

Coloradan

Alumni Magazine Fall 2018



ALSO IN THIS ISSUE:

COLLEGE FOOTBALL'S
OLDEST PLAYER

AN **ASTRONAUT** FLIES
HIMSELF TO CLASS

HOW TO TACKLE
WORKPLACE BIAS

THE **LIONFISH** KING

HEIRLOOM

RACING TO SAVE THE
APPLE TREES OF
BOULDER COUNTY

Be Boulder.



Alumni Association
UNIVERSITY OF COLORADO **BOULDER**



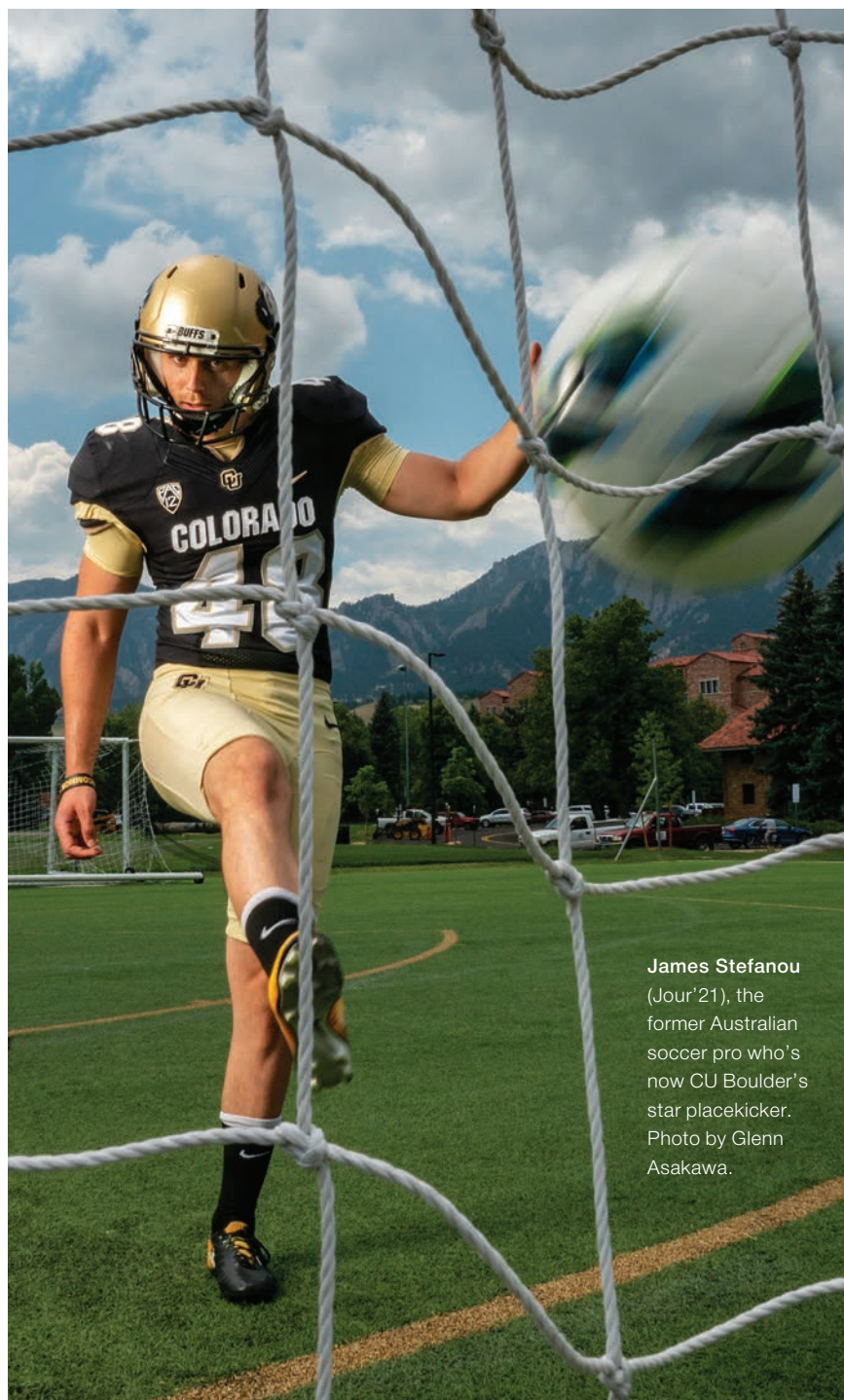
NOW

JUNE 2018

In June, CU art and art history professor George Rivera curated an exhibition of 117 works of art in a museum just outside of the Korean demilitarized zone (DMZ), including 23 works by CU Boulder students. All are diptychs — art in two panels — reflecting the standoff between North and South Korea.

The exhibition, which runs through Dec. 22, is the first to display American art in the DMZ Museum.

Pictured here is “Between You and Me” by **Sandy Lane** (Art’95; MFA’98).



James Stefanou
(Jour'21), the former Australian soccer pro who's now CU Boulder's star placekicker. Photo by Glenn Asakawa.

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COVER CU researchers are trying to preserve Boulder's apple tree legacy before it vanishes forever. Illustration courtesy U.S. Department of Agriculture Pomological Watercolor Collection. Rare and Special Collections, National Agricultural Library.

