Animal attraction
Flippered and four-legged connections

ALSO INSIDE: The waves roll on: Radio at Wooster
The hard-wiring of humans

I love my dogs. They aren't extraordinary. They're just dogs—simultaneously endearing and annoying. Little Frank pulls his lips back into a foolish smile when he meets me at the door, and receives treats with a small snorty wheeze of appreciation. His luxurious yawns, which crescendo to a little scream, can wake you from a deep sleep. Lily, my border collie mix, is deeply intelligent and deeply needy. I have coined a word to describe her most distinctive behavior: snoutering. To snouter is to thrust a long nose. Everywhere.

The fact that I love my pets is hardly newsworthy. We all do. The $40 billion that Americans spent on their pets in 2007 is almost double what it was a decade ago. Research confirms our conviction that our lives are better with pets. If you're a heart patient, for example, research shows that you're one-third less likely to die of the disease if you're a pet owner, compared to non-pet patients. Beau, a three-year-old black Lab therapy pooch, was recently brought to a military base in Tint, Iraq, to help ease combat stress. "We miss our dogs from home," said the soldiers.

It is completely understandable why humans, who love their pets, can routinely wipe out whole species of wild animals. The Japanese sea lion, for example, has vanished from our planet and intellectually we understand that this is alarming. But we don't know the Japanese sea lion. We have never looked into his eyes. Our paths have never crossed.

Zoos are often called arks, but the metaphor that makes sense to me is more of a bridge. Zoos bridge the involvement we have at home as pet owners with that of a wild, natural world that we'll never experience. And our interactions are growing increasingly more limited, as urbanization removes us from nature's animals. Grey Stafford '88, director of conservation and communications at the Wildlife World Zoo in Litchfield Park, Ariz., says that some inner city children who visit his zoo are lucky to even have seen squirrels.

In the past, my emotional experience with beluga whales has been limited to a propensity to play the kids' song, "Baby Beluga" in my head for days, after a single hearing. And then Carrie Myers Felice '97, a beluga whale trainer, told me about the opportunity to swim with her zoo's whales. In the amount of time it takes to reach out and touch the smooth, porcelain nose of a white beluga, my emotional investment changed. Now, my response to news of a beluga harpooning would be as passionate as my reaction to a border collie harpooning.

There's a reason why more people visit zoos every year than go to sporting events (including NASCAR). Even as we destroy our planet's animals, we appear to be hard-wired to need them. Some of us have always known it. "If all the beasts were gone, men would die of a great loneliness of spirit," wrote Chief Seattle, of the Suquamish Tribe, in a letter to President Franklin Pierce. "All things are connected. Whatever befalls the Earth befalls the sons of the Earth."

The alumni and faculty we cover in this issue have devoted their professional lives to the animal-human connection. And to a one, they say they have the best jobs in the world.

KAROL CROSBIE
EDITOR
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Ferdinand, a three-year old beluga whale, and Carrie Myers Felice ’97, an arctic animal care specialist for SeaWorld in San Diego, delight in each other’s company.

COVER PHOTOS: Michael Aquilina, SeaWorld
LETTERS FROM OUR READERS

Mailbox

Wooster magazine: Passing the test

Wow! From Jimmy's perspective, to the article on teams and coaching, from the wonders of small towns and miraculous hands, to the variety of fascinating lives shaped by Wooster as represented in the Class Notes, you have birthed another wonderful issue. It's a blessing to all who, like me, cannot help but consume it.

MIKE LAUBER '80
DOVER, OHIO

I've read every copy of Wooster from cover to cover ever since I received my very first one. It's a terrific magazine and keeps on getting better. I've been involved in the nonfiction book publishing industry for about 25 years and am still doing free-lance copy editing of college textbooks, so I read with a critical eye—Wooster passes all my tests!

LIBBY FOSTER BARSTOW '53
LONGMONT, COLO.

Coming of age when the world is falling apart

By Richard Harris '68
Manhattan, Kans.

As my children approach the end of their adolescence and the beginning of adulthood, I naturally think back to my own journey through this life stage. At that time, the nation and the world were in considerable turmoil. Life at Wooster in the late sixties was a time when we didn't have the luxury of separating ourselves from these events. I wrote this so that my children would have a better idea of my journey through this time, as it was extremely formative as to who I am today.

I was in college from 1964 to 1968. The nation and the world changed immeasurably during that time. Heck, it wasn't even the same place it had been four years earlier. Everybody went in with short hair and came out with long, but the changes went much deeper than that. All in all, it was quite a time to come of age.

I began college at The College of Wooster in September 1964, full of hope and excitement for this new adventure. During my college years, I made the almost quintessential shift from conservative, sheltered, suburban kid to political liberal, if not radical. At Wooster, the lifestyle was conservative (no drinking, no sex, no drugs—at least I never saw any)—all of which was just fine with me—but the politics and theology were liberal, and the campus church (Presbyterian) was out there leading the charge. The really defining issue was opposition to the Vietnam War, starting up seriously around 1966. But there were also other issues. The Civil Rights movement was going on, and our
Richard Harris '68 wrote “Coming of age when the world is falling apart” for his children (from left) Clint, and twins Grady and Natalie. His wife (far right) is Caprice Becker.

campus pastors frequently went down South to participate in sit-ins and marches.

At one point, I joined a small group led by a Quaker professor, Dr. Jim Bean, who was also my French teacher and the track coach. The pacifist theology that we studied struck me as the right way to interpret the Bible. Another time, my African history teacher recruited me (why me, I was never sure) to lead an evening discussion group at his home about current issues. To be honest, I can't remember what the subject of that group was, only that one evening we went downtown to hold a support vigil at the county jail where a Wooster student was being held after being arrested for an antwar protest.

Our college was a major center of progressive, activist, peace-and-justice theology. We students were encouraged to deeply study our faith and live it out. Perhaps the most distinguished theologian to visit the campus was the renowned though aged Paul Tillich, in one of the last public addresses before his death. Everyone turned out to see him. I remember I had to sit in the large choir loft of the old chapel, as all the other seats were taken. He spoke on the resurrection, and I felt very proud that I could halfway understand him, thanks to having studied the topic in our New Testament class.

However, the most memorable visiting theologian was William Sloane Coffin Jr., the activist pastor from Yale, who visited in 1966 or 1967. In one lecture, he talked about how we have to act and cannot just sit by and debate the issues. Then he announced another meeting for later that evening to organize concrete action against the Vietnam War. His stirring words motivated several hundred students to turn out, and this meeting laid the groundwork for future antiwar activities at the college.

Our spring break in 1968—the year of the Tet offensive and the beginning of serious erosion of public support for the war—was March 29-April 7. On Sunday evening March 31, President Lyndon Johnson announced in a televised address that he would not be a candidate for re-election. Later that week, on a road trip to visit friends, I heard on the radio that Martin Luther King Jr. had been assassinated in Memphis. Over the next three days, I saw three cities burn. Inner-city African Americans took out their anger on their communities with burning and looting, activities which produced large towers of smoke visible from the interstate for miles out of town. Two months later, presidential candidate Robert Kennedy was gunned down in Los Angeles after winning the California Democratic primary. People were starting to think the country was truly going to hell.

Although I had been accepted at four of the top psychology graduate schools in the country and had accepted an offer from the University of Illinois, the very real probability of being drafted prompted me to change my plans. By then I had decided that participation in war was against my interpretation of Christianity, which I now interpreted as properly pacifist.

Although I considered emigrating to Canada for graduate school, the fact that I would not be able to return was a serious problem. My mother had had surgery for lung cancer less than a year earlier. Being a Presbyterian, I figured I would have no chance of gaining a conscientious objector status at that point, as any application, however sincere, would necessarily look totally opportunistic. Also, I wasn't sure I had a good answer for questions like, "How would you deal with Hitler if you don't believe in war?" Only much later, after I had joined the Mennonite church, did I realize that even lifelong pacifists don't necessarily have answers to questions like that.

So what was it like to come of age in the year that the world was falling apart? In many ways, I believe that my college education at Wooster—an education squarely in the liberal arts tradition—helped me prepare for a world that no one knew was coming. But in a way, did my sheltered upbringing in the suburbs with two parents who unconditionally loved me and raised me to think all things were possible. My discovery of the Mennonite church following graduation brought together themes from my Presbyterian upbringing and the social activism of Wooster that helped form my adult life of faith.
Wooster's Moot Court team is best in the nation

For the first time in the College's history, a Wooster team captured the national title of the American Collegiate Moot Court Association's tournament, beating 64 other teams. The champion team was that of Drew Glassroth '08, Brookline, Mass., and Kate McCarthy '09, Portage, Mich. Twelve other Wooster students also received honors.

