Drawing from his Education

UNLV Alumnus
Ron Husband
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Olympian Challenges
Although the 1996 Summer Olympic Games might be a distant memory for most of us, three women from UNLV will look back on those days last summer with great clarity for many years to come.

By Laurie Fruth

Getting a Line on Evolution
Construcing genealogical charts for fish might sound a bit esoteric to some. But UNLV biology professor Andrew Martin's research on the evolution of fish holds promise for enlightenment on subjects far greater than the lineage of your guppy.

By Barbara Cloud

Drawing From His Education
Though UNLV alumnus Ron Husband has a great time as a Disney animator, he wouldn't want us to think his profession is kid stuff. There's a whole lot more to animating Disney films than you might think, he says.

By Susan DiBella

Grounds for Learning
For Dennis Swartzell, supervising the landscaping of UNLV's 335 acres is no small endeavor. He must strike a delicate balance between beauty and function.

By Diane Russell

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Bennett Gift to Fund Professional Development Building

UNLV has received a $2.2 million donation from William Bennett, owner of the Sahara Hotel and Casino, to build a professional development building adjacent to the planned Paradise Elementary School on the university campus, according to President Carol C. Harter.

“The school for at-risk elementary school children and the professional development center will be located on 8.3 acres on the northwest portion of the campus, according to Harter, who said the school will be moving to the campus in 1998 as part of a unique three-way agreement between McCarran International Airport, the Clark County School District, and UNLV.

“Thanks to Mr. Bennett’s generosity, we will join the professional development building and the new Paradise Elementary School in a complex that will likely become a model for such programs,” Harter said. “It is pioneering programs like this — built on collaboration and benefiting the entire community — that are enabling UNLV to become a premier urban university. We are most grateful to Bill Bennett for making this possible.”

Under the agreement, McCarran International Airport is buying from the school district the property on the south side of Tropicana Avenue at Swenson Street where Paradise Elementary currently is located. UNLV will provide land for the construction of a new school, and the Clark County School District will build the school, using funds from the sale of the existing property.

The new elementary school will be a professional practice school for educating at-risk students, training current teachers, and developing future teachers.

Kay Carl, the school district’s associate superintendent for elementary education, said this project will allow the district — in concert with faculty in UNLV’s College of Education — to better serve this special group of students while learning new methods of teaching at-risk students.

Thanks to Bennett’s gift, the professional development building and school will be enhanced by state-of-the-art computer and audiovisual equipment. According to John Amend, UNLV associate vice president for administration, the professional development building will be approximately 8,000 square feet and will include a seminar room, computer lab, classroom and office space, and a control room for high-tech equipment.

The new Paradise Elementary School will be about 60,000 square feet and will be based on one of the standard elementary school designs created by Domingo Cambero Corp. for the school district.

The school is expected to open in August 1998.

Outstanding Alumnus, Silver State Award Recipients Named

Regent Shelley Berkley has been named this year’s Outstanding Alumnus and former UNLV President Kenny Guinn has been chosen as the recipient of the Silver State Award, the UNLV Alumni Association has announced.

The Outstanding Alumnus Award is given each year to a UNLV alumnus who has exemplified leadership, service, and dedication to the university, the Alumni Association, and the community.

Berkley has been a steadfast supporter of UNLV, having served as a member of the UNLV Alumni Association’s Board of Directors and in legal committee. She has been a donor to both the association’s scholarship fund and to the fund to build the Richard Tam Alumni Center. Berkley also served as student body president at UNLV and as voluntary legal counsel to UNLV’s student government.

She has been an active member of many civic organizations in Southern Nevada, including the Jewish Federation of Las Vegas, the Democratic Women’s Club of Clark County, and the Allied Arts Council.

The Silver State Award is presented each year to a non-alumnus who has made outstanding contributions to the state, the university, and the Alumni Association.

Guinn, the former superintendent of the Clark County School District, served as interim UNLV president during 1994-95 and as chair of the UNLV Foundation Board of Trustees during 1993-94.

Guinn was also chairman of the board and president of both Southwest Gas Corp. and PrMeri Bank and has been an active member of numerous civic organizations, including the Nevada Development Authority, the Las Vegas Chamber of Commerce, and the United Way of Southern Nevada.

Both Guinn and Berkley were honored at this year’s Homecoming reception and were introduced during halftime at the Homecoming game.

UNLV Receives Law School Gifts

The proposed UNLV law school has the solid support and a pledge of $5 million from William S. Boyd, chairman and CEO of Boyd Gaming Corp., UNLV President Carol C. Harter announced recently.

Boyd announced additional pledges of support for the law school of some $2 million, bringing the total of private pledges for the school to about $7 million. These pledges came from Sunbelt Broadcasting Co. Channel 3 and James E. Rogers, president and chief executive officer; the Marilyn family; Michael Gaughan, chairman of the board and CEO, Coast Resorts; John D. (Jackie) Gaughan, president, El Cortez Hotel & Casino; Warren Nelson, a member of Boyd Gaming’s board of directors; Sam and Pat Lionidas, and Boyd Gaming, represented by William R. (Willie) Boyd.

William S. Boyd has been a member of the UNLV Foundation Board of Trustees since 1983. He received the Distinguished Nevada Award from the Board of Regents in 1985 and the Honorary Doctor of Laws degree from UNLV in 1986. He, his family, and Boyd Gaming have given UNLV more than $3 million to support a wide variety of academic and athletic programs.

Boyd and Kenny Guinn, UNLV Foundation board member and longtime supporter of higher education, were instrumental in securing the additional gifts for the law school.

Current planning calls for the law school to enroll its first class in 1998 and eventually to have a student body in excess of 400. The school would seek provisional and full accreditation at the earliest opportunities, assuring all graduates of being able to sit for the Nevada Bar exam.

The school would specialize in issues of local and regional importance, such as gaming, mining, water, and environmental law.

Last summer the Board of Regents endorsed a detailed implementation plan and directed the chancellor to include the law school in the UCSN 1997-99 budget request to the Legislature.
College of Urban Affairs Named for Greenspun Family

The university's new College of Urban Affairs has been named for the Greenspun family in recognition of their recent gift of $1.7 million and their earlier gifts, pledges, and in-kind donations that bring the family's total support of the university to $5 million, President Carol C. Harter announced recently. The Greenspun College of Urban Affairs, which was created during the university's recent academic reorganization, contains the Hank Greenspun School of Communication, named for the late founder and publisher of the Las Vegas Sun, the School of Social Work, and the departments of counseling, criminal justice, environmental studies, and leisure studies.

Two Longtime Members of the University Faculty Die

A. Wilber Stevens
Retired English professor and poet A. Wilber Stevens died in September after a long illness. He was 75. Stevens, who joined the UNLV faculty in 1973, was also an editor, a drama and music critic, an actor, and a scholar. He held teaching posts at a dozen colleges and universities during a career that spanned five decades. He taught at the University of Washington, Miami State University, Park College, and Prescott College, in addition to serving as a Fulbright Professor of English and American Literature at the University of Manka in Burma, the University of California in Thailand, and the University of Brazil in Rio de Janeiro. Stevens authored more than 100 published poems, more than 15 articles, and eight book-length works. He also wrote hundreds of theater, music, and book reviews.