EDITOR'S NOTE

CU Boulder people produce interesting stuff. New stuff. Fun stuff. Mind-bending stuff. Atomic clocks. Storm-chasing drones. Gloves that turn table-tops into pianos.

The university is also a repository for arresting old stuff. A **Glenn Miller** (A&S ex'26; Hon-DocHum'84) gold record. Apple computers from 1978. NASA spacesuits. Dinosaur bones.

The university's Heritage Center and libraries preserve and display a seemingly inexhaustible supply of treasures, including the actual diploma of CU's first graduate (**Henry Drumm**, Class of 1882).

An especially poignant example appears on pages 13 and 14: The CU football that astronaut **Elison Onizuka** (Aero'69; MS'69; HonDocSci'03) brought with him aboard the Space Shuttle Challenger in 1986.

We're developing a new *Coloradan* feature called "Artifact." If you have an evocative memento related to CU Boulder that you'd like to share with your fellow alumni, send word to editor@colorado.edu.

Eric Gershon



CONTACT ERIC GERSHON AT
EDITOR@COLORADO.EDU



WORKPLACE BIAS

Stefanie Johnson, an associate professor of management in CU's Leeds School of Business, studies unconscious bias in leadership. Here she discusses strategies for mitigating bias, her White House appearance and a joint project with her biologist husband.

How did the subject of bias first draw your interest?

In my Ph.D. program, I wanted to study a mainstream business topic, leadership. One of my first studies showed gender bias. I found some things that predicted leadership success for men predicted the opposite for women. I wanted to figure out what was causing this difference. I found the demands for a successful woman leader are greater than for a man. A woman has to demonstrate all the same levels of confidence, strength and assertiveness as a man while simultaneously maintaining her feminine gender role. So, she still has to be sensitive, caring and empathetic.

Who's an example of a female leader who deals with criticisms?

Hillary Clinton. People say she's too masculine with her pantsuits, for example. Hillary is super smart, but she's just not

very likeable. That's what I found in my study — women have to be both likeable and effective in order to be successful. If people don't like you, you're never going to make it to the top.

What classes are you teaching?

I teach "Critical Leadership Skills" and a class called "Women in Business."

How do students respond when they learn about unconscious bias?

My students for the most part are open to hearing about bias; they just don't want to believe it's true. In fact, when you tell women and minorities there is bias against them, it actually hurts their self-esteem. It's worse to admit you're being discriminated against because of your race or gender, because you can never change that. But after the #MeToo movement, people's consciousness is raised. Clearly there's not equality if sexual harassment is so rampant in organizations.

How does unconscious bias affect our leadership in a workplace?

Our leaders still look a lot like prototype leaders. Ninety percent of Fortune 500 CEOs are white men. There's more CEOs named John and David than there

are women in the S&P 500. It's going to take purposeful effort to change the way things are.

Is there a way to combat bias when hiring?

I advocate for blinding, which is taking names off résumés. If you do that, you're more likely to have more women and minorities appear in your hiring pool. I recommend setting targets for diversity and measuring your progress. If you're not benchmarking against what the best companies are doing, you're falling behind.

What advice do you give minorities seeking leadership positions?

Following on Sheryl Sandberg's advice, you have to apply. No one is going to force you to do it, and women and minorities only tend to apply if they think they have 100 percent of the qualifications. You just have to put yourself out there.

You spoke in the White House in 2016 at a diversity summit. What was that like?

It was awesome. People were there primarily from Fortune 500 companies. One of the things I talked about is the idea of two in

the pool: If you interview one woman or one minority, they're never going to be hired. You shouldn't bother interviewing just one woman or minority. You might as well do zero or include at least two.

Your husband, Pieter Johnson, also works at CU Boulder, as a biology professor. Talk about the project you worked on together.

We published a paper on the toxoplasma gondii parasite and its relation to entrepreneurship. Toxoplasma is the cat parasite that causes mice to act riskier if they get it. Humans carry it — 20 percent of the U.S. population — but people don't often study the effects on humans. We collected data from 2,000 students and found business students were significantly more likely to have toxoplasma, particularly entrepreneurship students. Then we went to entrepreneur events and swabbed their saliva along with others who were in the same place but weren't entrepreneurs. The entrepreneurs were significantly more likely to have toxoplasma. We've decided that toxoplasma makes you more likely to be an entrepreneur!

Interview by Christie Sounart (Jour'12). Condensed and edited.

Campus

News FALL 2018

How the Sunflower Got That Way

CU RESEARCHERS DIG DEEP INTO THE BELOVED FLOWER'S EVOLUTIONARY HISTORY

HUMANS AND SUNFLOWERS GO way back.

American Indians first domesticated the plant — prized for its seeds, oil and beauty — around 3,000 B.C.

Over the next 5,000 years, the common sunflower, *Helianthus annuus*, evolved dramatically and rapidly, resulting in the cheer-inducing plant we know today, with its single large head, broad yellow flowers, large seeds rich in high-quality oil and (unfortunately) weaker drought tolerance.

“Evolutionarily speaking, that’s very fast,” said **Chris Smith** (PhDEPO-Bio’20), a graduate student in CU’s ecology and evolutionary biology department who’s been teasing out fine details of the sunflower’s genetic journey.