This year's case concerned topics that were less mainstream than the previous two cases he has argued, said Glassroth. The 2008 case before the mock Supreme Court concerned William DeNolf, who home-schools his children and operates a small gun shop in his home, putting him in violation of the Gun Free School Zone Act. At issue is whether the act violates the Second Amendment, guaranteeing citizens the right to bear arms. "I didn't know anything about home-schooling," said Glassroth, "and the Second Amendment hasn't been addressed that much."

The case may be imaginary, but there was nothing pretend about the justices who heard the final arguments. The Glassroth/McCarthy team argued before three very real Iowa Supreme Court justices. The two students, who both plan to go to law school, say their moot court success will help them stand out from a crowded field of applicants.

"How many undergraduate students can say they've argued before a state Supreme Court justice?" said Glassroth.

What if physicists took up football?

The College of Wooster's Physics Club won the People's Choice Award in the national Nanobowl Video Contest, sponsored by the American Physical Society to coincide with Super Bowl XLII. Their winning "Theoretical Football" is a fast-paced, three-minute video that illustrates the science behind the game with a heart-pounding, yet humorous, competition between two teams of physics majors.

However, instead of tackles and touchdowns, these students used mathematics and Newton's laws to develop equations that described what happens when, for example, two players collide at high speed on the field. They also constructed the parabolic trajectory of the football as it glides through the air, calculated its range, and derived the formula for a football that is spinning briskly on its axis.

The idea for the video came from John Lindner, professor of physics and adviser to the Physics Club. "Wooster physics majors are multidimensional," says Lindner. "They have the technical expertise and the creative talent to make a video that is both very clever and very cinematic."

They are also very funny. Check it out at http://youtube.com/watch?v=f38ElzpTjg8.

Wooster's dog guy in the spotlight: USA Today

USA Today named Nick Weida '08 to its third team of top All-Academic undergraduates in recognition of his coordination of the service dog initiative at Wooster's Troyer program house. His work with Bebe the black Labrador was also featured in The Columbus Dispatch. Weida and the other Troyer House students are fostering for the Susquehanna Service Dog program.
New Southeast Asian Studies chair is endowed

The Willard A. Hanna Chair in Southeast Asian Studies has been made possible by a $1 million gift from the estate of Marybelle B. Hanna, in honor of her late husband, Willard A. Hanna '32.

Hanna was an author, teacher, and expert on southeast Asia, who spent most of his career working in that area. Military, government, and academic research appointments took him to Manila, Jakarta, Tokyo, Kuala Lumpur, Singapore, and Hong Kong. In fact, when he retired in 1976, it was the first time in 23 years of married life that Willard and Marybelle lived in the U.S.

He authored many books, mostly nonfiction, about the politics and history of Asia. His one novel, set in China at the outbreak of W.W.II, was highly acclaimed. A New York Times reviewer wrote, “All through the book (Destiny Has Eight Eyes), the author’s feeling for the country wells up in brief passages of description and in pregnant comment, always intimate and unaffected, often beautiful. . . . Working so from his love and understanding of a country and its people, and from the tolerance and candor of his search into individual character, this young writer has produced a realistic and dramatically interesting first novel which is very much more than ‘promising.’”

Food for thought

Well before his written I.S. was due, communication major Chris Nixon '08, Holland, Ohio, served up the creative component of his study to five dinner guests—his adviser, Rod Korba, associate professor of communication; Ken Bogucki, executive chef of the Wooster Inn; Jim Hikins, The John Garber Drushal Distinguished Visiting Professor; and Wooster magazine’s editor and student photographer.

Nixon, who will attend the French Culinary Institute following graduation, wanted his Independent Study to inform his future culinary career. So he researched plating (the way food is presented) as a form of communication.

“The fusion of sight, smell, and taste is a persuasive attempt to manipulate the diner,” explains Korba. “Chris’ study allows us to rethink how we define rhetoric. It might sound whimsical, but it’s grounded in terribly sophisticated thinking.”

Chris used his three-course dinner to prove a point: That food could be a kind of language. He did so by creating a game. His dinner paid homage to a famous person, and his guests were asked to guess who it was, based on the clues they were about to eat. They savored the Caesar salad that overflowed from a bowl made of parmesan cheese. (Chef Bogucki wondered if perhaps this dish referred to Caesar’s Palace in Las Vegas?) They exclaimed over the way the scallops, scallions, and bright sauce created musical notes on a staff. They pondered the dice-shaped cubes of rye bread that accompanied the beef tenderloins, and theorized that the bowtie pasta was significant. Chris’ specialty—a Jack Daniel’s sauce for the meat—was presented in shot glasses. (A major clue, the diners speculated.) Dessert included miniature cheesecakes decorated with blueberries.

Wooster’s editor was the first to guess: Old Blue Eyes himself, Frank Sinatra.
Retirements

Dale Brown

When Dale Brown coordinated the construction of the new student computer laboratory four years ago, he and his computer science colleagues had an important specification: The chairs would be on rollers so that students could glide between stations and compare notes with fellow problem solvers. Today, the laboratory works just as he imagined it. Instead of being in rows, the stations are in dynamic, open spaces that facilitate dropping (or sliding) in. And if a chair race occasionally breaks out, no harm is done.

Gliding between workstations is the perfect imagery for Dale Brown, professor of computer science, who for 20 years has dropped in on other disciplines for almost every aspect of his job.

An appreciation for the multidisciplinary approach begins when Brown and his two computer science colleagues identify potential student majors. "Very few students walk in the door saying, 'I want to major in computer science,'" says Brown. "We have to capture them. If we can get those good science majors into

The Hamptons

Barbara and Charles "Chuck" Hampton say they cannot remember a time in the last 36 years when they were not involved with the Wooster Christian Fellowship (WCF) on campus. Barbara, a writing center consultant and First-Year-Seminar instructor; and Chuck, a professor of mathematics, went to WCF meetings after they arrived in Wooster in 1972, and soon became advisers to the organization. "We've fed, mentored, hosted, and gone to conferences with countless students," Barbara says.

Their involvement fulfilled the couple's shared call, they say, "A certain synergy results when two people share the same passions and the same commitment to the same institution," says Barbara. "It was a privilege to live and work within our call, rather than having to search for it."

Chuck Hampton

Chuck Hampton, who has spent his entire career at Wooster, agrees. He says he has valued the congeniality of his colleagues and the opportunity to chair the department from 1986-98. The College's size has given him the opportunity to teach almost every math course in the curriculum and to interact with faculty from all over campus. He is also grateful, he says, for the College's support of his nontraditional research.

During his first term as chair, Hampton put the College's struggling computer science major on solid footing. He advocated the need for a senior faculty member and pushed to hire Dale Brown, another 2008 retiree.

The philosophy of mathematics has always intrigued Hampton, whose research asks questions such as, "How does my Christian faith relate to these abstract principles?" He helped found the Association of Christians in Mathematical Sciences in the 1980s and the Philosophy of Mathematics subgroup of the Mathematical Association of America, and served as an officer for both groups.

Hampton's other major research area—the role of math in gerrymandering (shaping electoral districts for political gain)—grew from his applied mathematics course. During a leave in 1991, Hampton was asked to help draw new districts for California, based solely on census data, not on political considerations. Ultimately, he defended his results before the California Supreme Court.

Hampton is a tuba and baritone horn player, and in the early years he occasionally played with the College concert band. He has also served as timekeeper and scoreboard operator for men's soccer for at least 30 years.
In late February, more than 200 students descended on Kauke Hall with shovels, waste baskets, and dining hall trays. The next day dawned on a snow-filled arch and (legend notwithstanding) classes as usual.

Brown has made significant contributions to the College’s Applied Mathematical Research Experience (AMRE), another example of interdisciplinary, collaborative work. The 14-year-old program offers students practical experience with tackling real-world problems. AMRE teams typically consist of a faculty advisor and three students, many times from three different majors. Brown has advised six teams working on diverse problems for major northeast Ohio companies.

“We have weekly meetings, and everybody sits around and talks about the problem,” says Brown. “Students see that when many minds work together, you have a much better chance of finding a solution.”

But don’t let all this talk of interdisciplinary gliding suggest that computer science is a smooth or effortless endeavor. Staying current with this dynamic discipline is labor intensive, says Brown, who must recreate most of his courses each time he teaches them. “Software tools and educational approaches are always changing. It’s been demanding, but it’s been fun.”

