chrisman graduates this year with a degree in medicine from Oregon Health Sciences University. Next year she will work as a Family Medicine Resident at Spokane Family Medicine Residency.

Troy O'Donnell finished U.S. Army officer candidate school in February, and is enrolled in the clerical officer basic course at Ft. McClellan, Ala. After attending Airborne School at Ft. Benning, Ga., Troy will transfer to Ft. Bragg, N.C.

89

Jeanna Newton is working as an underwriter for State Farm Insurance.

Mike Thiessen is a graduate student and president of the Atkinson Graduate Students of Management at WU. His wife, **Karen (Frederickson) '89**, is a benefits consultant and actuary at Howard Johnson and Co. in Portland.

90

Thomas Willett has been selected as co-chairman for the Chicago Advertising Federation's Gratis Committee, a public service committee that produces advertising and PR campaigns for non-profit organizations.

Rebecca Woodrum recently earned an associate's degree in apparel design, and is enjoying her job as a design associate with Recreational Equipment Inc. in Seattle.

91

Tever Nickerson is pursuing a master's degree in museum studies at San Francisco State University.

Richelle Tustin works in the international marketing department of Mitsubishi Electric Corp.'s semiconductor division. The Kita-itami facility where she works is also the headquarters of research and development for Mitsubishi semiconductor devices. Prior to joining Mitsubishi, Richelle participated in the Japan Exchange and Teaching Program for one year in Osaka, Japan.

Donnalyn Suk Yin Yee is living in Honolulu, Hawaii and is attending the University of Hawaii.

92

Dagny Haug is costume shop manager for the Boise State University theatre department, and assistant costume shop manager for the Idaho Shakespeare Festival.

Johanna Graveline is pursuing a graduate degree in human genetics at Sarah Lawrence College in New York City.

Sampsa Lehtonen is a first-year student at the University of Rochester School of Medicine in New York.

MARRIAGES

Dorothy (Alexander) Stadter '36 wed Sid McNeil on Aug. 1, 1992.

Gary Mansavage '63 wed Sara Elisabeth (Ansley) on Oct. 23 in Washington, D.C. They live in Khartoum, Sudan, where Gary is director of the U.S. Agency for International Development (USAID) mission, providing assistance to victims of civil war and food shortage.

Diane (McKenney) '70 wed Rod Mulholland on March 15. They live in Seattle, where Diane works as a vocational rehabilitation counselor for Cor Vel Corp.

Peggy (Traugher) '74 wed Donald Hall on March 17 in Honolulu, Hawaii.

Dan Tuttle '77 wed Lisa (Kimsey) on Dec. 27 in Honolulu, Hawaii. Dan is a science teacher and track and field coordinator at Punahou School. Lisa is a student at Chaminade University and secretary for the Calvary-Lutheran-by-the-Sea Church.

Jon Read '78 wed Francine Read on Feb. 20. They live in Portland and both work for the state of Oregon.

Robert Skinner '80 wed Susan (Hunt) in 1991. Robert finished his specialty training in urology and now works as a surgeon with Northwest Permanente. Susan is a pediatrician at Oregon Health Sciences University. They live in Portland.

Pierrette (Pelham) '83 wed Andrew Larkin Prestridge in June 1992. Andrew is a petroleum engineer, and is working toward a doctorate at Colorado School of Mines in Golden, Colo.

Erick Landeen '88 wed Kim (Hart) on March 19. **Echo Sorenson '89** was maid of honor.

Roxann (Ingersoll) '89 wed Douglas Ashworth on Nov. 28 in Ellicott City, Md. **Jeanine (Naapi) Van De Grift '89** was an attendant. Roxann is a research assistant at the Genetics Core Facility at Johns Hopkins University, and Douglas is an engineer with the U.S. government. They live in Baltimore, Md.

Kristin Lee (Patton) '91 wed Lenny Scianna on Aug. 1, 1992, in San Jose, Calif. Kristin works part time as an office manager at Almaden Institute and attends the sign language interpreting program at San Jose State University part time. Lenny works full time at Mission Bell Manufacturing, his family's business.

Victoria (Bollen) '92 wed Daniel H. Campbell III on July 18, 1992, in Placentia, Calif. **Dagny Haug '92** was maid of honor, and used her costume

design skills to sew Victoria's dress as well as her own.