While humans have had a heavy hand in the sunflower’s transformation through selection and breeding, for example, interbreeding with other wild species has also shaped the domesticated plant we know today, according to Smith and colleagues, including CU professor Nolan Kane.

A 5,000-YEAR JOURNEY TO THE FLOWER WE KNOW.

In recent work with sunflowers, the scientists focused on a common genetic process called alternative splicing, which allows a single gene to direct production of multiple proteins. This efficiency can lead to observable variations. They found that domesticated sunflowers had developed several new forms of splicing distinct from those of wildflowers and, in some cases, from the earliest domesticated sunflowers.

Ultimately, the scientists were able to pinpoint where alternative splicing had introduced certain characteristics of the modern-day sunflower.

They hope their work with sunflowers will help them decipher the evolutionary mechanics of other life forms — and not just plants. Smith’s got his eye on the barn swallow next.

By **Amanda Clark** (M’four’19)

Photo by @iStock/ineskoleva (petals); @iStock/rojoimages (sunflower)

BOULDER BEAT By Paul Danish

ALEX AND ED

AFTER YOU MET THEM, you never forgot them.

In 1962, with the Cold War at its peak, CU professors Alex Garber and Edward Rozek were poles defining the ends of the political spectrum at CU: Garber the brilliant and charismatic socialist sociologist, Rozek the equally brilliant and charismatic conservative political scientist.

Most folks on campus assumed they came from opposite ends of the earth.

Temperamentally, Alex was old left, Ed was old world.

But they had a lot in common.

Both put teaching above publishing and were passionately devoted to

students. Both had worshipful student followings. And both were ferocious anti-communist intellectuals.

They might argue about the merits of democratic socialism versus capitalism, but on the fundamental evil of communism they agreed.

Alex, a life-long democratic socialist, was the faculty sponsor of the Young People’s Socialist League (YPSL), the day’s most active left-wing student organization. Back then, the American socialist party considered communists their enemy. Alex might have been the fiercest anti-communist on the faculty — except for Ed.

Ed was Polish. Two months before his 21st birthday, in 1939, Germany and the Soviet Union invaded Poland. Ed escaped to England, joined the Free Polish Army, and spent the next six years fighting Nazis. He was wounded three times, almost blinded and earned a chestful of medals.

After the war, he came to the U.S. with \$50 and a suitcase full of books. He worked his way through Harvard, from B.A. to Ph.D. He joined the CU faculty in 1956 and stayed 43 years.

My fondest memory of Alex is of three weeks he spent, with a song in his

heart, regaling his political sociology class with Sol Alinsky’s *Rules for Radicals*.

Alex liked Alinsky not just because he was a radical, but because he thought Alinsky’s rules gave radicals an alternative to violent revolution, which was the communist approach.



My most vivid memory of Ed was his blistering introduction of Senator Barry Goldwater in a packed Mackey Auditorium. It was a furious attack on Goldwater’s campus critics, including the *Colorado Daily* and YPSL, which had been stirring up anti-Goldwater feeling in advance of the speech. His remarks completely upstaged Goldwater, fomenting an uproar that lasted all semester.

Alex moved on to California State University at Sacramento in 1964. He died in 1984 at age 72.

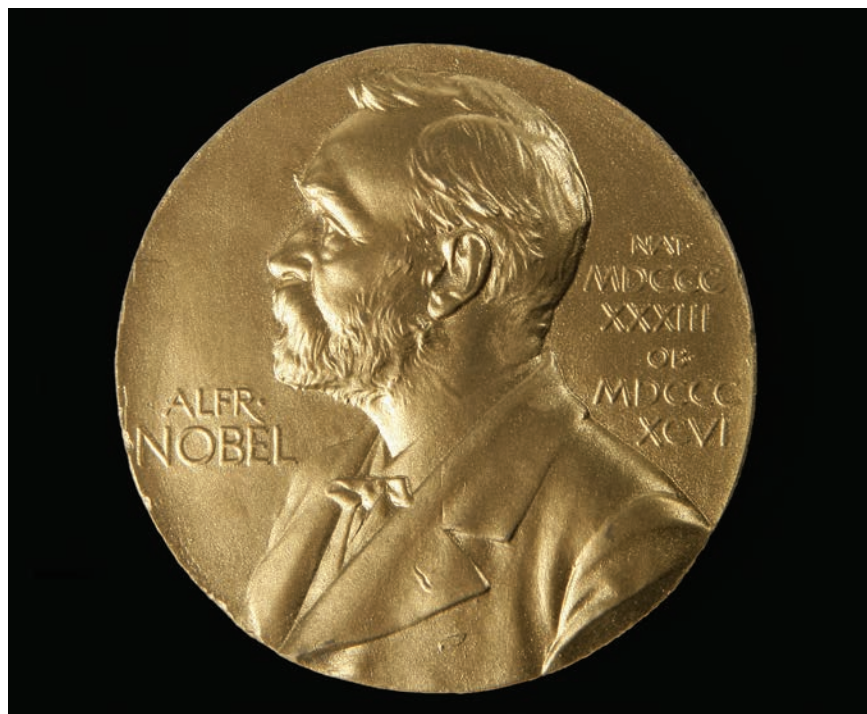
I didn’t have much interaction with Ed during the ’60s — I was a fiery Democrat back then and thought of him kinda like Darth Vader. But toward the end of his life we connected. He called one day to say he liked one of my columns. We had a nice chat, then met for lunch, which turned into a long discussion of politics, world affairs and CU. One lunch led to another, and I developed a great respect and affection for him. Ed died in 2009 at age 90. I still miss him.