In his last semester with the College, Brown is teaching a new course on bioinformatics with associate professor of biology William Morgan. For the first three weeks of the class, the biology students in the class studied with Brown, and the computer science students studied with Morgan. “And then we came together and traveled down the same road,” says Brown.

Brown plans to continue in his profession in some capacity after he retires from the College. “It’s just so much fun! I’m like a kid in a candy shop—and I want to continue being a kid for awhile.”

Barbara Hampton

In 1987 Barbara joined the Writing Center as a consultant. Six years later, she began teaching First-Year Seminar (FYS) and advising first-year students. She taught FYS 13 times (1993, 1995-2006) and embraced service learning as a class component. “I love the kinds of changes that students go through in that first year,” she says. “Deepening their ability to think analytically, making those first life choices—there’s something really special about that time.” She is particularly rewarded, she says, when she hears that former students “catch the vision for service” based in part on their FYS experience.

Barbara’s passion for interfaith communication now includes dialogue between Muslims and Christians, she says, and she wrote a comparative study of the Bible and the Qur’an. “All of the strands of my life came together at Wooster, in ways I could never have imagined.”

Following retirement, the couple is looking forward to being closer to family. Two of their three daughters live in the Grand Rapids, Mich, area, where Chuck has accepted a one-year post at Calvin College. Barbara plans to write, read, and scope out volunteer opportunities.

JWM
Cows Along the Journey

Thanks to all who sent us cow photos (http://alumni.wooster.edu/magazine/cows/). This one is from Judy Rich Hardt '88, who lives with her family in St. Legier, Switzerland, in the French-speaking area near Lake Geneva. "Despite living in a fairly good-sized town, cows are now a big part of our daily life," she writes. "Housing has been built up around farmland, so some days we must wait for a herd to cross the main road right by the freeway before we can get home!"

Keep on journeying, cow fans, and send your photos to kcrosbie@wooster.edu.

Dear friends:

As I get to know more alumni and continue to immerse myself in the life of the College, my appreciation grows for what a special place this is.

I am especially grateful for the warmth and generosity of spirit with which the Wooster family has welcomed our family, and happy to join a community that is open to change and eager to build an even brighter future on the strong foundation provided by those who came before us.

Let me share some more of my first impressions.

When we opened school last fall, Peg and I hosted a dinner for the first-year students. We had a receiving line where we shook hands with each and asked how it was going. Unlike their Northeastern counterparts, there was an earnestness and idealism about them that was charming, not a hint of the cosmopolitan cynicism and sense of entitlement that we have seen in other places.

What's true of the students is true of Wooster's faculty, staff, and alumni as well. They are warm and welcoming, serious about liberal learning, but without an ounce of pretension, sophisticated but not snooty. And they utterly believe in the fundamental purpose of our business, providing an outstanding liberal arts education.

To that point, I have been most impressed with the investment the College has made in the campus over the last decade, but particularly that it has devoted its investment to building outstanding academic facilities across the curriculum. Kauke Hall is simply one of the most beautiful, well-appointed, high-tech teaching facilities in the country. But it does not stand alone. Ebert Art Center is a brilliant and creative repurposing of our old gym, Scheide is a wonderful music facility, Morgan Hall is a state
Oregon Shakespeare Festival
Aug. 7-9, Ashland, Ore.

Reconnect with alumni, parents, and friends at the famous Oregon Shakespeare Festival. Join us for a performance, or build your own weekend trip by visiting area wineries, taking a guided white-water rafting tour, or relaxing at one of Ashland's many parks or restaurants.

If you would like more information about area lodging or tickets to the plays, please contact the Office of Alumni Relations at (330) 263-2533 or visit the Web at www.wooster.edu/alumni.

The Elizabethan Stage at the Oregon Shakespeare Festival
PHOTO: Courtesy of the Oregon Shakespeare Festival

Mark your calendars
4th Annual Clambake, Aug. 2
Hosted by Trustee Joan Blanchard ’78
Scituate, Mass.

Luncheon and performance, Aug. 9
Featuring Dr. Brian Dykstra on piano
Lakeside, Ohio

Reception with Mary Karen Vellines, Aug. 17
Vice president for enrollment
Chautauqua, N.Y.

Homecoming, Oct. 17-19
www.wooster.edu/alumni/homecoming
Will include Lowry Center’s 40th Birthday and the Scot Band Reunion.

of the art classroom and research facility, and Severance Hall has some of the best facilities in chemistry of any liberal arts college. In short, Wooster has invested heavily in its academic program. To me this speaks volumes about the commitment of the College to its core mission.

I was in Richmond, Virg., recently, working with a company that helps us with our admissions materials. The president shared with me an interoffice memo in which a colleague had written: “Wooster has a tough marketing challenge in that they actually deliver on their promises of a personalized education, individual attention, academic freedom, teaching critical thinking and creative problem solving, etc. unlike all those schools that use this kind of language but don’t quite carry it off.”

Exactly! Wooster has a kind of institutional integrity that you can’t buy, or fake, or create quickly. It comes with decades of staying the course. I have known The College of Wooster as a place of integrity for most of my professional life. It is a place where professors disproportionately send their children. This is worth noting: just as I want to know where my doctor goes for medical care, where my dentist gets her dental work done, where my auto mechanic gets his car fixed, it is also worth paying attention to where those who have a career in higher education send their children. That so many professors entrust Wooster with their children is strong testimony to its character and quality.

No college anywhere provides a better launch pad for pursuing a doctorate. I was recently studying some data which showed Wooster to be 38th overall, 24th in the humanities, and 20th in the physical sciences out of 206 of the nation’s finest liberal arts colleges in producing Ph.D.’s. Last year we graduated eight physics majors; all eight are currently enrolled in graduate school, six in top Ph.D. programs at places like Cornell, Purdue, and Carnegie Mellon.

What is impressive about this, and about our ranking in producing Ph.D.’s, is not that it is our mission. It is not, exactly, and I think very few students come to Wooster imagining this as their future. Rather, it is evidence of the tremendous, transformative value added through a Wooster education. Put another way, our students aim higher, imagine for themselves greater possibilities, and achieve more than students who go to places with much higher rankings and stronger entering student academic profiles. Either those places, most of which have many more resources to apply to their projects than do we, are underserving their students, or something very special is going on at Wooster. Maybe both.

Signature
Carrie Felice has loved all animals from the time she was little. Shawn Sweeney figures he was probably born loving monkeys, and Leah Michelson fell in love only after she made the acquaintance of Wooster's capuchins. Todd Naelitz loves elephants, and Grey Stafford has a special place in his heart for baby wallabies. Humans appear to be hard-wired to connect with animals. These alumni think they have some of the best jobs on the planet.
As an animal trainer, success in Carrie's job comes through trial and error and the kind of learning she had at Wooster—creative exploration.

**BELUGA WHALES:** Alua, a young female beluga whale, demonstrates the spyhop, a behavior that allows her to lift herself from the water to survey her environment. Ferdinand looks on with interest.

Belugas (the word comes from the Russian word for "white") live in arctic and sub-arctic waters. These whales have so many squeals, trills, whistles, and chirps in their repertoires, they're called the "canaries of the sea." They create their songs by moving air between sacks near their blowholes. The vibrations pass through an organ inside the beluga's head called a melon. The beluga creates her songs by changing the melon's shape using muscles in her head. The beluga's constantly moving forehead makes her look unusually expressive.

Belugas (like bats and some insects) create a specific sound that helps them navigate and locate objects. A rapid series of clicks passes through the melon, which focuses the sounds into a beam. The beluga shoots this sound beam forward into the water, and the sounds bounce off objects. Some are reflected back, and the beluga picks up the echoes with its lower jawbone. The echoes are then sent to the brain to be translated into information. Belugas can probably "see" with sound as effectively as humans can with sight.
Carrie’s family

"Family-centered workplace" is not, it turns out, just a well-worn political phrase. It is alive, well, and flourishing at zoos across the country. Zoo professionals are all about families—the human families they educate and entertain, and the animal families they nurture.

So when Carrie Myers Felice '97 and her husband, Mike, senior animal trainers at SeaWorld San Diego, were expecting their first child, they knew that their baby would quickly become a part of their daily professional lives. Felice worked until just a few weeks before the baby was born. (“Imagine getting into a wet suit when you’re eight months pregnant,” she recalls.) Her colleagues cheered her on.