He was widely recognized as editor and publisher of Tertium, a literary magazine, and as a theater and music critic for the Las Vegas Sun and the Las Vegas Review-Journal. He held a bachelor's degree from Brown University and master's degrees from both the University of London and the University of Washington, where he went on to obtain a doctorate in 1957.

Brendan O'Toole Named 1996 Nevada Professor of the Year

UNLV mechanical engineering professor Brendan O'Toole has been named the 1996 Nevada Professor of the Year by the Carnegie Foundation for the Advancement of Teaching.

O'Toole, who joined the UNLV faculty in 1992, has received four other teaching awards, including the Alex G. and Faye Spanos Teaching Award from UNLV and the Ralph R. Teeter Educational Award from the Society of Automotive Engineers.

He has taught nine different undergraduate and graduate courses in the field of engineering and authored some 20 scholarly publications, many on the subject of applications for composite materials.

O'Toole has also served as a faculty advisor to teams of students who have won regional and national engineering design competitions. He was one of the faculty advisers to a team that set a record — and took first place in the 1995 Society for Automotive Engineers West Coast Supermileage Competition — by designing and building a vehicle that got 3,470 miles per gallon.

Another of his teams took first place in the American Society for Mechanical Engineers Region IX Human-Powered Vehicle Design Competition, also in 1995.

O'Toole, who received his bachelor's degree, his master's, and doctoral degrees from the University of Delaware, is a member of numerous professional and university organizations. He has also served as a consultant to several private companies.

The Professor of the Year program, which was started in 1981, salutes the most outstanding undergraduate instructors in the country. The Carnegie Foundation for the Advancement of Teaching sponsors an annual national competition from which the state winners are also selected; 885 candidates were nominated for this year's U.S. competition.

Each candidate must be nominated for the award by his or her institution and receive letters of support from current or former students, colleagues, and presidents or academic deans. Judging of the competition takes place in several stages: award recipients were selected on the basis of the following criteria: service to students, institutions, the community, and the profession; teaching informed by scholarship; impact on and involvement with students; and support from colleagues and current and former graduate students. In a final statement he was asked to submit with his entry form, O'Toole attempted to describe his approach to teaching.

"I feel it is my responsibility to motivate my students to ask questions because we all learn at a different pace," he wrote. "I listen and respond to any questions, no matter how trivial it might seem. I don't want to discourage anyone from asking questions because one of the most effective ways to learn any new topic is to have a discussion about it with someone who knows it very well.

"I also try to provide students some of the educational opportunities which I regretted not having as an undergraduate."
Although the 1996 Summer Olympic Games might be a distant memory for most of us, three women from UNLV will recall those days last summer with great clarity for the rest of their lives.

BY LAURIE FRUTH

They worked 10-hour days in sticky, intense heat. They fought their way through swarming crowds of camera-toting tourists. They struggled to overcome the fear instilled by senseless bombing. They gave heart and soul to jobs they knew would disappear after just a few short weeks. And they wouldn’t have missed it for the world.

It was, after all, the 1996 Summer Games.

Several individuals from UNLV participated in the Games in a variety of capacities. UNLV Magazine interviewed three of them — alumna and former student athlete Lori Harrigan, academic advisor Vaune Kadubek, and head volleyball coach Deitre Collins — to find out about their experiences there.

Though each had different responsibilities during the Games, they came away from their time there sharing a certain awe of the experience. And each had a different story to tell.

LORI HARRIGAN

One of the U.S. champions was softball player Lori Harrigan, who brought home the ultimate prize — a gold medal. But for this two-time All-American softball pitcher, simply competing in the Games was more than she had dared to dream.

Harrigan had already reaped many rewards from her athletic talent, including a full athletic scholarship to UNLV in 1988, national recognition in the 1990 and 1991 College World Series, and wide acclaim as a member of the National Women’s Softball Team. But her Olympic aspirations didn’t take hold until 1991 when the Olympic Organizing Committee decided to include women’s softball as a medal event.

The decision heralded the start of an arduous four-year tryout period for Harrigan and the 19 other women who would ultimately comprise the U.S. Women’s Softball Team.

“The selection committee followed us all four years, keeping a book on everything we did. If I had a bad day or if my attitude wasn’t good, that day went down in their book. It was really stressful. After I made the team, most of the stress was gone.”

Normally an active person, Harrigan curtailed all athletic activities except softball during the tryout period to minimize the possibility of injury. Each year she tried out and was selected to play on the National Team, which she believes strongly enhanced her chances of going to the Olympics.

“If you didn’t make the National Team, you had to find a way to work yourself back into the loop. It wasn’t impossible, but it was more difficult,” Harrigan says. Once the Olympic team had been assembled, preparations for the Games began in earnest. Harrigan and her teammates traveled to Columbus, Ga., where they lived for four months prior to the Games.

“We needed to get adjusted to the heat and the humidity in Georgia,” Harrigan explains. “It was tough being away for so long. My employer [Rod Yanke, CEO of Envirotech International] was very supportive. He continued to pay my salary while I was away. And my boyfriend, John Johnson, is a musician so he understood my crazy schedule. But it was still tough. I only saw John once in four months.”

Thoughts of home dissipated once the Games began. Harrigan and her teammates played nearly every day of the two-week event with only one day off before the final game. But the hard work paid off when the United States captured the gold.

“It’s hard to describe what it was like standing on the podium to receive my medal,” Harrigan said. “I felt so many emotions. My family and I had a falling out prior to the Games, so they weren’t there to see me get my medal. That was disappointing. My boyfriend couldn’t afford to fly to Georgia, and I was sad about that. At the same time, I had just won a gold medal in the Olympics. It was very emotional.”

Harrigan’s return to Las Vegas prompted a flurry of media attention.

“The questions I was asked most often in interviews were about my hair, my makeup, and my red, manicured nails. Everyone thought that I was making a statement about female athletes being feminine. But this is just me. I like to wear makeup and have my hair artistically fixed.”

Statement or not, Harrigan and her teammates have become role models for a generation of young girls who aspire to become elite athletes. But Harrigan is quick to acknowledge the contributions of those who went before her.

“Those who go before pave the way for those who are coming up,” Harrigan says. “I’m just part of that process now.”

In the months following the Olympics, Harrigan’s life returned to normal. She continues to coordinate seminars for motivational speakers and is beginning to develop her own talents as a speaker.

“I was recently asked to speak before a group of 2,000 people,
and I was scared to death. I can pitch before 10,000 people, and it doesn't bother me a bit. But speaking in front of an audience terrifies me."

"Her strong belief in the message of her speech — "never give up" — brought her through the experience. I consider that to be my personal motto," Harrigan says.

Eventually, Harrigan hopes to open a school for girls interested in athletics. But her immediate goal is to continue playing on the National Team while training for the next Summer Games in the year 2000.