Paul Danish (Hist’65) is a Coloradan columnist.

Photo by @iStock/zoom-zoom

Not All That Glitters Is (Merely) Gold

SOMETIMES IT'S ALSO A NOBEL PRIZE MEDAL



Here, the face of a Nobel Prize medal. Jan Hall gave his to the campus Heritage Center.

THE NOBEL PRIZE CONFERS on winners great prestige and a measure of celebrity. It also comes with a 175-gram gold medal. John “Jan” Hall’s will soon be on display at CU Boulder.

One of four scientists to share the 2005 prize in physics, Hall and his wife, Lindy, have donated his gold presentation medal and Nobel diploma to the campus Heritage Center, an archive and museum about CU Boulder.

Five CU scholars have won the Nobel Prize: Four in physics, one in chemistry. Hall, now 84, is the first to turn his over to the university. The museum previously received CU chemist Tom Cech’s original Nobel diploma and a replica of his medal.

With the Halls’ donation in hand, the Heritage Center, located in Old Main, is planning a Nobel Prize gallery for showcasing the medal and highlighting CU Boulder’s other laureates: Cech, Carl Wieman, Eric Cornell and David Wineland. The exhibition also will recognize CU affiliates involved with Nobel Peace Prize efforts. Work is expected to begin

later this year, Heritage Center director Allyson Smith said.

Hall, a laser expert and member of CU Boulder’s physics community since the early 1960s, won the prize for his contributions to laser-based precision spectroscopy; basically, using light to make extremely precise measurements of various natural phenomena.

“There can never be enough time or opportunity to speak individually with young people starting their advanced educations so it is hoped that visual contact with such memorabilia will inspire and motivate them to succeed at high levels and realize their goals and ambitions,” said Hall.

CU Boulder’s five Nobel laureates are among fewer than 900 individuals to have won the prize since its 1901 establishment.

The medal, made of 18-carat recycled gold, depicts prize founder Alfred Nobel, a Swedish chemist and engineer known for inventing dynamite, and, of course, for the prize in his name.

By **Christie Sounart** (Jour’12)

GOOD NEWS FOR EARLY RISERS

Early risers may be less prone to depression, according to one of the largest studies yet to explore the link between sleep-wake preference and mood disorders.

Researchers at CU Boulder and Brigham and Women’s Hospital in Boston looked at sleep-wake preferences and depression rates for 32,000 female nurses and found that early birds were 12 to 27 percent less likely to develop depression.

So: Stop staying up late to watch Netflix. Doctor’s orders.

For details of the study, visit CU Boulder Today online and search “early risers.”



HEARD AROUND CAMPUS

“**LOVE THEM, COMFORT THEM, CALM THEM DOWN, MAKE THEM FEEL SAFE AND SECURE AND LET THEM KNOW YOU CARE FOR THEM.**”

— CU emeritus professor Marc Beckoff, author of *Canine Confidential: Why Dogs Do What They Do*, on helping pets through grief, in the *Huffington Post*.

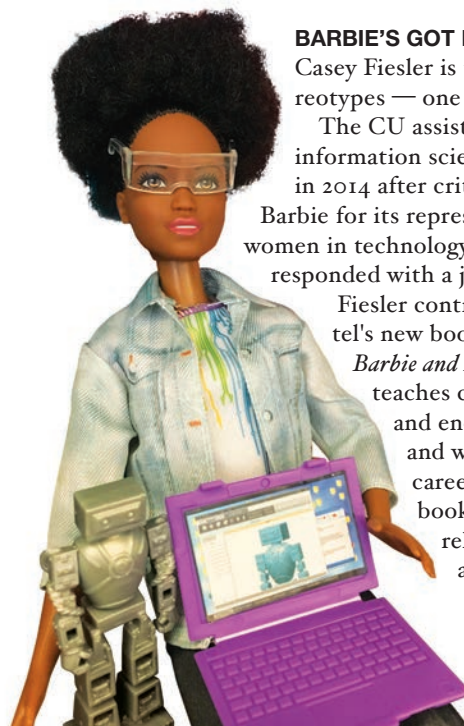
© iStock/benimage. Photo courtesy Casey Fiesler (Barbie)

BARBIE’S GOT BRAINS

Casey Fiesler is taking down stereotypes — one Barbie at a time.

The CU assistant professor of information science won notice in 2014 after critiquing Mattel’s Barbie for its representation of women in technology. The company responded with a job offer.

Fiesler contributed to Mattel’s new book *Code Camp with Barbie and Friends*, which teaches children to code and encourages girls and women to pursue careers in STEM. The book was recently released along with a new doll, Robotics Engineer Barbie.