Today, it’s not uncommon to see the couple wheeling seven-month-old Blaney around the park. “She’ll grow up thinking all parents work with polar bears, beluga whales, and dolphins,” says Carrie Felice. “She’ll also grow up loving animals.”

Felice is committed to both her human and animal families. Her work with the animals—many of whom are born on site—often begins before the babies are born, as she and other staff members attend to breeding and prenatal needs.

Felice had already found her niche with marine animals when she arrived at SeaWorld in 2002 from the Indianapolis Zoo. Her charges at SeaWorld—polar bears, walruses, beluga whales, seals, and arctic foxes—demand 10-hour days that begin before sunrise. Mornings are spent preparing diets. For example, Charly the polar bear’s daily ration of almost 20 pounds of food must be weighed carefully. He’ll receive the mix of fish, meat, bear biscuits, and fruits and vegetables throughout the day, often as reinforcements during training sessions.

Before the park opens to the public, the trainers clean the animals’ habitat—a chore that in Felice’s case requires suiting up with scuba equipment for underwater vacuuming.

By mid-morning, Felice is ready for her human family onslaught. SeaWorld recently expanded its educational programs to include an interactive program for guests to go behind the scenes and into the water. While the dolphin’s perpetual “grin” is endearing, nothing is more spectacular, says Felice, than a child’s smile as he pats a dolphin on the head, or a 57-year-old’s delight as she receives her first beluga whale kiss.

Felice trains her animals to do three types of activities. First are behaviors that mimic what they would do in the wild. For example, a specific touch from Felice will prompt her beluga whales to leap high, a behavior that would allow them to see over the horizon in their natural habitat. Second are husbandry behaviors that train the animals to receive their daily medical care. And third are pure-and-simple “people-pleasers.” When a human touches her own cheek, she is inviting the beluga to give her a kiss, thus clinching a one-sided love affair. The human is in love; the beluga receives another fish.

Belugas respond mainly to their trainers’ motions, and Felice’s hand signals are as graceful as a conductor’s. Small gestures, a lifted arm, a flick of a wrist, result in dozens of behaviors. The belugas’ vocal repertoire covers 13 different sounds, including one that sounds like a bear, coaxed out with a pantomimed bear claw, raking the air.

Her belugas have distinct personalities, says Felice. “Ferdinand is always trying to get into the conversation, make noise, be in the mix. Ruby is more laid-back. She observes things from a distance, soaks everything in. Allua is a take-charge kind of gal. She makes her presence known. And I hate to say that Nanuq is a joker... but he makes us laugh.”

Positive reinforcement can come in the form of food, activities, or toys, she says, and each animal has his favorite. A bucket of ice is Obic the walrus’ preferred reward, and a blue plastic disc entices Ruby the beluga.

Success in her job comes through trial and error and through learning from more experienced trainers, says Felice, who was a biology major. “You take advantage of the kind of learning we had at Wooster—creative exploration. The field is very competitive. Dozens of people apply for a single opening.

“IT’s not a high-paying job, but it’s a wonderful one. To be surrounded and involved with animals is what I always wanted. It’s perfect for me. In fact, about the only downside I can think of is that you go home smelling like fish.”

No matter what behavior she is shaping, her goal is always the same, says Felice: To enrich the life of the animal through creative learning and play. And although she varies routines, her teaching strategy is constant: To modify behavior through positive reinforcement.

Once you’ve learned the power of reinforcement, it’s hard not to be on the lookout for training opportunities everywhere, says Felice, including with your own seven-month-old.

“It gets ingrained into your soul.”
“The biggest thing you’ve got to understand is, you can’t make an elephant do something. You have to make them want to do something.”

Hooked on elephants

Four-year-old Aidan Naelitz has spent so much time hanging out with his dad at the elephant barn that he’s acquired a blase sophistication about the whole thing. His dad, Todd Naelitz ’02, lead elephant keeper at the Knoxville Zoo in Tennessee, grew up helping his older brother care for elephants at the Cleveland Metroparks Zoo and remembers a similar feeling. He knew he wanted a career working with animals when he majored in biology at Wooster, but not with elephants. Been there, done that.

But his first job after college was an internship at the Cleveland Zoo, working with elephants. From there Naelitz went to Nashville as an elephant specialist, and today he’s hooked.

Probably for life, he says. “I’ve applied for other jobs, but I always back out. I do this for love, not money, and I can’t see myself doing anything else.”

If you could paint a picture of trust, it might look like the Knoxville Zoo elephant barn on a typical morning. Aidan is playing in the hay, and his dad is giving bathing instructions to Edie, an African cow. “Stretch” brings Edie to her knees, and “foot” prompts her to raise one foot. The scrubbing that follows is both pleasurable and essential, says Naelitz.

“In the wild, elephants remove dead skin—which can cause infection in their hair follicles—by rubbing on trees or ledges. But
in zoos, nothing is big enough or strong enough for them to rub against, so we rub them with pumice stone.

Another of Naelitz's primary jobs is to devise foraging opportunities to keep Edie and the other two elephants active and engaged. But when your charge is 8 feet tall and weighs more than 8,000 pounds, creativity is required. For example, if Naelitz hides a treat (Edie's favorite is doughnuts) in too small or fragile a container, engagement lasts for only a few seconds—the time it takes the elephant to stomp, crush, and eat. So Naelitz devises activities that involve 500-pound water pipe cleaners, huge fire hose balls, and hay baskets and beer kegs welded just barely within reach. He constantly seeks ways to engage the elephants' intelligence. For example, he hid a treat deep in a long tube, and the elephants could retrieve it only by using their trunks.

And is all this stomping and crushing intimidating to a father and his young son? "Not if you know what you're doing," says Naelitz. "You've got to have trust and build the relationship. You've got to carry yourself with confidence. Elephants don't have a sense of size, and they respect the trainer who stands his ground."

Naelitz works quietly. "It's important not to get too worked up or move too fast. Elephants will pick up on your mood and feed it back to you."

He also observes intently. He understands that a raised head and tusks pointed straight ahead represent a challenge. "When I see that, I just say, 'OK, knock it off,' but a new trainer might not recognize it as an aggressive act—might think the elephant is just stretching his head higher so he can see better."

Naelitz stays tuned to the language of the elephants. A low rumble (imagine the roar of a motorcycle) announces pleasure at greeting a friend or receiving a doughnut. A roar of dismay or excitement can have the intensity of a jet engine at 50 feet. "You can feel it before you hear it," Naelitz says. "You feel the sound in your chest, vibrating."

He has learned the ability to teach in small steps. "The biggest thing you've got to understand is you can't make an elephant do something. You have to make them want to do something. You start out small and reward with food. For example, to teach them to throw a ball, you begin by asking them to raise their trunk. You build up expectations until they begin throwing the ball three or four feet."

His job with elephants makes him a better father, says Naelitz. "I don't raise my voice with the elephants. They don't understand what that means. They have taught me patience. There are a lot of things you can't control. You accept those things and learn from them."

A note from Todd: We are always looking for ideas for positive engagement for the elephants. Anyone with an idea can e-mail me at naelitz@knoxville-zoo.org. Also, if my parents are reading this, thanks for everything.

Capuchin connections

Claudia Thompson was already something of a monkey specialist when she arrived at the College's psychology department in 1982. But she had no expectation that she would be able to continue her specialization. The College of Wooster offered her the opportunity to teach learning and motivation and to maintain a laboratory of rats and pigeons. Very few colleges or universities keep primate colonies on site, and Wooster was no exception.

But Thompson had been at the College for less than year when she responded to a notice from a retiring professor at the University of Chicago, who was looking for a new, young researcher willing to take on his small colony of *Cebus apella* capuchin monkeys.

And so it was that Thompson and student Chris Kline '84 found themselves driving a van full of monkeys from Chicago to Wooster. All had gone well. College administrators had agreed to free up space in the basement of Kauke, formerly used for a preschool. The guys in the service department had agreed (after a long silence) to free up one of their vans. The six monkeys had been packed, ready to go, and waiting for them on a dock at the University of Chicago.

But the trip had been a long one. It was approaching midnight, and Chris' accelerator foot grew heavy. His professor in the back of the van didn't notice. But a cruising cop did.

"In his most engaging way, Chris told the officer that six monkeys plus his professor were in the back of the van, and that he had been in a hurry to get back to their college," Thompson remembers. (Continued on next page.)