Heather (Ferrin) '92 wed Michael Myers '91 on Jan. 2 in Blackfoot, Idaho. The wedding party included **John Callahan '92**, **Anita Cate '93**, **Jeff Gilbert '90**, **Steve Carter '91**, **Kaye Paulson '92** and **Kristy (Patton) Scianna '92**.

Lisa (Smith) '92 wed Steve White on July 11, 1992. They live in Keizer, Ore.

BIRTHS

Gayle (Jones) Aman '71 and her husband, Robert, became parents of their first child, Kathleen Carpenter, on Jan. 15. Gayle manages the International Conference Center at the World Trade Center in Portland, and Robert is a general contractor.

Ellen (Dunn) McPherson '76 and her husband, J.R., became parents of Mary Catherine on Dec. 2.

Carla Piluso '77 became the parent of Kathleen Althea on Nov. 17.

Claudia (Lien) Foster '78 and her husband, William '78, became parents of Kyle McKenzie on March 4. Kyle's maternal grandparents are Elaine and Melvin Lien '49; his aunt and uncle are **Colleen (Lien) '70** and **James Fitzpatrick '70**; his great-aunt and great-uncle are **Audrey (Lien) '50** and **Robert Kaplan '52**; and another great-aunt is **Arda (Lien) Berryhill '57**.

Janet (Willock) Sweeney '78 and her husband, Harry, became parents of twin girls, Alyssa Karen and Megan Petra, on Sept. 28. The twins join older sisters Jessica and Kristen.

Gerald Takase '78 and his wife, Barbara, became parents of triplets, Derrick, Scotty and Jillian, on Oct. 15. They live in Hilo, Hawaii.

Roger Garvin '81 and his wife, **Robin (Reed) '80**, became parents of their first child, Erica Lynne, on Nov. 2. They live in Spokane, Wash., where Roger is a physician and Robin is a pastor.

Colleen (Spelman) Nistler '81 and her husband, Werner, became parents of Louise Elizabeth on Sept. 25. They live in Portland, where Werner is president of Touchmark Living Centers Inc.

Elizabeth (Hollar) Harper '81 and her husband, Ty, became parents of Austin Scott on Sept. 30.

Steve Ball '83 and his wife, Jill, became parents of twin boys, Andrew and Michael, on Feb. 22. The twins join older brother Brian. Steve is assistant principal of Whittier High School in California.

Carey (Shorten) Penner '83 and her husband, Bruce, became parents of Elisa Kelley on March 10.

Celia Fitzwater '84 and her husband, **Jim Parker '84**, became parents of Grant Holten on Jan. 23. Grant joins older brother Gregory.

Sally (Channing) Santiago '85 and her husband, Gale, became parents of their first child, Andresse "Andi" Paige on Sept. 6. Sally is a microbiologist at the University of California-Davis, and Gale is a pharmacy technician at Memorial Hospitals Association.

Thomas Gygi '85 and his wife, Kirsten, became parents of Conner Jeré on May 21, 1992. She joins older brother Köhl Thomas. Thomas is a senior buyer for Boeing Commercial Airplane Co. in Olympia, Wash.

Amy (Cannon) McKean '87 and her husband, Ray, became parents of Ellen Ann on Feb. 11.

Audra (Harwood) Crouse '89 and her husband, Douglas, became parents of their first child, Dylan, in August 1992.

Audra works as credit card manager at Security State Bank in Basin, Wyo., where Douglas is president.

Catherine (Corson) Davis '91 and her husband, **Brett '90 M'92**, became parents of their first child, Mallory, in January. They enjoy living in Salem, where Brett is a stockbroker with Dain Bosworth Inc.

IN MEMORIAM

Charlotte (Tebben) Wilson '19 died Jan. 14.

Ruth (Robinson) Richter '22 died April 5. She was born in Amity, Ore., and earned a master's degree in education from Linfield College. She taught homemaking, math and science for 30 years in schools in Oregon and Idaho, and was a member of the Retired Educators Association and the United Methodist Women Loyalty Circle. She was preceded in death by her husband, Theodore Richter. She is survived by one son, a sister and two granddaughters.

Delbert Warren Moore '23 of Boise, Idaho, died March 25. He was born in Springfield, Ore. After a year at WU, he attended the University of Oregon and did graduate work at Northwestern University School of Music. He was involved in music all his life, and conducted or played violin in numerous ensembles, orchestras and bands, including the Willamette Trio at WU. He served as supervisor of instrumental music for public schools in Eugene and Corvallis, Ore., and in 1935 he was appointed symphony orchestra conductor and head of the stringed instrument department at Oregon State University. He is survived by his wife, Nita Maria (Lamb); two daughters; four grandchildren; and six great-grandchildren.