DIGITS

TUSCAN VERNACULAR

1917

Year Charles Klauder, who developed CU Boulder’s “Tuscan vernacular” architectural style, first visited campus

15

CU buildings designed

14

Number built

1921

First (Hellems)

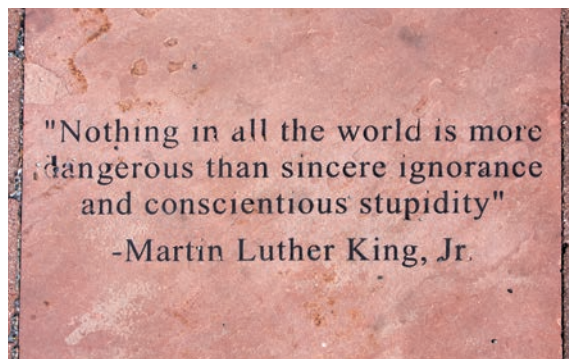
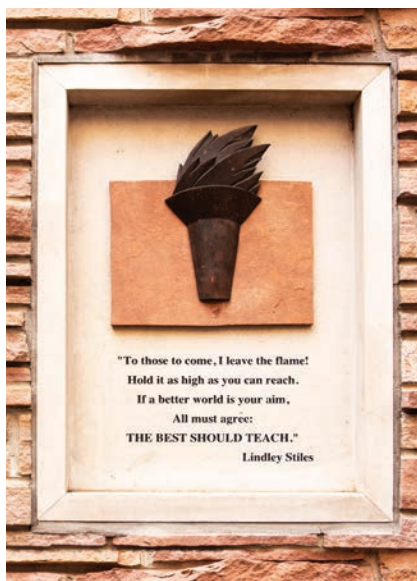
1947

Last (McKenna Languages, after Klauder’s death)

1

New edition of *Body & Soul*, book about CU Boulder’s architecture

LOOK INSCRIPTIONS



BEHOLD!

We often see without noticing, especially when we've crossed paths with a thing a thousand times or we're running late or we're preoccupied with the future. And there's a lot to take in at CU Boulder.

Wisdom itself blares across quads from building faces. It calls out to us from the bushes, down to us from entryways, up to us from walkways.

We noticed these inscriptions and artworks around campus — six among scores. If your favorite isn't shown here, let us know. We'll track it down for future publication. Write editor@colorado.edu.



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MEMENTO

On the third floor of Old Main, encased in glass in an exhibition hall chronicling CU Boulder's distinguished history in space, there's a football with "Colorado" pressed into the pigskin.

At 11:38 a.m. on Jan. 28, 1986, that ball rocketed away from Cape Canaveral aboard the Space Shuttle Challenger, stowed among the belongings of NASA astronaut **Ellison Onizuka** (Aero'69; MS'69; HonDocSci'03).

Seventy-three seconds later, a catastrophic explosion tore Challenger apart, a heart-rending event seared into memory for millions of Americans. The orbiter fell nine miles into the Atlantic Ocean. The seven-member crew perished.

Among the wreckage recovered from the sea was the CU football, a soccer ball signed by the players of the Clear Lake (Texas) High School girls soccer team, including Onizuka's elder daughter, and a Hawaiian flag. (Onizuka was from Hawaii.)

These items and some others were returned to Onizuka's widow, Lorna, and their girls, Janelle and Darien.

The family presented the soccer ball to the high school, in Houston, and the flag to Hawaii's governor. The football they gave to CU Boulder. It was an early and enduringly poignant gift to the campus Heritage Center, still new in 1986.

Not long ago, the soccer ball completed its journey to space. In 2016, 30 years after the Challenger disaster,

NASA astronaut Shane Kimbrough, whose son was attending Clear Lake, ferried it to the International Space Station.

"This ball was on Challenger that fateful day," he tweeted, with a photograph of the ball floating in the space station's windowed cupola. "Flown by Ellison Onizuka for his daughter, a soccer player @Clear_LakeHS. #NASARemembers."

By Eric Gershon



1. *Rome*



2. *Wealthy*



3. *McMahon*



4. *Gano*



5. *Arkansas Black*



6. *Gano*



7. *Northern Spy*



8. *Delicious*



9. *Crab*



10. *Jonathan*



11. *Northwestern Greening*

The Oldest APPLES in Boulder

CU ECOLOGISTS ARE TRACKING DOWN THE SURVIVING TREES OF THE FRONT RANGE'S ALL BUT VANISHED APPLE ORCHARDS — AND PRIMING A RENEWAL.

By Trent Knoss

ON A HIGH MESA overlooking Eldorado Canyon, an elderly apple tree stands alone. Its trunk is weathered, its branches bowed, but it is nevertheless resplendent with white springtime blooms. The tree is a hardy survivor, a witness to more than a century of Boulder history.

And now, near the end of its life, CU researchers are trying to preserve its genetic legacy before it vanishes forever.

Apple trees are a largely overlooked element of Colorado's agricultural heritage. In the late 1800s, pioneers brought seedlings from afar, planting orchards across the state that yielded varieties like the Maiden Blush, the Winesap and the Yellow Transparent.

Near the turn of the 20th century, Colorado was one of the top apple-growing states in the nation, regularly exporting thousands of bushels by rail. An abundance of heirloom apple varieties, each with its own local quirks and flavors, offered Americans hundreds of unique varieties for eating, canning, baking and making hard cider.

By the 1920s, however, the newly invented Red Delicious gained popularity and Washington State emerged as the country's new apple-growing hub. The commercial apple market shrank, with growers turning their focus to only the most profitable varieties.