VAUNE KADLUBEK

UNLV academic adviser Vaune Kadlubek is also making plans for the Games in the year 2000, but not as a player. The former All American women's water poloist hopes to become the head coach for the first women's water polo team in the history of the Olympics.

"I truly believe that the time has come for women's water polo to be included, but the decision won't be made until sometime later this year. I think our chances are good because we're not asking for a new sport. Men's water polo has been a medal event since 1904. Women's water polo is the only counterpart sport that is not represented. It's time to break that barrier," Kadlubek knows all about breaking barriers. While in high school in Santa Barbara, Calif., Kadlubek became the first girl in the country to play on a boy's water polo team.

"I was a great offensive weapon," she explains. "The boys on the opposing team didn't know how to guard me, so they let me alone."

Kadlubek's talents and enthusiasm for the game eventually led to a position on the first U.S. Women's Water Polo Team in 1979. The team won gold, silver and world championship medals. She was named head coach of the Women's National Water Polo Team in 1998.

"1996 was my last chance to be included in the Olympics as an athlete," Kadlubek says. "But I'm not discouraged. I had three goals in life: to play water polo, to coach water polo and — when I'm too old to do either of those — to wheel my chair to the side of the pool to watch water polo.

Watching water polo from the side of the pool is exactly what Kadlubek got to do at the 1996 Games. Hired as a spotter for the men's team, Kadlubek worked on the pool deck identifying players and clarifying calls for the television production crew.

Aside from some cursory instruction on television jargon and camera positions prior to the start of the Games, Kadlubek required little preparation for the job. However, she admits she was unprepared for the toll the hot, humid weather would take.

"I must have had five bottles of water a day," she says. "Our venue was outside, so we were in the heat every day from nine in the morning to 10 in the evening. But tough as it was for those of us on the deck, it was even harder on our dedicated fans who sat in the heat for hours watching the matches."

Although she wouldn't have dreamed of missing the experience, she admits that she was ready to return home to resume her duties as academic adviser to UNLV students.

"I'll always be involved with athletics. I'm now responsible for advising students in four sports: men and women's swimming, basketball, and softball. And I remind all my kids that they are fortunate to have a talent that lets them play a game they love. A lot of opportunities will come their way if they are willing to work hard."

DEITRE COLLINS

Former Olympian and UNLV head volleyball coach Deitre Collins understands well the level of commitment needed to succeed as an elite athlete. A 1988 Olympian and a leading volleyball player both nationally and internationally, Collins has traveled the world playing the game she loves.

Her experience with the game and her knowledge of the players on the 1996 Olympic Volleyball Team made her the ideal candidate to serve as a spotter for the volleyball events.

"My job basically was to serve as the eyes and ears for the NBC director, camera people, and producers who were covering the volleyball games," Collins explains.

She was employed by Atlantic Olympic Broadcasting, the organization that provided the television feed for countries covering the games.

"Usually, the camera people feed off what the commentators say. However, in this case, they had to feed off of what I said. So I did the play by play. I had to know who was going to jump serve, who was going to make the kill [the shot that scores the point], which side the serve was going to be on, and so forth."

Collins worked long hours; she was often as far back as 9 a.m. to midnight with just a short break in the middle of the day.

"Having been to the Olympics as an athlete and then as a paid employee, I can definitely say that it is so much better being an athlete," she says with a laugh. "Athletes are taken care of. They don't have to deal with the crowds. They have people whose responsibility is to get them where they need to be. All they have to do is show up and perform."

The little free time Collins did have, she spent with her friends on the team — a bittersweet experience for the recently retired Collins.

"It was difficult. These were people who I had played with, and they were still on the team. I didn't make the 1992 Olympic team, but I played with these women from '92 until '94 when I retired."

Collins' favorite memory of the Olympics was the first night that the women's basketball team played. "The crowd was huge. I got goose bumps just being there. To hear that crowd roar was very exciting."

Aside from that game and the long hours, what Collins remembers most about the 1996 games was the security. Because she was housed in the same hotel as the Dream Team, she had gotten accustomed to the intense security surrounding the hotel. But the bombing at Centennial Park was a wake-up call to all involved in the Olympics, as well as to the rest of the country.

"When I played in France, there was a lot of violent activity in Saudi Arabia, but that felt close. I remember thinking, 'I can't wait to get back to the United States where I'll be safe.' But after the bombing, I wondered if it was safe anywhere anymore."

The bombing, the early defeat of the U.S. Volleyball Team, and the long hours all caught up with Collins the last week of the Games.

"I had fun watching the games, and I learned something new, but I was anxious to get back to UNLV. As much as I've been involved with volleyball as a player, to be a head coach and to be building my own team was more important to me this past summer than being at the Olympics."

"When you have done something so thrilling for a long period of time and then that comes to an end, you have to find what to do next. A head coach position is the perfect opportunity for me at this time in my life, and I truly believe I can make a contribution here."

VAUNE KADLUBEK: UNLV's water poloist hopes to become the head coach for the first women's water polo team in the history of the Olympics. and was employed by Atlantic Olympic Broadcasting, the organization that provided the television feed for countries covering the games. She served as a spotter for volleyball events. Collin's favorite memory of the Olympics was the first night that the women's basketball team played. "The crowd was huge. I got goose bumps just being there. To hear that crowd roar was very exciting."
He had just helped some stranded islanders when they offered him fugu, also called pufferfish, for dinner. He explains that the fish, which contains a deadly toxin, is a unique culinary delight—with a twist.

"If prepared correctly, it leaves you euphoric," he says. "If prepared wrong, it leaves you dead."

Fortunately for Martin, it was a good night for pufferfish. The dish was prepared correctly, and he lived to tell us about it—and about the work that took him to that neck of the Pacific Ocean, as well as many other distant points on the map.

Martin is a marine biologist interested in the evolution of fish, and his research has taken him to such assorted locales as the Amazon Basin, Puget Sound, and Nevada’s Devil’s Hole, in addition to the South Pacific. All of these spots offer Martin watery laboratories in which he can study the evolutionary process that has resulted in such vast diversity of life on our planet.

Referring to what some have called the "last frontier," Martin says that the seas are beginning to yield important clues about evolutionary change that could someday produce more than insights into the lives of fish. He believes these clues could even lead to breakthroughs in our understanding of the human body that might enable us to better control the aging process.

To this end Martin studies the DNA of fish; a few years ago, his work in this area led him to a discovery that forced him to rethink things all the time, Martin explains. "In the 1980s, researchers began to realize there is a lot more variation in the course of a single day, thousands of mutations occur, and our bodies have to deal with them. Our bodies either correct the mutations or they don’t, and if the mutations aren’t corrected, the DNA is damaged. The accumulation of damage is one of the reasons we age."

Mutations in DNA also occur from one generation to the next. Martin says it’s a regular process, and until recently scientists thought that all species mutated at the same rate. This common mutation rate was known as the "universal molecular clock."