Donald Pomeroy Grettie '24 died Feb. 18. A native of Salem, he earned his master's degree from the University of Oregon and his doctorate in organic chemistry from the University of Pitts-

burgh. He married Edris (Vohs) in September 1930. For the next 35 years he worked in the research laboratories of Swift & Co. in Chicago, and then returned to the Portland area, where he worked as a research biochemist for Oregon Health Sciences University until 1980. He is survived by his wife, two sons and three granddaughters.

Hazel (Malmsten) Griffin '26 of Seal Beach, Calif., died March 29. She was born in Iowa and moved to Vernonia, Ore., at age two. She married Fair Griffin in 1929; he died in 1971. During her lifetime she lived in various places, including Washington state, Washington, D.C., Beaverton, Ore., and California. She was a social worker in Fairfax, Calif., for several years. She is survived by daughter **Shirley (Griffin) Jacobs '53**; a son; a brother; a sister; six grandchildren; four great-grandchildren; and a nephew, **Gordon Greathouse '70**.

Margaret (Wood) Woodworth '29 of La Center, Wash., died Oct. 3.

Helen Stanclift '32, widow of Paul Stanclift, died Oct. 5.

Harriett (Adams) Smart '33 of Salem died March 5. She was born in Iola, Kan., moving to Salem with her family at age nine. At WU she was active in music and was a member of Cap and Gown. In 1938 she married **Richard Smart '36**. She worked as a secretary before becoming a homemaker, and in later years she again worked as a medical secretary until her retirement. She served as choir director at Knight Memorial Church for many years, and was a member of Chapter BQ of the P.E.O. Sisterhood. She is survived by her husband; son **David B. Smart '70**; a daughter; a brother, **Verne Adams '38**; and seven grandchildren.

Miles "Woody" Woodworth '34 died Jan. 23. He was born in Heppner, Ore., and moved to Portland as a child. He was a descendant of the Luschers, an Oregon pioneer family. He worked as a

firefighter in Portland, and held positions including Portland fire marshall and assistant fire chief. Later he moved to Boston, where he served in the National Fire Protection Association as an engineer and secretary of the flammable liquids committee. After retiring, he moved back to Portland, where he was a member of the Tigard United Methodist Church. He is survived by his wife, Kay (Epperson); two daughters; and seven grandchildren.

Robert Jeffcott '36 died Feb. 23. He was born in St. Helens, Ore., and graduated from Hill Military Academy. He earned his dental degree from the North Pacific College of Dentistry, now the Oregon Health Sciences University School of Dentistry. After serving in an army hospital unit during World War II, he operated his own dental clinic in Portland until his retirement in 1978. He was known for his artistic talent, producing watercolor scenes of North Africa and France, where he served during the war, and of Oregon rivers and bays. He is survived by his wife, Betty (Bright); two sons; a daughter; a sister; and five grandchildren.

Margaret (Haight) Thome '36 died in January. She is survived by husband **William Thome '36** and daughter **Sara Bowles '66**.

Lawrence Edwards '39 died Jan. 25. He was born in Payette, Idaho, and moved to Salem at age 12. After graduating from WU, he served in the U.S. Navy prior to earning a master's degree from the University of Southern California. He married **Gertrude (Cannell) '40** in 1941. He was a teacher at Gresham, Jefferson, Madison and Marshall high schools in Portland and retired in 1980. He served as choir director for 20 years at the Gresham United Methodist Church, and was also a member of the board of trustees. He is survived by his wife, a daughter, a son, three grandchildren and a great-grandson.

Erma (Cole) Rickard '39 died Jan. 17. She was a retired teacher from the San Jose School District.

N. Morrell Cray '40 died Feb. 26. He was born in Salinas, Kan., and moved to Salem at age five. He married Gertrude (Zielinski) in 1942. He served in the Army Air Corps, seeing action in the Pacific Theater during World War II, and then worked as a liaison officer for the Air Force Academy. He retired as a colonel in 1975. He also worked for the Oregon Statesman as their first paid photographer, and for McEwan Photography. After 60 years at McEwan, he retired and sold the store in 1987. He was a member of St. Joseph Catholic Church and president of the Reserve Officers Association. He was also a member and former president of Capital Lions Club. He is survived by his wife and three grandchildren.