3. *McMabon*

An unlucky run of crop-killing late spring frosts and disease outbreaks further sapped apple enthusiasm along the Front Range. The orchards dotting Boulder's fields, hills and now-historic neighborhoods faded into the landscape.

Today, a few hundred old apple trees remain in Boulder County, having long outlived their original caretakers. But many won't survive much longer.

Enter CU ecology professor Katharine Suding.

She usually studies mountain ecosystems (and leads the university's long-running Niwot Ridge alpine plant research project). But she was curious about the origins of the apple trees near her own Boulder County home and felt strongly that the trees represented natural and cultural history worth preserving.

ALL THESE TREES HAVE STORIES TO TELL.

Despite an estimated 7,500 types of apples worldwide and 2,500 in the United States alone, Americans' apple consumption is dominated by just 15 common varieties, such as Red Delicious, Golden Delicious and Granny Smith. The selection at the grocery store barely scratches the surface of what once was — and again could be.

"This effort could uncover rare and uncommon varieties that have been lost to time," she said. "They probably represent a lot of diversity in our apple cultivars that we don't have anywhere else today."

Thus was born the Boulder Apple Tree Project. The first order of business was finding more of these historic trees.

Like old-fashioned sleuths, Suding and her students fanned out across Boulder to find and catalogue them. They consulted maps and journals, cross-referenced farming logs and scrutinized photos from the Norlin Library archives. Students hiked trails and canvassed neighborhoods block by block, an effort still underway.

Whenever the apple hunters locate a tree (and obtain landowner permission), they mark its GPS coordinates and collect leaf and branch samples. The group has identified over 200 specimens so far, including in the Chautauqua area, the Mapleton neighborhood and one at the historic Doudy-DeBacker-Dunn home near the South Mesa trailhead — possibly one of the first apple trees ever planted in Boulder.

Along the way, the scientists have benefited from the wisdom of the crowd. Boulder residents eagerly chime in, reaching out with clues and tips and

secret spots. Last spring, Suding and her colleagues created a free smartphone app for community members to submit tree info instantly.

Back at the greenhouse on CU's East Campus, Suding and her students extract DNA samples from the old trees in order to classify and compare them against a database of known varieties. So far, around half of the samples have returned matches. The other half may have no living equal anywhere in the world.

These yet-to-be-identified trees are likely to be heirloom varieties worth reviving, either for ecological study or for commercial apple cultivation.

But apple trees have notoriously fickle genes: A tree grown from seed alone will not necessarily resemble its parent, making it difficult to conserve desired characteristics through traditional planting. Grafting, an age-old horticultural art that joins two plants together as one, could offer the solution. On greenhouse tables strewn with dirt and tape and pruning shears, Suding and team carefully attach wood from the old trees to a healthy root system. Then they place the combined stems into pots to be nurtured over several growing seasons.

Each successful graft will yield the genetic heir of a tree planted over a century ago, paving the way for these forgotten varieties to thrive again.

Suding isn't the only person interested in a Front Range apple revival. In 2015, **Eric Johnson** (Edu'92) and Brant Clark co-founded the Widespread Malus project, an orchard in east Boulder that plants and manages grafted apple tree varieties from near and far.

"On one hand, we're preserving old trees and repropagating them because we know they work here," Johnson said, "and on the other, we're gathering genes from wild apples because those are the tools that are going to make the apples of the future."

Other citizen-led initiatives, such as the Montezuma Orchard Restoration Project, have in recent years compiled information about Colorado's major fruit-growing regions. But the Front Range has remained largely uncatalogued until now.

The success of such an effort, Johnson says, will be built on the hard work of phone calls, door knocks and one-on-one community interactions like the ones Suding's team prioritizes.



1. *Rome*

"I'm thrilled that they're out there doing this," Johnson said. "They have a lot of hands, they've mapped scores of trees already and they have really made a dent."

The Boulder Apple Tree Project has the potential to answer important scientific and agricultural questions. The CU team also views it as an ongoing educational outreach effort, offering undergraduates the rare opportunity to participate in research efforts during their first years in college.

The simplicity of the project's aim — saving lost apples — could serve as a crucial entry point to ecology for talented students, said ecology professor Lisa Corwin, a co-leader of the apple study: "Not all students believe research is for them, but if we can just get them out there, they may find that they love it."

For now, Boulder's next generation of heirloom apple trees grows in a quiet corner of a CU greenhouse. The young, healthy stems, each about a foot tall, bear little resemblance to their gnarled forebears. Eventually, when the freshly-grafted trees are strong enough, Suding will plant them outdoors as a kind of "living laboratory" that will offer agricultural teaching resources for students and community members alike.

The revived apples might even pop up at local farmers markets someday, though they're unlikely to disrupt the commercial dominance of the Red Delicious or the Granny Smith anytime soon. Still, they'll offer Coloradans a taste of the agricultural diversity that once existed in their own backyard.

"The research is relevant and it's tangible," Suding said. "All these trees have stories to tell about the history of this place and the environment where we live."

Comment? Email editor@colorado.edu.

What Happened to the TEACHERS?

COLORADO'S TEACHER SHORTAGE PERSISTS. CAN CU BOULDER HELP?

By **Christie Sounart**

STEPHANIE MARES (EBIO'17) WAS in demand.