- Eight-year-old Riley—often the most investigative of the Wooster colony—contemplates Prof. Thompson. PHOTO: Dee Nolte '96
THE WOOSTER MONKEYS: AN IMPORTANT GIFT

The officer couldn’t see through the van’s blackened windows, but (after a long silence) he let them go. “I’ve always wondered if he was giving in to the most creative excuse for speeding he’d ever heard, or if he was leer[y] about what he’d find in the back of the van,” says Thompson.

Twenty-six years later, the grandchildren of the original six monkeys are valued members of the College’s psychology department. Today they live in the basement of Morgan Hall, and their chief caretaker, once a new assistant professor, is now department head.

Their role is pretty simple: Just be monkeys. Although they are given creative tasks, they are not highly trained nor are they tamed. “They aren’t interested in being our pets,” says Thompson. “And we aren’t interested in doing anything that would distort how they interact with each other.”

Because of their predator-free lives and expert care, the Wooster monkeys will live to be about 50 years old, a good 25 years older than their wild counterparts. The monkeys’ 15 x 15-foot room has plenty of toys, treats, and goodwill. What it doesn’t have are trees, grass, and blue sky. Thompson has no reason to believe that the monkeys are unhappy. But she does believe that the gift they are giving to humans is huge, and that humans should give a gift back in return. When Wooster monkeys are about 20 years old, they are taken to an outdoor animal preserve to live out their retirement under the open sky. The most recent release took place in 2004, when a family of four was taken to a wildlife refuge in Kendalia, Tex.

Watching monkeys be monkeys

Thompson, who specializes in how primates learn, is especially interested in observing which hand her charges use to carry out complicated tasks. The highly intelligent little capuchin monkeys are proficient tool-users, and well-suited to research on handedness. Unlike humans, they have not evolved to prefer the intuitive right side steers the right hand; the logical left side steers the right hand.) Thompson’s ongoing research may well reveal clues about why humans evolved as they did. “What kind of environmental experiences would prompt human beings to favor their right hands?” asks Thompson.

If her research reveals something about human evolution, that’s great, but not necessary, says Thompson. “Monkeys are so complex and so wonderful, and we know so little, that I would be happy if I could just understand them better.”

One experiment, for example, showed that the monkeys were capable of a high degree of cooperation with each other. Food that had been placed in a suspended box could be retrieved only if two monkeys simultaneously pulled on opposite ends of the ropes. “This took them a long time to learn,” says Thompson, “but they finally got it. Cooperation like this—a high level skill—is uncommon among animals. It requires that the monkeys project into the future.”

For her Independent Study, psychology major Leah Michelson ’08 researched the theory that self-control is a limited resource that becomes depleted with use, but can be replenished over time. When she gave the monkeys pretzel stick tools to dig out more food, they did not eat their tools, thus exhibiting good self-control. Leah is testing to see if the activity depleted the “self-control reservoir” and made the monkeys less likely to exhibit self-control on subsequent tests.

But while academic studies of tool use, handedness, and self-control are interesting, the monkeys’ most important gift is simply their presence, says Thompson. “Humans have a deep yearning to connect with animals. Our students have a chance to interact with the monkeys in ways they have never had before and may never have again. The richness of these animals’ mental and emotional lives will never appear in a scientific paper, but the understanding and empathy that our students gain is invaluable.”

More than 500 Wooster students have interacted with the monkeys since they arrived, and children from local communities make frequent visits to watch the monkeys from the observation room. About a dozen students have written Independent Studies about the monkeys, including Michelson and Courtney Segovis ’05.

“It’s a beautiful place to retire.”

Courtney Segovis, who wrote her Independent Study on the monkeys’ mirror use and social monitoring and who coor-
ominated the four student caretakers, admits to spending more time with the monkeys than she did in her dorm room.

Segovis was working as an intern at the Wildlife Rescue and Rehabilitation reserve in Kendalia, Tex., in the summer of 2004, and was there to welcome her professor and four retiring capuchins. After a short, initial nervousness, her old friends were soon back to their former selves, greeting her and demanding grapes, Segovis remembers.

"Other caretakers commented about how well-behaved they were, and I felt like a proud mother. On one of their first nights, I went down to their enclosure to check on them. I think I was more worried than they were. For them, it was probably a very exciting time. There are chickens running around, and wild ostriches that try to steal food, and a group of cattle near their enclosure."

Segovis, who is now pursuing a master's degree in evolutionary anthropology at the University of Durham in Durham, England, gives high marks to the reserve. The sanctuary, which is not open to the public, specializes in giving dignified care to non-releasable wild animals. "It's a beautiful place to retire," says Segovis.

"I will be eternally grateful to them."

After four years of working with the monkeys, graduating senior Leah Michelson says she knows them well. She knows that Alex, the dominant male, hates her fur-lined boots and screams at her whenever she wears them. She knows that whatever toy is put in the cage, he will try to lug it up to the second level "penthouse." She was intrigued to watch him try to use an orange peel as a tool, following the pretzel experiment.

She'll miss all of the monkeys, says Michelson, but she'll especially miss her favorite—Riley, the mother of little Zeke and Pip; Riley, who loves to carry things around in cups; Riley, who never hesitates to greet Leah. Even though Michelson understands that it isn't uncommon for wild animals to lose their first-born, she grieved right along with Riley when her infant died. "Riley carried her dead baby around for a week, and it was very sad," she remembers. "But she finally put it down, and then things were OK. Now she's a good mother to Zeke and Pip."

Her powerful bonding with the monkeys has shaped her future, says Michelson, who is pursuing a career working with wild animals. A summer internship at the Bronx Zoo allowed her to work with a variety of animals, but primates are close to her heart, she says. "They're so like us. Their little hands. ... It's like staring evolution in the eye.

"I will be eternally grateful to them."

When Jane Goodall, arguably the world's most famous primatologist, came to the Wooster campus as a guest lecturer in 2004, it made sense that her student host was Shawn Sweeney '06. A double major, he had begun work on two separate Independent Study projects. For psychology, he was working with Professor Susan Clayton, researching visitor responses to zoo animals, and for biology he was developing a method to measure the welfare of captive chimpanzees. He was also head caretaker of the psychology department's colony of capuchins.

Sweeney is now serving a one-year graduate fellowship at the Jane Goodall Institute in its Roots & Shoots program — a youth-driven, global network of more than 8,000 groups in almost 100 countries. Sweeney, who helped found a chapter of Roots & Shoots at Wooster, is helping to train college-age students in leadership and outreach skills.

Following his fellowship, Shawn hopes to study at the International Institute for Humane Education in Surry, Maine.

PHOTO: David Plummer
Grey Stafford: Zoomility

You might think that Dr. Stephen Grey Stafford’s stories about his 20 years as an animal trainer and educator would be all about success. He’s one of the most visible trainers in the field—frequently accompanying animals on TV shows hosted by Ellen DeGeneres, David Letterman, Jay Leno, Larry King, and Martha Stewart. Director of conservation at the Wildlife World Zoo near Phoenix, he has a bimonthly call-in segment on the local TV station, posts an online pet training column, and is a favorite speaker at national conferences.

But Stafford loves nothing more than to tell tales that illustrate his central guiding principal: “Zoomility,” (Don’t know what that means? Stick with us.) There was, for example, the time he tried to retrieve a dropped camera from the addax exhibit. “The addax,” he explains, “is a rather odd-looking antelope, with an impressive set of corkscrew-shaped horns and an almost toupee-like patch of hair that makes it look like Moe from the Three Stooges.”

This particular addax was a new mother, and not, Stafford recalls, a comedian in any way.

As soon as I hopped the fence to retrieve the camera, I knew I was in trouble. Not only was I not going to have time to pick up the camera, there was serious doubt whether I would make it back over the fence without mom’s distinctive horns stuck in my backside. My only hope was to treat the fence as a gymnast’s pommel horse. Using my left hand as a pivot, I hurled myself horizontally out of the yard, in front of all the guests.

And then there was the escaped kangaroo encounter. Stafford responded to an SOS that a large kangaroo had escaped over the moat and was cruising around the children’s zoo. He will never forget his three mistakes: Underestimating the speed of a kangaroo, trying the rescue by himself, and not having a clear idea of what he would do once he found his friend from Down Under.

Catching a kangaroo is sort of like steering a boat. You treat the tail like a rudder and direct him back home as he hops along. This is simple in theory, provided you can get hold of the tail. You really don’t want anything to do with the rest of the kangaroo—their powerful legs and sharp nails are a formidable defense…

I arrived at the narrow opening behind the penguins and was startled to see nothing but kangaroo chest hairs. To this day, images of this meeting still flash through my mind. The beast stood about as tall as I did, completely filling my field of vision like a wide screen TV. Realizing I had only a split second before he cleaned my clock, I dropped to the ground muttering something along the lines of: “Oh, shoot.” I would have gotten away with my momentary lapse (the other keepers were at the other end of the exhibit), had it not been for the 20 or so guests lined up to board the nearby train ride, witnessing this odd version of leapfrog.