Donald Jeppeson '47 of Roseburg, Ore., died March 8. He was born in Eugene, Ore., and after earning a medical degree from the University of Oregon Medical School, he set up general practice in Roseburg in 1951. During the Korean War he served as a lieutenant in the U.S. Navy. He was named the Oregon Medical Association doctor-citizen of the year in 1980, and in 1985 was selected as the family doctor of the year by the Oregon chapter of the American Academy of Family Physicians. In 1987 he was appointed to the Oregon State Board of Medical Examiners by Governor Neil Goldschmidt, and was chairman of the board at the time of his death. He is survived by his wife, Joan; two daughters; a stepson; a stepdaughter; a brother; a sister; and two grandchildren.

James Brennan '49 of Portland died Nov. 2. After graduating from WU, he became involved with the Boy Scouts of America and later went into the banking business. He retired in 1986 as vice president of U.S. Bank. He is survived by his wife, **Avis (Roberts) Brennan '50**; four sons; two daughters; and 14 grandchildren.

Paul Lyman Reiling MA'49 died Feb. 19 in Vancouver, Wash. He was born in Milwaukie, Ore., and lived all his life in the Willamette Valley area. He married Irmentrude "Irmy" (May) in October 1935. After earning a doctorate of education from the University of Portland in 1966, he worked as a teacher and coach at Mount Angel Prep School, and later became superintendent-principal of Gervais Union High School. He was a professor at Portland State University until his retirement in 1975. He was a former president of the Oregon Council of Crime and Delinquency, and a member of St. John the Baptist Catholic Church and Knights of Columbus. He is survived by his wife; two sons, including **Donald Reiling L'62**; two daughters; 11 grandchildren; and one great-grandchild.

Ted Busselle '50 of Dallas, Ore., died April 8. He was born in Salem and served in the Army during World War II. He earned a master's degree in education from Oregon State College, and was a teacher and principal at several Dallas area schools, as well as an educator of the developmentally disabled. He was a member of Sigma Chi Fraternity and the Jennings Masonic Lodge, and served as an ombudsman for several nursing homes. He is survived by his wife, Jan (Bowling); one daughter; three sons; his mother; a sister, **Clarice (Busselle) Anunsen '47**; and four grandchildren.

William Harryman '50 died March 3. He was a retired game warden from Libby, Mont.

James M. Ragland '51 of Ashland, Ore., died Jan. 16. He was born in Shamrock, Texas, and attended schools in Salem. He married Mary (Garrity) in 1950, and they lived in Portland, later moving to Medford, Ore., and then to Ashland. He was a stockbroker for Paine-Webber of Medford. He was active in many organizations in Medford, including the Rogue Valley Art Association, which he helped found, the Oregon Shakespearean Festival and the Southern Oregon Historical Society. He also served as planning com-

missioner and city councilman for the City of Ashland, and was a member of many ad-hoc committees. He is survived by his wife, two sons, three daughters and six grandchildren.

James Lewelling L'54 of Toledo, Ohio, is deceased. He is survived by cousins **Asa Lewelling L'39** and **Blevins Lewelling '42**.

Loraine Meusey '54 of Sun City, Ariz., died Jan. 26. She was born in Humboldt County, Iowa, and after graduation from WU she earned a master's degree in education. She taught at schools of all levels in Montana and Oregon, and retired in 1969. Several years later she moved to Arizona, and there she was active in Sun Health Foundation, Sun City Symphony, and many other organizations. She was a member of the Women's Guild of Our Lady of Lourdes Catholic Church. She is survived by two brothers, including **Wayne Meusey '52**.

Jenna Moore '55 died in January in Honolulu, Hawaii.

Thomas Loree '57 of Santa Fe, N.M., died Feb. 27 after being struck by a vehicle. He earned a master's degree and a doctorate in physics from the University of Wisconsin, and began working for Los Alamos National Laboratory in 1957. Since 1962 he was a staff member of the Laser Science and Applications Group at the laboratory. His accomplishments have earned respect in technical and medical fields, and products of his work are in the process of being commercialized. At the time of his death, he and a co-worker were in the third year of development on an optical biopsy system, which could enable doctors to examine cells for healthy or malignant tissue without performing surgery. The Food and Drug Administration is testing the technique, and the laboratory recently applied for a patent on it. Loree was on the board of directors of the Bradbury Science Museum, and his artistic talents included painting, music and theater. He is survived by his wife, Bliss Kelley.