To develop a family tree, Martin says, "you count the changes that are revealed in a stretch of DNA and divide it by the clock. Scientists have used this method, for example, to try to determine when humans last shared a common ancestor with chimps and gorillas.

"If you plot out the clock it isn’t quite so universal, after all."

In the 1980s, researchers began to realize that there is a lot more variation in the molecular clock than was originally thought. Among those questioning the traditional wisdom was Martin, then a University of Hawaii Ph.D. student. "I tested the hypothesis [that there is a universal mutation rate or molecular clock] by comparing mutation rates in sharks and primates," Martin says. Much was known about primates, such as humans and chimpanzees, and Martin selected sharks for comparison because, he says, "Amazingly, we have a
Sharks mature at a late age, and we mature late. They are live bearers, so are we. They are basically a lot like us in ways that potentially affect how fast mutations occur, but they are very different in physiology. In particular, they are cold-blooded.

Sharks have another attribute that made them good subjects for this study: lots of teeth. Martin says a single shark may grow and lose as many as 10,000 teeth in a lifetime. These teeth fall into sedimentary layers of shoreline where they become part of the fossil record. Using this fossil record, Martin and colleagues Stephen Palumbi of the University of Hawaii and Garvin Naylor of the American Museum of Natural History were able to estimate the mutation or evolutionary rate of several species of sharks. When they compared the shark DNA mutation rates with the carefully calibrated data that exists for primates, they discovered that sharks mutate much more slowly.

Sharks accumulate mutations, the raw material of evolution, at a rate about 10 times slower than primates, they calculated. Naturally, they wanted to know why.

"The only thing that could really explain it was the fact that they are living life at a slower rate," Martin says. "They respire [breathe] at a lower rate, and their metabolisms are much repressed in comparison with ours. We're really depressed. Our cells process information really fast.

Martin explains that it is well established that metabolism is related to the size of a creature and whether it is warm-blooded or cold-blooded. Among warm-blooded animals, whales have a much slower metabolism than mice, and cold-blooded animals are slower than warm-blooded.

So, as Martin explains, "If you are cold-blooded and big, you are going really slowly."

No one had really considered that mutations might follow a pattern similar to that of metabolism.

"But it makes perfect sense," Martin says, "that the cells that govern what happens in us every day also influence the DNA and, thus, the mutation rate.

The discovery drew worldwide attention and opened new lines of thinking about evolution. "It was neat," Martin modestly says. "There are some really bizarre creatures down there, including some species that have changed little in the past 700 million years."

Martin is particularly intrigued by a shark he calls the "megamouth." "This is a cool fish," Martin says. "It basically lives deep during the day and moves to the shallows at night. It's like a lot of ocean dwellers that go up and down with the light levels, following food sources."

The megamouth shark is related to white sharks and may get as big as 15 larvae distinguishing characteristic is its huge lips that glow in the dark.

Scientists have obtained only a few megamouths for study, so they aren't sure what makes the lips glow.

"It's either got its own way of making light or it harbors bacteria that make light," says Martin. "It also has a structure in the back of its mouth that is a reflective surface, like a mirror."

The light helps the megamouth keep food on the table. "If you put a flashlight under water, you'll attract shrimp and other food. That's what these things are like — giant flashlights slowly moving through the water, sucking in whatever comes near and filtering the water out through their gills."

The megamouth studies and the comparisons between deep- and shallow-water fish are aimed at determining what makes the cells mutate at a particular rate.

"If we can figure out what controls mutation rates in a cell, we can potentially learn to control it ourselves and stop aging and some cancers," Martin speculates.

He adds that interest in shark mutation rates is heightened by the fact that "there's never been recorded a naturally occurring cancer in sharks. A lot of other fish get all kinds of cancer. Since mutation rates have a direct bearing on the development of cancer, the focus is once again on the issue of mutation, Martin says.

So the question becomes, "Is it just metabolism that affects the mutation rate or are there other factors involved?"

Martin works with bits of tissue taken from the sharks and other fish to continue analyzing the subject. The tissues he uses can be as small as a clipping of the fin or a piece of the gill.

"You extract the DNA from the tissue basically by just dissolving it in a detergent which makes the membranes fall apart. You're left with the DNA."

Then, says Martin, a process called a "polymerase chain reaction" creates billions of copies of a gene in a test tube in two or three hours.

"You need large numbers of copies of DNA in order to determine its sequence," Martin explains. Using radioactivity or dye, he then "labels" the DNA so that changes — mutations — will show up in his analysis.

Martin also applies this technique to the tiny Devil's Hole pupfish, an endangered species that lives in Ash Meadows between Las Vegas and Death Valley.

The entire pupfish population consists of about 200 individuals. "It's pretty much on the verge of extinction, but it has been that way probably for 50,000 years," Martin says.

Until recently all the pupfish were together. "If you have all one species in one place, something is going to happen and eventually they will be wiped out," he adds.

In an attempt to maintain the gene pool and ensure survival of the species, the U.S. Fish and Wildlife Service has created a new refuge and divided the population.

"They are reproducing," Martin says of the pupfish in the new location, "but we don't know if the gene pools are the same because mutations are constantly happening. They may actually be creating another species, not preserving the species we want to preserve."

When he examines the DNA patterns in the pupfish, he looks for "molecular markers," which are "highly variable pieces of DNA that allow you to identify individual fish, like fingerprints. By examining where these markers turn up in the DNA pattern, we can tell whether individuals in one place are more like each other than individuals in another place, and whether the preservation effort is succeeding.

The pupfish work has just begun so it is too early to know what is happening to one of the few fish species unique to the desert.

I nterestingly, it was the variability of desert — not aquatic — life that first attracted Martin's attention to the study of evolution. Growing up in the desert around Tucson he collected snakes, lizards, spiders, scorpions, and other critters.

"I had tanks all over the house," he recalls, "and every once in a while something would escape, and my parents would get upset."

These experiences led to a "nagging desire to find out why there is so much variability in nature," which in turn led to an interest in DNA. Martin wanted to continue his education after completing his bachelor of science degree at the University of Arizona, but he wanted to continue on page 28
Though UNLV alumnus Ron Husband has great fun in his career as a Disney animator, he wouldn't want us to believe his work is kid stuff. There's a whole lot more to animating Disney films than one might think, he says.

BY SUZAN DIBELLA

THERE AREN'T MANY JOBS OUT there that would require you to know how a goat walks. Or how a goat would look with a pipe in its mouth. But for UNLV alumnus Ron Husband, it's all in a day's work. He is a supervising animator with Walt Disney Feature Animation, and his most recent creation for the big screen was a goat named "Djali" in The Hunchback of Notre Dame.

To bring Djali to life, Husband had to find out everything he could about goats - from information on their skeletal structure and their musculature to the colors and textures of their coats. His research for that particular character took him, among other places, to the petting zoo at Disneyland.

"I spent the whole afternoon watching the goats, taking home movies of them, and even feeling their musculature," Husband recalls with a seriousness that lets you know he was oblivious to what others might have thought about his intense focus on the animals. "You know, goats don't move like dogs or cats. They're more similar to cows or other hoofed animals."