And the time Stafford retrieved some debris from a dolphin pool, convinced the residents were productively occupied with their training session at the opposite end of the pool.

As I made my return swim to shore, a dolphin buzzed by me, then another, and finally another. By now I was swimming in front of a large beach area where the classroom portion of our children’s program was in full swing. At this point, the dolphins were completely fascinated with the “stranger” in the water. They ignored their trainers at the far side of the pool, preferring instead to push and shove me like one of their toy boomer balls.

I asked one of the other trainers to signal for an immediate “recall,” a technique that communicated to the dolphins “instead of using that trainer as a play toy, choose to come over here and you will receive reinforcement.”

Stafford tells these stories of near-disaster in his newly published book Zoomility: Keeper tales of training with positive reinforcement (iReinforce.com), to illustrate the human humility he believes is essential before good training can occur.

But the book is also full of success stories about the power of positive reinforcement to shape animal behavior. Like most zoo animal trainers, Stafford has always been a disciple of this training method for his wild charges. Controlling behavior with punishment or dominance just isn’t an option for most zoo trainers, who succinctly explain why: “You can’t spank a killer whale.”

But it wasn’t until a few years into his career that Stafford clearly understood that the method shouldn’t be restricted to zoo animals. “I was approached by a dog trainer from Chicago, who was amazed by our shows. We were getting sea lions to do four to five shows a day, and she was having trouble getting dogs to compete a couple of times in a weekend. And the reason was that they were being punished for making mistakes. Something that should have been fun, wasn’t.”

In contrast to wild animals, dogs have been bred to be human companions for thousands of years, says Stafford. “For us to mess things up by punishing them and stopping on that natural willingness to please their owners seems kind of a shame.”

So in addition to his job as spokesperson for the Wildlife World Zoo, Stafford has also become a sought-after expert on dog training. Several times a month, he is available to answer questions on a
“Nothing can match the power of positive reinforcement in building a relationship of trust between humans and animals.” . . . Grey Stafford

FRIENDS  Grey Stafford and Hoku, a 300-pound teenaged male Atlantic bottle-nosed dolphin enjoy a dip. Bottle-nosed dolphins can see 180 degrees forward, backward, and to the side, but they can’t see up. That’s why it’s not uncommon to see dolphins chasing fish bellyside up, and why they spyhop (see the photo of Carrie and Allua on pg. 12.)

“Hoku has helped to educate tens of thousands of kids and adults about the need to protect our oceans and the creatures that live there,” says Stafford.

PHOTO: Dolphin Quest

DOGGY SMOOCH  No ordinary pooch, this is a New Guinea singing pup, known for his eerie howl, that can sound as if it has whale overtones. These intelligent, small dogs come from the remote highland forests of New Guinea, and can climb trees in pursuit of dinner. This pup was born at the Wildlife World Zoo.

PHOTO: Chris Feinberg, Wildlife World Zoo
TV call-in show. “It’s fun,” he says. “You have to really think fast on your feet and come up with an answer in 20 seconds or less.”

Stafford says there probably aren’t too many animal trainers with a degree in physics. His Wooster I.S. was far removed from animals (the influence of temperature on binary fluids). His postgraduate studies in oceanography did not make him happy. He remembers when he first knew what his career should be. “One evening, I stayed for the night show at Sea World in Aurora near Cleveland (where I grew up). A trainer, a killer whale, and a bottle-nosed dolphin were doing an elaborate water ballet. The way my wife, Karen (Karen Balogh ‘90), tells it, my jaw was on the floor the entire time. That sealed it.”

Within months, he had secured a job at the Aurora SeaWorld. “They wanted someone with a science background. They wanted someone who could think critically—make decisions and justify them.” From there, Stafford went on for a Ph.D. in reproductive and environmental physiology at Kent State University, where he studied primates.

“Like many zookeepers, not all my teachers have been human,” he says. “The more time I spend around animals, wild or domestic, the more I am awed by their ability to adapt to changing circumstances. Behavior is perhaps the most flexible attribute of all living creatures.”

POSITIVE REINFORCEMENT

KEY CONCEPTS

1. THE 3Rs: Request, response, and reinforce are at the center of reinforcement training.
   - Request: With a clear idea of what she wants to happen, the pet-owner requests (but does not command) a behavior from her pet.
   - Response: The trainer waits quietly for her pet’s response, carefully observing its behavior. She doesn’t speculate on what she imagines the animal is thinking, but concentrates only on its behavior.
   - Reinforce: As soon as the animal delivers the requested behavior, the trainer gives it something it likes—a treat, a back scratch, or favorite toy.

2. MAXIMIZE REINFORCEMENT: It’s important to vary the types and amounts of reinforcers. The same treat, given at the same time, for the same behavior, becomes predictable and loses effectiveness. The maximum power of positive reinforcement training comes when the animal has no idea when, where, or what type of reinforcement is coming next.

3. HAVE A PLAN: Know what you’re looking for from your pet, how you’re going to try to get it, and what will happen once you do.

4. TIMING IS EVERYTHING: Reward while the animal is still successful and is still exhibiting the desired behavior.

5. A CASE AGAINST USING PUNISHMENT:
   - Punishment is inefficient. Although it may decrease the odds that a behavior may reoccur, it doesn’t tell the animal what the owner wants to have happen.
   - A relationship based on fear is less rewarding than one based on trust for both the animal and the owner.
   - Punishment takes away an animal’s desire to try something new, because it is afraid of making mistakes.

6. NON-REACTION—AN ALTERNATIVE TO PUNISHMENT: Control the immediate environment so if your pet gets it wrong, you can ignore it (both the animal and its behavior). This training device is called the "least reinforcing scenario" and will never be mistaken as reinforcement by your pet. (For example, if Bruiser dashes to the window barking, and you roar “No!”, he may mistakenly interpret your response as reinforcement, rather than punishment.)

7. PREVENTING MISTAKES: Anticipate failure and head it off at the pass, so your pet doesn’t repeat it. For example, if you know Bruiser will try to herd your guests out the door as soon as he knows they’re leaving, ask him to enter his crate before departure time and reward calm behaviors while inside.

8. A CASE AGAINST DOMINANCE TRAINING: What about the training philosophy that requires that the trainer be the “leader of the pack”? A training device that shapes animal behavior through dominance and force from one alpha human may fail when there are children, grandparents, visitors, or other animals in the home.

9. A FINAL CASE AGAINST FORCE: But what about “popping the leash” to keep your dog from pulling? There’s no doubt that punishments can be temporarily effective at forcibly changing an animal’s path. But how would you jerk a five-ton elephant across the floor? You wouldn’t. So why should it be considered an acceptable practice when applied to a dog, cat, or any creature, simply because you are physically stronger than it is?
Wildlife preserves, which are the only habitats remaining for some endangered species, receive major funding from zoos from around the world. Nancy McCarthy ’59 took photos of the velvet monkey (left) at the Tarangire National Park in Tanzania, and the two elephants (pg. 14) at the Lewa Reserve in Mount Kenya. Both parks receive funding from the San Diego Zoo (Carrie Felice’s employer).

The tiger (above) that McCarthy photographed at the Bandhavgarh National Park in Madhya Pradesh, India, is a species that has undergone severe depletion in recent years. Pictured on pg. 11 are McCarthy’s photographs of young lions at the Masai Mara reserve in Kenya, an elephant at the Kirman’s Camp in the Sabi Sands area in South Africa, and a zebra at the Mara River in Kenya.

Grey Stafford is well-versed in the ethical debate about zoos. He believes proponents of the “free-the-animals” philosophy base their convictions on a shaky premise.

“The problem with their position,” he says, “is that they assume that there is still a wild out there. Human beings are bumping into wildlife and wild places everywhere. With the possible exception of the bottom of the ocean, there is no pristine nature left anywhere on the planet.”

There is no place, he says, where animals have not felt the effect of humans. “Even wild animals in Africa are managed. They’re managed so that genetic diversity is maintained, so that food supply is kept in check, and so that skirmishes with humans are contained.

“There is nowhere to return these animals to. The best we can hope for is that organizations like accredited zoos can help preserve what’s left of nature, wild places, and wildlife.”