By the time the 22-year-old left CU Boulder in May with a biology degree and teaching certificate, she had seven job offers in a single Colorado school district, St. Vrain Valley, in her hometown of Longmont.

Had she kept looking, she'd likely have had more offers still, given her science training and English-Spanish bilingualism. Colorado is struggling with a serious teacher shortage.

"There's a shortage in all of Colorado except for the Front Range," said Katherine Schultz, dean of CU Boulder's School of Education.

There are shortages in many states, especially for special education, math and science teachers, attributable to a combination of low salaries, demographic shifts, inadequate training, and the rising cost of college education and teaching licenses and other factors, according to a 2017 Colorado Department of Higher Education (CDHE) report.

The shortage became apparent in Colorado in 2010, and is most severe in rural areas — partly because of their typical distance from colleges that prepare teachers, the need for teachers to handle multiple subjects and a greater need

for culturally and linguistically diverse personnel, said the CDHE.

"People have told me there are schools that haven't had an 11th grade math teacher for a couple of years," said Schultz.

Low pay is the biggest problem, though: The CDHE found that 95 percent of rural school districts' teacher salaries are below the cost of living.

"In some districts teachers make about \$30,000 a year," said Schultz. "It's difficult to take a job in an area that pays so little money, especially if you still have student loans."

THE AVERAGE STARTING TEACHER SALARY IN COLORADO IS ABOUT \$33,000.

Statewide, the average starting teacher salary in Colorado was \$32,980 in 2017, according to the National Education Association. Adjusted for cost of living, teacher pay in Colorado ranks 44th in the nation, National Public Radio reported.

CU Boulder is stepping in.

"There are two ways to address a

teacher shortage," Schultz said. "One way is through recruitment of new teachers. The other is through the retention of teachers who are already there."

To cultivate future teachers, the university is promoting teaching careers to middle and high schoolers through classroom visits, internships and college-level credit for some high school courses. A new CU bachelor's degree in elementary education equips graduates with skills for teaching diverse populations and emerging bilingual learners.

Current teachers play a role in inspiring the next generation. Mares' high school history teacher, **Chris Barnes** (Hist'06; MEdu'10), persuaded her to consider CU Boulder for a teaching degree.

"He really pushed me, and he took me on my first campus tour," said Mares, who received, and could not have attended without, significant scholarships. "This one teacher changed my life. I thought, 'I can do this for other kids.'"

Barnes, now in his 13th year of teaching, saw potential in Mares' work ethic and interest in learning.

"The job of teacher is getting harder and harder," he said. "Teaching used to be just the dissemination of knowledge.

Now you're a counselor, a liaison between family and community, a language specialist and a bureaucrat."

In rural areas especially, where schools often face a distinct shortage of infrastructure, technology and financial resources, Barnes said, teachers often leave by their fifth year in the job.

Last spring's national teacher walkouts and protests — including April's march by thousands of teachers on Colorado's state capitol — have heightened awareness of teachers' economic circumstances.

CU's education school is meanwhile bolstering the skills of current teachers. It's developing an online dual master's program in bilingual education and special education, for instance.

This fall, Mares is prepared to start her own career as a physics teacher at Longmont's Skyline High School. But she hasn't ruled out a future position in a rural school.

"I would prefer a school that is struggling a little bit because I think it's where I can make the most impact," she said.

Contact **Christie Sounart** (four'12) at sounart@colorado.edu.





BRAINY Buffs

YEAR AFTER YEAR, TWO OF CU BOULDER'S MOST SUCCESSFUL SPORTS TEAMS ALSO PERFORM BEST IN THE CLASSROOM. HOW DOES THAT HAPPEN?

By Eric Gershon

PETRA HYNICOVA HAD BEEN in the United States two days when she dropped by the mighty CU ski team's headquarters for the first time. It was August 2014, and the future Olympian had come to CU Boulder with two aims — studying science and racing for an elite ski team.

At home in the Czech Republic, there was really no way to do both. Universities there generally don't blend serious academics and serious sports. Hyncicova (IntPhys, MS'18), a Nordic, or cross-country, skier, was about to give up racing for school when she learned of another possibility.

An acquaintance connected her with CU ski coach Richard Rokos, a fellow Czech, and she soon found herself on the path to a new future.

In Boulder, Hyncicova had barely set foot inside the ski team offices when she saw that the vaunted scholar-athlete was no mere catchphrase: Noted beneath photographs of CU's many NCAA championship teams were their GPAs.

"When they come, they see," said Rokos, who has a degree in engineering and calls knowledge "my passion."

CU's women skiers in particular have a two-part reputation to uphold, Hyncicova found: They're perennially among America's best collegiate racers and also among the top performing CU Boulder athletes in the classroom. For five years running, they've earned the highest team GPA among spring athletes, 3.5 most recently.

Their fall-sport rival is CU's women's cross-country squad, which won the Pac-12 title last season. The runners also have

earned highest team GPA honors five years in a row, 3.4 last semester.

How does this happen? How is it that two of CU Boulder's most successful intercollegiate athletics teams also consistently do best in the classroom?

THE THEORIES

If there's no definitive answer, the athletes and coaches all have theories.

Some emphasize CU Boulder's ability to offer both elite-level skiing and running and premier science and engineering programs — a draw for high school athletes with a scientific bent.