And his research didn't stop there. Later, back at the studio, he asked one of his colleagues to imitate a goat headbutting someone else from behind so he could analyze the movement.

UNLV alumnus Ron Husband, who has been animating characters for Walt Disney Feature Animation for more than 20 years, spends a great deal of time researching his subjects before going to the drawing board.

"I spent the whole afternoon watching the goats, taking home movies of them, and even feeling their musculature," Husband recalls with a seriousness that lets you know he was oblivious to what others might have thought about his intense focus on the animals. "You know, goats don't move like dogs or cats. They're more similar to cows or other hoofed animals."

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In a word, they animate their characters. For Husband, that means making the characters give an acting performance, complete with facial expressions, gestures, and movement. What's more, the animators must make those characters move with a fluidity and authenticity unparalleled by any other animation studio in the world.

Their goal, he says, is simply to make their audiences forget that they are watching a series of drawings.

"Our primary purpose as animators is to tell a story. And we want to tell it to the extent that the audience gets so involved in following the story that they forget that it's an animated picture," says Husband, who graduated from UNLV in 1973 with an art degree. "It's the intent of the animator to let the audience get lost in the drawn lines and just..."
follow the story."

For that to happen, he points out, each animated character must have life and depth and feeling. And it is his job not only to make his characters look real, but also to make them act like real people — even when one of them happens to be, for instance, a goat.

The seriousness with which Husband approaches his work paid off for him in The Hunchback, the first film on which he served as a supervising animator. He beams like a proud parent when he notes that the amount of screen time Djali received in the finished film was double of what it was originally. In previous films Husband served as an animator, bringing to life such characters as the dastardly villains Jafar in Aladdin and Scar in The Lion King. He animated the playful Pumbaa and Timon, also in The Lion King, as well as the arrogant, hefty Gaston in Beauty and the Beast. And he drew the chiseled features of the heroic John Smith in Pocahontas and captured the innocence of Cody in The Rescuers Down Under.

But it was with Djali that Husband moved into a supervisory role, interacting with the director on every scene that involved his character and becoming, in a way, that character’s advocate. Given the intensity of his involvement with Djali, it’s easy to see how a small animated goat could become more to Husband than just the four-legged sidekick of the mesmerizing gypsy Esmeralda. Djali, like all of the other characters Husband has animated during his 20-plus years at Disney, began to take on a personality during the year-long animation process.

"I tried to have him convey the attitudes and actions of a 10-year-old boy trying to protect his older sister. He’s there to offer moral support. When she thinks she doesn’t have a friend in the world, Djali’s there. He’s her all-around buddy and protector."

The goat also brought lightness to a story that is perhaps one of the darkest that Disney has ever tackled.

"When I first worked on Djali, he was a secondary character in the picture. His part was minor — he had not quite 300 feet of animation. But then when the animators saw footage of him, they would say, ‘Djali’s looking pretty good. Let’s write him some more parts.’ It was like the Fonz on Happy Days. He was a minor character, and then people started liking him, so his part expanded.

‘And Djali sort of took the edge off the story in the sense that he was a light, comical character,’ Husband says, adding that the goat was able to lend a little lightness to a very heavy story — one that included such themes as lust, murder, and a man tormented by loneliness and unrequited love. ‘That’s pretty serious storyboarding.’"

But exploring deep emotions is an integral part of any storytelling, Husband says, noting that, even though Disney characters are frequently animals, they often end up in very trying situations.

"For example, in The Lion King, the lion becomes a little boy who just lost his mother. So, you have to communicate that loss through the character. As animators, we deal with universal emotions. There are certain things in life that convey all of the world — laughter, love, hate. These are deep emotions in every culture and in every civilization. We capitalize on those basic emotions and try to bring them out in our animation."

He compares his job to that of an actor interpreting lines in a play: he must bring expression to the words in the script and meaning to all of the character’s movements — and he must do it all through the use of a pencil. He is mindful that with one false stroke of that pencil, the willing suspension of disbelief will disappear like so much fairy dust.

"I was always blessed with the ability to fit myself into a character, so you’re using psychology. I was too small to be much of a receiver. I was too small to be much of a running back, so they put me out on the flank where I would have a better chance of survival,” he laughs.

Although Husband graduated toward art in the classroom, he took a wide variety of courses, many of which he calls "upon in his work currently."

"One of the unique things about animation is that I’ve been able to call upon every class I’ve ever taken, literally. From psychology to math to history to drawing, I’ve used them all. When you’re putting on an acting performance, you’re concerned with the motivation of the character, so you’re using psychology. When you’re figuring out camera angles and rate of camera movement, you have

Frequently Asked Questions About Animation

How many drawings does an animated feature film contain? Each second of film contains 34 individual drawings. There are roughly 144,000 drawings in the average 70-minute Disney animated film.

How much of the animation is done on computers? Animators still use largely the same process to create their characters that was used in Snow White and the Seven Dwarfs. While they still draw characters by hand using pencil and paper, Computers are sometimes used to create scenes containing large numbers of people or animals — when detail is not critical. One example is the widebeest stampede scene in The Lion King, which animators drew one of the animals and then had it replicated many times on the computer.

How many people work on each character? A team, ranging in size from one to a dozen or more people and led by the supervising animator, is usually assigned one character per film. The specific size of the team depends on how much screen time the character has. The supervising animator develops thumbnail sketches of the character for each scene and discusses them with the director of the film. The next step is the actual animation of the character. The animator is responsible for the key drawings in a scene — the ones that convey the character’s most important emotion or action. Then, animators, called “in-betweeners,” fill in the other drawings.

Which comes first — the recording of the character’s voice or the drawing of the character? Despite what you might have seen in the movies, the voice characterization is done first. The voice is necessary for the animator to know how to shape the character’s mouth. Animators sometimes observe the actor or actress doing the voice characterization during the recording session to gain insight into the interpretation of the script.
In his academic program, he learned disciplines at UNLV, both in the classroom and on the football field.

"I graduated right at the nose," Husband says proudly. "I took 18 credits the first semester of my senior year and 19 the next. I was really trying to save money. Well, we would have to pay extra if they provided a second witness. So we went down the hall and asked a complete stranger to be our second witness." He smiles as he reports that he and his wife, who have three grown children, were married 25 years earlier with the goal of bringing them off Monday at the studio guard gate. And they called me about a week later and told me I could start whenever I wanted."

Reading on page 25
about plants and landscaping," says. "People can come out here to learn about desert landscaping, to take a look at what kinds of plants work well in our arid environment."

The UNLV campus, all 335 acres of it, is a state arboretum — a designation bestowed by the 1985 Legislature. By definition, an arboretum is a place where trees, shrubs, and other plants are cultivated for educational and scientific purposes. Swartzell takes UNLV's role as an arboretum very seriously.

"We have self-guided tours that allow people to walk around the campus and take a look at our mature plants. All the trees and plants on the tour are labeled, which allows people to write down the names so they can ask for the plants at their nurseries.