Loree; his father; two sons; a daughter; a stepson; a stepdaughter; two grandchildren; and two sisters.

Roger Leo Huntemann '59 died Jan. 1 in Portland. He was the chef at MacGuffy's Pub.

Glen Warrington '67 of Bend, Ore., died in December 1992.

Preston Morrow '70 of Laguna Beach, Calif., is deceased.

Herbert Schmidt '74 is deceased. He was an attorney and lived in Portland.

John Aungst V-12 is deceased.

Carol (Beaty) Hewitt D'69 died June 13. Born in Minnesota in 1945, she moved with her family to Salem when she was in grade school. She graduated from

North Salem High School. She attended St. Olaf's College in Minnesota before receiving her law degree from Willamette. Hewitt was named a partner in the Portland law firm of Ater, Wynne, Hewitt, Dodson & Skerritt. She was the first woman to be hired by a large legal firm in Oregon. Hewitt argued hundreds of cases concerning medical product liability, sex discrimination and employment discrimination. She successfully argued an employee discrimination case in front of the U.S. Supreme Court in the early 1980s. Former governors Vic Atiyeh and Neil Goldschmidt appointed Hewitt to the Oregon Investment Council which oversees the State pension fund. From 1987 to 1990 she served as the council's first chairwoman. She also served on the board of Columbia Funds, the YMCA and the Portland Opera. She is survived by her husband, Mark Yerby.

'A True Christian Gentleman...'



Norman Huffman, emeritus professor of religion at WU, died March 18. He was educated at Trinity College of Duke University, Duke Divinity School, Harvard Divinity School and Brown University. He was a member of an archaeological expedition to Turkey and published a series titled "How We Got Our Bible," as well as a book, *Which Peace Plan*. He served as pastor at several churches and was head of the department of religion at Wesleyan College and then at WU. He retired in 1974. He is survived by two sisters.

*Following are excerpts
from Professor Lane McGaughy's eulogy:*

"Every one who knew Norman speaks of his basic goodness: he was kind and generous, loyal and fair, one whose speech was without guile or malice. In nineteenth century parlance we would call him 'a true Christian gentleman.' ... And so, though the epitaph 'a true Christian gentleman' is an accurate description of Norman, Matthew's self-designation in 13:52 is perhaps more apt: Norman was a Christian 'scribe — trained for the kingdom of heaven.' Like all scribes, Norman was not only literate and learned, he was also self-effacing. He possessed a kind of humility that comes only to those whose lives are filled with compassion and who forego the pursuit of self-promotion in order to serve the needs of others. Because of Norman's modesty, many perhaps overlooked his enormous scholarly and pastoral abilities. Like all scribes and secretaries, some might have taken his contributions for granted. But for those many students, colleagues, and friends whose eyes were opened, Norman was that Christian scribe who, like a householder, brought out of his treasure what is new and what is old, and we were all enriched."

GUIDELINES

- Class Links are included in the winter, spring and summer issues of the *Willamette Scene*.
- If you have information you would like to submit for Class Links, please send it to: Sue Rende, University Relations, 900 State St., Salem, OR 97301
- Please print or type all submissions, in the interest of accuracy.
- If something has been written about you in a newspaper or other publication and you would like it included in the *Scene* Class Links as well, please submit a copy with a note giving your permission.
- It is the practice of the *Scene* not to print pregnancy or engagement announcements.
- The *Scene* reserves the right to edit or omit any information submitted.
- The deadlines for submissions are:
Winter issue: Oct. 10
Spring issue: Jan. 25
Summer issue: April 20
- We welcome photos to be submitted for possible use, depending on space available and photo quality. Black and white photos are preferred. Please send a self-addressed, stamped envelope if you would like your photo returned.
- It is the practice of the *Scene* to list a surviving spouse in all obituaries when the name is available to us. Other survivors who are alumni or otherwise connected with Willamette will also be listed by name when we receive that information.

KEY:

L = Doctor of Jurisprudence or LLB
M = Master of Management or
Master of Administration
M/L = Joint degree, Law and
Management
MAT = Master of Arts in Teaching
MED = Master of Education

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Science: A Vital Component Thriving Within Willamette University's Liberal Arts Tradition



Michelle Nicholson, Chemistry Major, WU Class of '96

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