The zoos that employ Stafford, Felice, and Naelitz are members of the Association of Zoos and Aquariums. Their membership means strict accreditation, and it also means that they are significant contributors to the Association’s conservation work. In 2006, the Association’s 194 members funded 1,719 conservation, research, and education projects in 98 countries.

Last year, the Conservation Fund for SeaWorld & Busch Gardens, which employs Felice, gave $1.3 million to fund efforts such as the Eastern gorilla rehabilitation and reintroduction project, and the southern African black rhino program. Stafford’s employer, the Wildlife World Zoo, has raised many generations of scimitar horned oryx and addax, two species that had become essentially extinct in the wild. The zoo also helped to fund the species’ reintroduction to Tunisia.

But if zoos are Noah’s arks, Stafford and other conservationists believe that the flood waters are rising too quickly to save many species. “We’re debating the value of zoos, and meanwhile Rome is burning,” Stafford says. “Here’s a figure that puts things into perspective: Roughly 250 elephants are kept in American accredited zoos. In the past 25 to 30 years, on average, human beings have killed 100 elephants every day.”

Stafford points to a recent report from the Wildlife Conservation Society in India that reveals that past tiger counts have been drastically inflated, due to flawed census procedures. “We’d been patting ourselves on the back about India’s Bengal tigers, believing the population had stabilized,” says Stafford. “In fact, India, which holds the largest number of remaining tigers in the world, has only about 1,400 tigers left, almost 50 percent less than had been previously reported.

“The Bengals are the best subspecies we’ve got going,” says Stafford. “Some species of tigers number fewer than 100. It’s bad. We’re going to lose wild tigers in our lifetime.”

Zoos support research, habitat conservation, and breeding programs. They also affect attitudes, one person at a time. Susan Clayton, Wooster professor of psychology and a specialist in the emerging field of conservation psychology, is studying humans who visit zoos. Clayton and her students analyzed 1,900 overheard visitor conversations and studied how they illustrate humans’ relationship with animals.

“Zoos provide a unique opportunity for people to feel a connection to animals,” says Clayton. “Zoos consider their animals ambassadors for their species. Visitors are presented with animals who communicate, ‘Here I am. Do you care about me? Do you care about my species?’”
RADIO AT WOOSTER

the waves roll on

BY JOHN FINN
PHOTOS BY EMMA POWELL
nothing rankles radio executives quite like dead air—those precious seconds of silence that seem to pass like hours. Such interruptions often result in lost listeners and, for commercial stations, lost revenue. Even for college radio stations, dead air is bad news, especially when its presence threatens to knock a station off the air for good. Just ask broadcasters at The College of Wooster.
HERE'S WHAT HAPPENED:

In the fall of 2004, as WCWS Radio was preparing to renew its license (a procedure mandated by the Federal Communications Commission [FCC] every seven years), a Texas Christian radio group challenged the station on the basis of its abbreviated broadcast schedule. Because WCWS was tied to the College's academic schedule, it operated only 30 weeks per year and fewer than 24 hours a day.

The Texas group argued that it would make better use of the frequency by broadcasting all year. However, it was willing to strike a deal. WCWS could continue broadcasting during the fall and spring semester. But the religious conglomerate would be permitted to use the frequency for remote satellite broadcasts from the Lone Star State when WCWS wasn't on the air—between midnight and 6 a.m., during winter and spring breaks, and in the summer.

Students and administrators agreed that radio at Wooster was too valuable to lose (or even share), but they needed to find an inexpensive way to stay on the air 24 hours a day, 365 days a year. The solution was found in an automated music system called Quebbie, which was being marketed to stores, restaurants, and professional offices. The unit operates much like a personal computer and stores tens of thousands of songs that can play continuously for days with little or no oversight. The system also allowed the addition of promos, public service announcements, and station identification.

Quebbie turned out to be the perfect answer, and it was surprisingly affordable (between $5,000-$6,000). That summer, Wooster purchased a Quebbie unit, and on Aug. 1, 2005, WCWS Radio began its round-the-clock operation. Shortly thereafter, the FCC dismissed the Texas group's challenge and approved Wooster's license for another seven years.

At about the same time, members of the station's student management team began working to give WCWS a new look and a new identity. After considerable debate and discussion, radio at Wooster was dubbed WOO 91. Today, more than three years after almost being silenced, the station is as active and vibrant as any time in its history. A 10-person student management team has increased the station's visibility and popularity. During the spring semester, 42 students hosted live shows, ranging from classic rock, hip hop, and indie rock to pop, jazz, and classical. There is also periodic live coverage of lectures and varsity athletic events, pre-recorded student and faculty recitals, and a handful of public affairs and specialty programs.

General manager Josh Eepich '08, a communication studies major from Owosso, Mich., says his top priority has been to get more students into the station and behind the microphone. "We are a student-run operation, and increasing student participation is essential to our mission," he says.

Students prepare for their broadcast experience by taking Communication 130, a seven-week broadcast workshop. Taught by Rod Korba, associate professor of communication, the course covers everything from the origins of radio, to the rules and regulations that govern it. Preparation also includes mentorship from an experienced student programmer, a chance to get comfortable in the studio, and instruction on how to operate the equipment. Students are then tested by the chief engineer, Herman Gibbs, who determines whether they are ready to go on the air.

No one expects student DJs to be perfect, but as is the case with all radio stations, a professional-sounding product is critical to building and maintaining an audience, both on and off-campus. The DJs' hard work is paying off, says program director Amy Cohen '10, from Mount Prospect, Ill: "The DJs are more committed to their shows, and I think we are sounding better as a result."

Of course, people have to know you exist before they can listen, and the student management team has worked hard to heighten visibility. The most successful endeavor has been public appearances by student DJs who spin tunes at campus events, particularly during orientation. Other initiatives include a professionally designed Web site, t-shirts, bumper stickers, and posters. Members of the management team are also lobbying for more airtime on audio systems at buildings like the Lowry Center.

The station has also taken advantage of the increased visibility made possible by the Internet. At one time, all that mattered was the height of your tower and the strength of your signal. Now, the ability to stream (broadcast over the Internet) is equally important. And WOO 91 is streaming, opening the airwaves for listeners across the country and around the world.
"I really like the fact that my family and friends can hear my show in Illinois," says Cohen, who fashions her two-hour Sunday night show with indie and classic rock, and music from the '60s, '70s, and '80s. "It's awesome to imagine how large the audience might be."

Or how far reaching. Yauko Hackman '10, Ghana, receives requests to play tunes on his popular hip-hop-R&B party music mix from listeners in New York and Canada, and from his hometown of Accra.

While Wooster does not specialize in preparing students for a career in broadcast media, many former WCWS staffers have gone on to successful careers in radio, television, and related professions. Vince Cellini '81, for example, was an award-winning anchor at CNN and is now an anchor with the Golf Channel. His classmate, Mike Di Pasquale '81, has been a sports anchor and reporter at WSVN in Miami for 11 years. (For a list of other Wooster alumni in the broadcast industry, see pg. 26.)

Current students who are contemplating a career in broadcasting include Lindsey Reddig '11, Webster, N.Y. "I had a chance to be on the air as a high school student, and that's where I got the bug for radio," she says. "When I came to visit Wooster last year, I sat in on one of the shows and had a great experience. I promised myself I would sign up for the radio workshop so I could get on air as soon as possible." Reddig's enthusiasm and talent landed her a weekly show before the first semester was over. She says she hopes to pursue a management position with the station next year.

No matter what career they pursue, students' experience with the station is valuable, says general manager Espich. "Whether a student becomes a presidential speechwriter, a pharmaceutical chemist, or a federal reserve economist, he or she must be able to articulate express knowledge," he says. "Radio provides an outlet for everyone to address a large audience each week. To many, public speaking is a terrifying experience, but when a microphone replaces a large, live audience, the situation is more manageable."

Mark DeWine '07, an English major from Cedarville, Ohio, agrees. "Being on the air has helped me with my public speaking. It has given me a level of confidence that I didn't have before."

Program director Cohen says she values the administrative, leadership, and organizational experience she has gained. "Much of what I have done isn't related to music, but instead relates to the skills I would need in any professional setting."

The autonomy of WOO-91 is what excites them most; say many student broadcasters. "I like the College's commitment to student-run media," says Jeff Geffert '08, a communication studies major from Mentor, Ohio. "It gives us an opportunity to express ourselves through our shows. Almost all of the ideas to improve and innovate come from the creative minds of the students."