"Sometimes people forget that a lot of our neighbors aren't from Las Vegas and aren't aware of the plants commonly grown here," says Swartzell, who was recently honored as the co-recipient of the President's Outstanding Professional Staff Member of the Year Award for 1996 at UNLV.

"So if somebody comes in from Cleveland or Florida or Washington state, they can take our tour and see some of the plants that are a little bit more common to the area that they may have never seen before."

Swartzell himself is a transplant to the area. He came to Las Vegas in 1982 from his native Georgia, where he earned a degree in agriculture with a major in floriculture at the University of Georgia.

He recalls that before he arrived here, he had never seen some of area's most ubiquitous varieties of flora, such as the European olive tree. Swartzell points out that particular tree, though widely planted on the campus years ago, is now banned in Southern Nevada, due to its prodigious production of allergens. That is the kind of information he shares with campus visitors during his landscaping education sessions.

"We offer programs on Saturday mornings about once a month that are open to the public," he says, continuing his list of UNLV's outreach activities for home gardeners. Topics vary, but they usually include such favorites as new plants, transplanting, and pruning.

One subject that is discussed almost always, regardless of the announced topic, is water conservation, according to Swartzell. "It's almost a given now. We just incorporate it into the various programs that we provide."

Water conservation is also a concern on campus. It's one of the reasons that points out through their nurseries.

"I think most people have a misconception about water-efficient landscaping. People think everything is gray, thorny, and boring. Well, it doesn't have to be . . ."

— Dennis Swartzell

While desert landscaping was a hard sell for Southern Nevada homeowners for many years, it's catching on, Swartzell says. The major reason, he believes, is increased water costs.

"Why was there a reluctance to begin with?" he asks. "People think everything is gray, thorny, and boring. Well, it doesn't have to be gray or thorny. It doesn't have to be boring. A lot of times water efficient landscaping can be very lush, very green, very colorful. It's just more water-efficient.

"Xericaping is a very pleing type of landscaping that utilizes drought-tolerant plants," he says. "Xericaping embraces the concept of an oasis around the immediate living area. It should not, he warns, be confused with "terracing," a type of landscaping that often consists of a rock and maybe a cactus and a wagon wheel."

People interested in seeing a good sampling of the variety of water-efficient plants available in Southern Nevada, should stop by UNLV's xeric garden, Swartzell suggests.

"It's kind of our pride," Swartzell says of the small garden located on 1.5 acres just east of the Marjorie Barrick Museum of Natural History. Filled with more than 150 species of trees, shrubs, flowers, and groundcovers, the garden is popular with students and campus visitors alike.

It was recently expanded toward the north with the help of the master gardeners, a group of citizens who have earned their title through a cooperative extension program. Swartzell works with the master gardeners on a regular basis.

One day during the expansion project, Swartzell stopped to show a visitor some of the new areas that aren't that great?" he asked after snapping off a sprig of Mr. Lemmon's "aid tree."

And this one is called a "donkey," he added, proffering a piece of another aromatic plant.

Swartzell remembers well the creation of the garden in 1988 — particularly the activity that took place one cold February day when members of the two local cactus and succulent societies came out to help plant the drought-tolerant shrubs. Swartzell's crew had dug the holes in advance, but all the plants remained to be done. "It was 30 degrees with 40 mile-per-hour winds. We planted 700 shrubs in one day."

Today, the desert demonstration garden provides home gardeners a chance to get ideas of what might work in their yards. Swartzell assures that the garden at different times of the year so that the plants can be seen in all their various stages.

Swartzell, who frequently writes for trade journals, recommends that every yard have a plan rather than being a haphazard arrangement of plants. For people who want grass in their yards, the best placement of it typically is in the high-use areas. Swartzell's own backyard, for instance, features turf near the living area so that his dog has somewhere to play. Beyond the turf are water-efficient plants, the lushest plants located nearest the house. Farther from the continued on page 28
March 11
Mask and Mime Co.
March 12
3-21 Art Exhibit: MFA Thesiss Exhibits. 9am-5pm.
11-21 Art Exhibit: "Women's History Month," Weekdays, 8am-5pm. Jessie Mestall Gallery.
3-8 Basketball: Western Athletic Conference Championship. Details TBA.
5-9 University Theatre: Ten-Minute Play Festival. March 5-8, 8am; March 9, 2 pm. Paul Harris Theatre. 895-3801.
7-9 Music Department Opera Theatre: "The Magic Flute." March 7 & 8, 7:30pm; March 9, 2pm. Artemus Ham Concert Hall. 895-3801.
11 Hockey: Las Vegas Thunder vs. Colorado. 7:05pm. Thomas & Mack Center. 895-3900.
13 Music Department: UNLV Wind Symphony. 7:30pm. Artemus Ham Concert Hall. 895-3801.
14 Family Affair: National Traditional Orchestra of China. 8pm. Artemus Ham Concert Hall. 895-3801.
15 Music Department: Invitational Choral Festival. 8am-6pm. Artemus Ham Concert Hall. 895-3801.
Chamber Music Southwest: Music of Elliott Schwartz. 8pm. Black Box Theatre. 895-3801.
Hockey: Las Vegas Thunder vs. Long Beach. 7:05pm. Thomas & Mack Center. 895-3900.
16 Music Department: UNLV Orchestra. 7:30pm. Artemus Ham Concert Hall. 895-3801.
18 Master Series: Cincinnati Symphony Orchestra. 8pm. Artemus Ham Concert Hall. 895-3801.
19 Alumni Event: Board Meeting. 6pm. Richard Tam Alumni Center. 895-3621.
Variety Show: Paddy Noonan's Irish Variety Show. 8pm. Artemus Ham Concert Hall. 895-3801.
23 Musical Arts Society: St. John's Passion. 3pm. Artemus Ham Concert Hall. 895-3801.
24 Family Affair: Macowsky Polish Folk Ensemble. 8pm. Artemus Ham Concert Hall. 895-3801.
Art Department: National Conference on Education for the Ceramic Arts Regional Juried Student Competition. Weekdays, 9am-5pm. Donna Beam Fine Art Gallery. 895-3803. (through April 5)
25-26 Choral Festival: National Black College Music Department: Desert Winds Invitational Band Festival. All day. Artemus Ham Concert Hall. 895-3801.
11-21 Art Exhibit: "Women's History Month," Weekdays, 8am-5pm. Jessie Mestall Gallery.
3-8 Basketball: Western Athletic Conference Championship. Details TBA.
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Changes for Commencement 1997

Commencement 1997 has been set for May 10 in the Thomas and Mack Center. The ceremony will be somewhat different from past commencements, according to Don Schmiedel, chair of the commencement committee.

In an effort to enhance the event and focus attention on the graduates, the committee is implementing a plan to hold two complete ceremonies on May 10. The morning ceremony will begin at 9:30 a.m. with graduates and faculty from the Colleges of Hotel, Liberal Arts, Urban Affairs, and Sciences. The afternoon ceremony, beginning at 1:30 p.m., will include the Colleges of Business, Education, Engineering, Fine Arts, and Health Sciences. Each of the ceremonies is expected to last approximately 90 minutes.

MAY 1997

1 Music Department: University Chorus, 8pm. Artemus Ham Concert Hall, 895-3801.
6 Nevada Symphony Orchestra: Classical Concert. 7pm. Artemus Ham Concert Hall, 895-3801.
6 Music Department: Jazz Ensemble I, 8pm. Judy Bayley Theatre, 895-3801.
10 Commencement: Graduation Ceremonies. 9:30am & 1:30pm. Thomas & Mack Center.
17 Concert: Las Vegas Gambo-Aires. 2 & 7:30pm. Artemus Ham Concert Hall, 895-3801.
22-29 University Theatre: Rigging Workshop. Call for details. Judy Bayley Theatre & Black Box Theatre, 895-3801.

JUNE 1997

8 Nevada Dance Theatre: Youth Ballet. 2 & 7pm. Artemus Ham Concert Hall, 895-3801.
15 Dance Recital: Backstage II. 2 & 7pm. Artemus Ham Concert Hall, 895-3801.
20 Dance Concert: Madeleine Dance Recital. 6pm. Artemus Ham Concert Hall, 895-3801.
22-29 University Theatre: Rigging Workshop. Call for details. Judy Bayley Theatre & Black Box Theatre, 895-3801.

JULY 1997

2-4 National Dance Competition: Dance Olympics. All day. Artemus Ham Concert Hall / Judy Bayley Theatre, 895-3801.
4 Holiday: Independence Day recess.
5-9 National Dance Competition: New Rainbow Connexions. All day. Artemus Ham Concert Hall, 895-3801.
7-12 University Theatre: Pre-Fight Mini Workshop. Begins 8am daily. Judy Bayley Theatre, 895-3801.

Events are subject to change/cancellation.

Drawing

continued from page 18

learned the ins and outs of animation, including timing, perspective, and "squash and stretch," a term used to describe how animated characters move. "Animators have to squash or stretch some part of their characters' bodies to make them move," Hubbard explains, adding that, for example, when we walk, our mouths are constantly squashing and stretching. "But knowing how much to squash or stretch is the key, and that is based on the character's skeletal and muscle structure and on how 'cartoony' it is. For instance, if the character drops its arm, and then its arm stretches all the way to the ground and then pops right back up, that's cartoony. That works if the character is Goofy. But if it's Snow White, no. There's a difference in how much you can exaggerate the motion. These are the kinds of things we learned in the training program. Hubbard passed the trial period and soon found himself working his way up the Disney animation ladder. He first served as an "in-between" (the person who draws the character in between the key drawings that are provided by the animator) for Frank Thomas, one of "the nine old men." Hubbard went on to take higher positions, each requiring him to accept increasing responsibility for the characters he drew.

But then, in May 1978, a setback came. Hubbard found himself losing weight and feeling extremely fatigued. "I took some time off to try and catch up on my rest," Hubbard says. "I remember lying in bed and getting a call from Disney telling me that I had been promoted to animator. I was so pleased, but I just sort of whispered, 'thank you,' and rolled over and went back to sleep."

Finally, after seeing a long line of doctors who offered little insight, Hubbard saw a neurologist who diagnosed him quickly: he had a growth located at the base of his brain, and surgery was required immediately.

"He hospitalized me right away, and they performed eight hours of surgery," he says, pointing out the three-inch scar on the back of his neck. "The doctor told my wife — but not me — that I was probably going to die on the operating table. He said even if the operation was a success, I was probably going to be paralyzed from the neck down."

Fortunately, the growth was a benign cyst, and Hubbard was not paralyzed by the operation. But they weren't so sure about how his motor skills would fare."After the surgery, they were very concerned that I might have lost my drawing skills. So my wife and brother kept pushing a sketch pad and pencil into my hands to see if they were still there. I, of course, had no idea what they were up to."

He did lose many motor skills initially; he could hold a pencil, but he couldn't control it. But over the course of the next year, he began to improve. He had to learn to brush his teeth again.

"I had to learn to walk again. I had to learn to brush my teeth again," Hubbard says. "I was very aware of my balance and trying to get that back. That came back slowly. I remember taking little baby steps with a walker and eventually being able to take a few steps, then being able to walk down the street the length of one house and back, then around the block."

When he returned to work, he was greeted by overwhelming support — and his new position as animator.

"There was a lot of interest in animation at Disney, and everyone builds on the quality of the work that others have already accomplished."

Today, Hubbard is grateful, for his health, his job, his family, and his art. The next film he is working on is "Hercules," due out this summer. After that, he will help create new segments for the updated version of the Disney classic, "Fantasia."

Meanwhile, he finds time to do freelance illustration jobs, and he's willing to lecture about animation to just about any group that asks, from elementary school classes to the Black FilmMakers Hall of Fame, where he has addressed each of the past five years.

During a recent visit to UNLV for his interview with UNLV Magazine, Hubbard found time to speak to a group of university art students, providing them an overview of the animation process. He talked about requirements of the job, including the ability to tell a story through a character, an aptitude for analyzing action in order to capture it on paper, and, of course, the essential drawing skills.

But, surprisingly, he left off his list one characteristic he couldn't have foreseen: the willingness to spend some real, quality time with goats. drinkers!
Brenda Judi Leake, '71 AA Nursing, '86 BS Nursing, just completed 25 years of employment as a nurse at Sunlife Hospital. In 1975, she became the first international student in Nevada. She is an avid traveler and made a trip around the world in 1985.

Debra Croce Cameron, '78 BS Hotel Administration, has been a partner in the Incredible Graphics design firm. After graduating from UNLV, she worked in management of fine dining establishments in San Diego and in Rochester, N.Y. She lives in Palmsted, N.T., with her husband, Jim, and sons Alex and Max.

outstanding community service by the Chamber of Commerce. The company also recognized her as an “Outstanding Young Woman of America.”

Chris Meyer, '94 BS Business Administration, has been promoted to the position of director of sales at the Sands Expo. He has been serving as a national sales manager and was the sole leader at the facility for five years in a row. Previously, he had worked at the Tropicana Resort & Casino, the Flamingo Hotel, and at the Marina Hotel & Casino.

Anthony V. Tamaggio Jr., '86 BS Hotel Administration, is president of Tamaggio Brothers Inc. construction company in New Jersey. He recently moved to Florida to continue his career. He lives in Boca Raton.

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Chris Meyer '94

Dona R. Brekhi, '86 BS Biological Sciences, graduated from the University of Osteopathic Medicine and Health Sciences and Surgery in Des Moines, Iowa, in 1993. More recently, she finished a pediatric residency at the University of California Irvine Medical Center. She currently is a traveling doctor, crossing the nation to fill in for other doctors. In July, she will begin a pediatric cardiology fellowship at Denver Children’s Hospital.

Kenna T. Derleth, '86 BS Engineering, '94 MBA, is the president of KJE Consulting Engineers Inc. The corporation provides civil engineering services.