There's plenty of campus buzz about WOO 91. "When I see my friends behind the microphone having a great time with their shows, I feel invigorated," says general manager Espich. "People are excited about radio at Wooster."

John Finn, director of public information, also advises the WOO-91 student staff. Emma Powell '08, who has provided photography assistance for the magazine for the past three years, graduates this spring in studio art. She plans to continue her study of photography in graduate school.

WOO-91 student DJs include Deron Boyd '08 (above) and (from left) Kristen Sorek '07, Dave Duncan '07, and Karin Johnson '08. Students represent diverse disciplines and career goals, but they all say the radio experience has boosted their confidence.
WCWS Radio alumni pros

Here is a sampling of WCWS Radio alumni who pursued successful broadcast careers.

- Robert Smith '51 served as director for television stations in North Carolina and Washington, D.C., as vice president and general manager of the Northern Virginia Education Television Association, and president and general manager of the Public Broadcasting Foundation of Northwest Ohio.
- David Mellon '53 was executive director for radio and television programs produced by the Capitol Region Conference of Churches and the New Britain Area Conference of Churches in Connecticut.
- Howard King '53 was the public address announcer for University of Michigan football for 35 years.
- Robert Pisor '61 was a political reporter, military analyst, and occasional anchor at WDIV-TV in Detroit.
- David Kanzeg '70 is director of programming at Ideastream, Cleveland's not-for-profit multimedia company, with responsibilities for 90.3 WCPN Radio and W21Z/PBS Television.
- Keith Humphry '71 has spent more than 25 years as a news anchor and reporter for WDBJ-TV in Roanoke, Va.
- Eric Filios '73 directed evening newscasts at an ABC affiliate in North Carolina and directed “Inside NASCAR” for TNN before starting his own post-production company.
- John Wetherbee '74 is with WCVO radio in Clarksville, Tenn.
- Diana Davis '75 has been a reporter at WSB-TV Channel 2 Action News in Atlanta for the past 25 years.
- Arlene Kemejak '75 was one of the first female engineers at WKYC-TV 3, an NBC affiliate in Cleveland.
- Scott Peterle '81 has served as traffic reporter for radio stations in Kansas City, Seattle, and Hawaii.
- Vince Cellini '81 is an anchor with the Golf Channel.
- Mike Di Pasquale '81 is a sports anchor at WSVN in Miami.
- Tom Messner '82 is chief meteorologist for WPTZ in Plattsburgh, N.Y., and also serves as chief meteorologist for four radio stations.
- Rick Dayton '89 is a television news anchor at WOWK in Charleston, W.Va.
In April, 1922, William Westhafer, then Wooster's one and only physics professor, had finally finished designing a radio transmitter. Eager to listen to its first public broadcast, an audience crowded into Severance Hall (now Ebert Art Center). To everyone's chagrin, nothing happened.

To the rescue came Vic Andrew ’26, a student who helped the physics department design a new, fully functional transmitter. (Vic went on to be a leader in the field of industrial and military communication equipment, particularly in the development of coaxial cable.)

In 1926, radio at Wooster became official. The station, WABW, broadcast only fine arts and sports programs. After a year, it went off the air. Radio would not return to Wooster for more than 20 years.

In 1949, a bold junior named Bob Smith ’51 (who would become the station’s chief engineer) petitioned the administration for a campus radio station. Generously, they agreed. They gave the new facility a start-up budget of $50, not even close to the amount needed to buy an industrial transmitter. Bob's solution was a simple homemade AM carrier current. Carrier currents don't need a tower because they don't attach to an antenna. Instead, they attach the transmitter's signal to an existing power line, like one used to service a campus building. WCW was frequently knocked off the air, but it was clear that radio at Wooster was here to stay.

In 1957, the manager of a local radio station invited students to produce 20 weekly shows over his commercial station, an arrangement that lasted for nine years.

In 1968, WCW switched to the FM band and became WCWS, operating at 91.9. That same year, the station began carrying live broadcasts of the Metropolitan Opera from New York City. Almost two decades passed before any other significant changes took place.

The first occurred in 1984 when chief engineer Herman Gibbs filed an application with the FCC to increase the power from 388 watts to 890 watts. He also requested the installation of a new 100-foot antenna tower. One year later, the station began to broadcast in stereo for the first time.

In 1986, the College received an additional increase in power from the FCC and a move down the dial to 90.9 FM, where it resides today.

In 1988, the station began to broadcast at 3,000 watts from Wishart Hall, but the more powerful signal interfered with experiments in the physics department across the street. To eliminate the problem, the antenna and transmitter were moved to a site on Back Orrville Road, about 10 minutes from campus.

In 1999, a violent summer storm toppled the tower on Back Orrville Road. The tower's owner was reluctant to rebuild it, and it was a full year before the station could resume broadcasting.

In the fall of 2004, a Texas Christian Radio group challenged the WCWS FCC license on the basis of its abbreviated broadcast schedule, but quick work by administrators led to the purchase of a system that could keep the station on the air 24 hours a day, 365 days a year. At about the same time, students came up with a new name and a new identity for the station. WCWS became WOOS 91.

In 2005, students came up with a new name and a new identity for the station. WCWS became WOOS 91.

Win Logan (left), professor of communication, and Ted Evans, general manager of WWST Radio.

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Legacy students, Class of 2011
Generations of families have a way of sticking with us.

Brandon Edward Andrew
Father, Edward J. Andrew 1960
Mother, Charlene Daugstrup Andrew 1980
Grandfather, Edward J. Andrew 1961
Great-aunt, Juanita Andrew Hord 1960
Great-grandfather, Victor J. Andrew 1926
Uncle, Richard Andrew 1982
Aunt, Diane Buchanan 1982
Uncle, William V. Andrew 1985
Aunt, Patricia Youngberg Andrew 1984
Cousin, Dustin Jeremiah Welty 2003

Russel Jay Aronchick
Mother, Nancy Falls-Aronchick 1978
Grandfather, Raymond L. Falls Jr. 1950
Grandmother, Alice Van Fleet Falls 1952
Great-grandmother, Mildred Witzler Van Fleet 1922
Great-uncle, Franklin Van Fleet 1931
Great-aunt, Phyllis K. Falls Burns 1952

Taryn Grace Aubrecht
Mother, Michelle Felt Aubrecht 1983
Grandfather, Ronald E. Felt 1953

Mara Celeste Bartlett Asenjo
Father, Stephen D. Bartlett 1980
Grandmother, Katherine Griswold 1956
Great-aunt, Maud Mary Griswold Bishop 1954
Great-uncle, Lincoln T. Griswold 1952

Elijah Packard Bresley
Grandfather, John Allen 1957
Grandmother, Elisabeth Walter's Walker 1957
Aunt, Doon Allen Foster 1980
Uncle, John S. Foster 1980
Cousin, Susan Allen Stefanek 1957
Cousin, N. Richard Stefanek 1956

Russell David Brill
Grandfather, William G. Keene 1955
Grandmother, Jean Martinetti Harper 1955

Sarah Louise Ciriegio
Father, Philip A. Ciriegio 1977
Mother, Wendy Galloway Ciriegio 1977
Sister, Laura Elizabeth Ciriegio 2006
Sister, Carolyn Lindsay Ciriegio 2008
Aunt, Laura Galloway Bordin 1980

Dana Leigh Culbert
Father, Brad Culbert 1980
Cousin, Timothy H. Hillhouse 1990

Emily Caroline Davis
Great-great aunt, Grace E. Smith 1906
Grandmother, Jean Mason Davis 1940

Emma Marjorie De Looze
Mother, Leslie Jordan De Looze 1978

Liam Michael Machle Donovan
Great-grandfather, Edward G. Machle 1888
Great-aunt, Elice Machle White 1912

Top: Herman L. Retzler, Joseph L. Retzler, Bottom: Emily Noyes (Wooster's first female alum), and Andrew Retzler
In Closing

"BOY JUMPING IN THE AIR"

DANA BUSTAMANTE '09

Studio-art major Dana Bustamante was one of 143 students who participated in Wooster's off-campus study program during 2006-2007.

Nearly every day in the rural village of Kaloleni, Kenya, a group of young boys gathered outside my home-stay house after school to rake dirt into a soft pile. They would then take turns running and flipping upside-down in the air to land on the pile, showing off for their friends, any girls who happened to stop by, and of course, the visiting American college student. Here, Emmanuel, my ten-year-old home-stay brother, grins for the camera as he hurls his body through the air.

—Dana Bustamante