David Pokorny, '86 BS Computer Science, '93 MBA, is a senior producer with Hearst Interactive in Beverly, Mass. Hearst Interactive creates interactive CD-ROM video games.

John Avery '87

Kim Young-Kay, '87 BS Hotel Administration, is the front office manager at the Hyatt Regency Pauoa in Paia, Kierra.

Sharon Diamond, '99 BA Communication Studies, is the marketing research director at television station KLAS TV-8.

Regina L. Stouck Neale, '99 BA Criminal Justice, is living in Indonesia where her husband is building power plants. She wrote to say she enjoyed UNLV Magazines recent story on the Komodo dragon (Platz ’96) as since they now live “with the Komodos.”

Stefanie Shidlin, '89 BA English, a graduate of UNLVs Honors Program, earned a law degree from Gonzaga School of Law in 1994. She is currently an attorney with the law firm of E. Roger McPhie Ltd. in Las Vegas. She practices in the areas of corporate and business transactions and construction.

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‘80s

Leticia Rivera, '83 BS Business Administration, is principal of Schol Elmentary School in the Hardin Independent School District in San Antonio. She received a governor’s award for commitment to education and also was given an award for

outstanding community service by the Chamber of Commerce. The company also recognized her as an “Outstanding Young Woman of America.”

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a change of scenery.

He decided Hawaii would be a “nice place” for graduate study, and the University of Hawaii fortunately had scientists doing path-breaking work with DNA. For his Ph.D. in biology he did the aforementioned study that led to the rethinking of the calibration of the molecular clock.

Obtaining a post-doctoral fellowship from the Smithsonian Institution, Martin next found himself on and in the waterways of the Amazon Basin in his continuing quest to understand diversity.

“We are interested in why there are so many species in the Amazon Basin,” he says. “It looks like there were brief periods of time when the creation of new species was rampant, then everything pretty much stayed the same for awhile.”

For example, he explains, five million years or so ago the world was cold with a lot of water tied up in glaciers. The Amazon Basin was then relatively dry, and evolutionary connections were broken. New species evolved, creating new branches on the evolutionary tree, and Martin has been tracking those changes.

He returns to the Amazon periodically to continue his studies of diversity, and there, of course, he encounters the Amazon’s most infamous fish, the piranha.

The first time he went to the Amazon Basin, Martin recalls, he didn’t know piranhas could be found everywhere.

“So I’m out there in the river, seining away, and the Venezuelan ichthyologists I was with didn’t say anything. Then, we pulled in the net, and it was full of piranhas.”

Once he recovered from his initial shock, Martin found he could largely ignore the fierce fish. “They’re no problem unless you have a sore, and then they clean it very nicely — maybe too nicely,” he says.

As if to suggest turnabout is fair play, he notes that his expeditions have provided him with enough fish stories to fill a book — a cookbook, that is. He loves to eat fish and has sampled some unique species.

“Like a good biologist, I’ve sampled considerable diversity,” he says.

He has tasted most types of coral-reef fish, and says the “weirdest looking has to be the bird wrasse,” a small, blue fish with an elongated, beak-like snout, whose fleshy is also bright blue.

Catfish abound in the Amazon, and Martin has sampled about two dozen varieties, including one specimen that was “as big as a boat and another that had whiskers at least five feet long,” he says, swearing he isn’t exaggerating.

Besides, as “fish stories” go, it would be hard to top the tale of the potentially poisonous pufferfish.

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house one goes, the more drought-tolerant the plants should become.

One common pitfall that Swartzell urges home gardeners to resist is making their yards in Las Vegas look just like their previous yards did in Baltimore, Seattle, Des Moines, or San Antonio.

“That’s a real common problem here. For example, people bring in and want to use weeping willow. And weeping willows are just the worst trees for Las Vegas. They’re just the pits when it comes to root problems, water consumption, susceptibility to disease, and insect problems.”

Swartzell says that instead of looking to the areas where they lived before moving to Southern Nevada for landscaping ideas, Las Vegas gardeners should look to one of the desert models — either our own Mojave Desert, or the Sonoran, Chihuahuan, or Australian Deserts.

He suggests that from the Mojave, they might pick a creosote bush or a barrel, beavertail, or hedgehog cactus. If the Sonoran Desert is their model, they might choose an ocotillo or a teddybear cactus. The Chihuahuan Desert offers such ideas as the yucca, some native grasses, or the Texas sage.

“Native grasses fit into the landscape very well and are low maintenance. And many of them can be quite colorful. For example, we’ve been leaning toward the use of deer grass as of late,” he says.

“We’re kind of excited about grasses, which seem to be the new trend in water-efficient landscaping. They add that soft touch.”

Flora from the Australian desert can add variety to a yard as well, but Swartzell warns against relying too heavily on trees or plants such as eucalypts and cassia. Australian species had become quite popular in Las Vegas until one winter when many were lost in a freeze. Homeowners who had gone too heavily in that direction found themselves having to replace many plants at significant expense.

“You can mix and match. There’s nothing wrong with that,” he says. “The important thing is that the homeowner have a yard that is unique to him or her. Homeowners shouldn’t be afraid to try something different as long as the plants are suitable for this climate. The UNLV Arboretum can help them in making that determination.

“Also, homeowners should bear in mind that Las Vegas is perhaps one of the toughest locations in the country to grow plants,” Swartzell says. “They should just think of it as a challenge and know that any success should be savored.”

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Your child. Your spouse. Relatives. Close friends. Your estate plan should provide for all the obvious beneficiaries.

But what about the heirs who are less apparent? What about, for example, the students of the University of Nevada, Las Vegas?

A growing number of people are including UNLV in their bequests. Clearly, they understand that they have both the privilege and the responsibility of assisting future generations of students. And they’re using their estate plans as a vehicle.

A bequest to the University of Nevada, Las Vegas is a rare opportunity to make a life-transcending gift — one that will perpetuate your ideals, your hopes, your values.

By providing for UNLV in your estate plan, you can often make a much larger gift than would be possible during your lifetime. And that gift will have far-reaching ramifications, affirming UNLV’s mission of education, touching the lives of students for years — even generations — to come.

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If you haven’t yet made a bequest to the University of Nevada, Las Vegas, please consider it.

If you have already included a gift to UNLV as part of your estate plan, please let us know. We want to thank you now by including you in our UNLV Heritage Circle. The UNLV Heritage Circle is a special group of donors and friends who, through their planned gifts, will make a tremendous impact on UNLV’s future.

If you’re interested in making a provision for UNLV in your estate plan, you can call the UNLV Foundation at (702) 895-3641 and ask about Generations. It’s our program to inform people about the benefits of charitable gift planning.

Ask for our free brochure on estate planning. We’ll send you information about the numerous giving options as well as preferred bequest language for review by your lawyer.
Construction is underway on the university's new $8.25 million, 75,000-square-foot Architecture Building, which is expected to be completed in July 1997. The building, which will be located on the south side of the campus near the Houssels House, was designed by Swisher Hall Architects and is being built by Tibesar Construction. The rendering above shows its north elevation.