Others cite cultural and demographic factors, including women's superior academic achievement on average, skiers' and runners' strong performance across the NCAA and their often-privileged backgrounds — white and middle class.

Still others stress team culture and healthy peer pressure.

YOU DON'T WANT TO DISAPPOINT THE TEAM.

Everyone interviewed for this story underscored the nature of the sports, which depend on a series of exacting solo performances for team success, and the driven, self-reliant personalities they attract.

"These are not normal college students," said cross-country associate head coach **Heather Burroughs** (Bio'99), a past CU All-American.

Hyncicova, who would become a two-time CU ski captain while pursuing a joint bachelor's-master's degree, said she wasn't about to blow her team's brainy reputation.

"You want to do the same and not disappoint the team," she said in June, while wrapping up her master's thesis and preparing to join the Czech national ski team.

BUT HOW?

The academic strength of CU's women skiers and runners makes sense: Across the NCAA, both groups do well.

The athletic association measures classroom performance by a metric called academic progress rate (APR). While imperfect — it emphasizes eligibility to play and persistence in school,

but does not factor in actual GPAs — APR offers a basis for comparisons.

For the four-year period through the 2016-17 school year, women's ski teams ranked second nationally, tied with swimming and ice hockey and just behind gymnastics, the NCAA reported. Women's cross-country teams ranked fifth, tied with rowing and tennis.

In more than 25 years at CU, cross-country head coach Mark Wetmore has mentored hundreds of runners, leading the women's and men's teams to a slew of national titles. He attributes their academic prowess overwhelmingly to the type of person drawn to a grueling, glamour-free sport.

Most cross-country runners also run distance events in spring track, which means they're in season 10 months a year, running 10 or more miles daily.

"It's rarely playful," Wetmore said. "Nobody says, 'Let's go to the park and have a 10,000-meter race.'"

The students who pursue collegiate distance running usually arrive on campus imbued with determination, self-discipline, focus and tolerance for pain, he said.

Combined with intense competitiveness and, often, intellectual ambition, these traits serve them well in the classroom.

"I've always felt this need — 'I have to be the best at it,'" said **Sage Hurta** (ChemBioEngr'20), an emerging women's cross-country star and chemical engineering major from upstate New York who recently earned a 4.0 GPA, along with at least four other runners.

Hurta recalls feeling this way all her life, even about middle-school badminton.

"It would really bother me that I wasn't good at it," she said.

All NCAA Division I athletes are competitive, and it's especially true of endurance athletes. The structure of cross-country competition further intensifies it: Only seven of the team's 20 runners compete in most meets, so they're perpetually competing against teammates as well as opponents.

At the meets, the team's fate depends on each runner's solo performance: There are no time outs and no substitutions.

"You are on your own when the gun goes off," Burroughs said.

This reinforces the athletes' innate determination, self-reliance and sense of personal responsibility.



"We keep our practices businesslike, so they're out the door."

"I either do things as hard as I can, or I don't do them at all," said **Ben Saarel** (EngrPhys'18) of men's cross-country, which last spring had the highest GPA among CU men's teams.

Saarel, an engineering physics major whose roommates nicknamed him "Bengineering," is a two-time Pac-12 scholar-athlete of the year. He graduated with a cumulative 3.97 GPA and the CU record for 1,500 meters.

To the extent Wetmore and Burroughs help runners in the classroom, they said, it's through flexible scheduling and by sending a convincing message that they value intellectual ambition. They routinely schedule make-up practices for runners with conflicting academic obligations, and they design efficient training programs.

"We keep our practices businesslike, so they're out the door," Wetmore said.

Similar traits are at play among the skiers, especially Nordic racers like Hyncicova. And like the cross-country coaches, Rokos attributes the skiers' academic success mainly to the natures of the sport and the athletes, plus a team culture steeped in learning.

"As long as you provide opportunity for this climate," he said, "it's self-fulfilling."

TECHNIQUE

Like all student athletes, the runners and skiers ration their time.

Hurta and Saarel live by the same maxim, which Saarel put this way: "If you're not ahead, you're behind."

Both said they keep a close eye on due dates for assignments, exams and projects, and avoid procrastination. This allows them psychological space to focus on running come race day. They also communicate early and often with professors about their travel schedules.

Hurta prioritizes running and school work nearly to the exclusion of all else, including social life outside the team, she said. Saarel said he generally tried to get ample rest, but pulled all-nighters — once between 12- and 14-mile runs — when necessary.

(Runners are generally fastidious about diet and sleep. "The requirements

of [race day] preclude a lot of howling at the moon," Wetmore said.)

Competitiveness drove Hyncicova, the skier said; team culture inspired her.

Her experience at the 2018 Winter Olympics underscored culture's role.

On CU road trips, she found Rokos a versatile conversationalist with an infectious sense of curiosity. The skiers stayed together in small quarters. After skiing, eating and napping, she said, it would get quiet and they'd hit the books.

But at the Olympics, where Hyncicova was one of the only athletes with obligations other than skiing, keeping up with school was a challenge.

"It's really tempting to focus on skiing," she said.

CU's skiers are further motivated by the awareness that there's almost no chance they'll become professional racers, given how few there are worldwide.

"Everybody knows they will have to go and make a living," said Rokos.

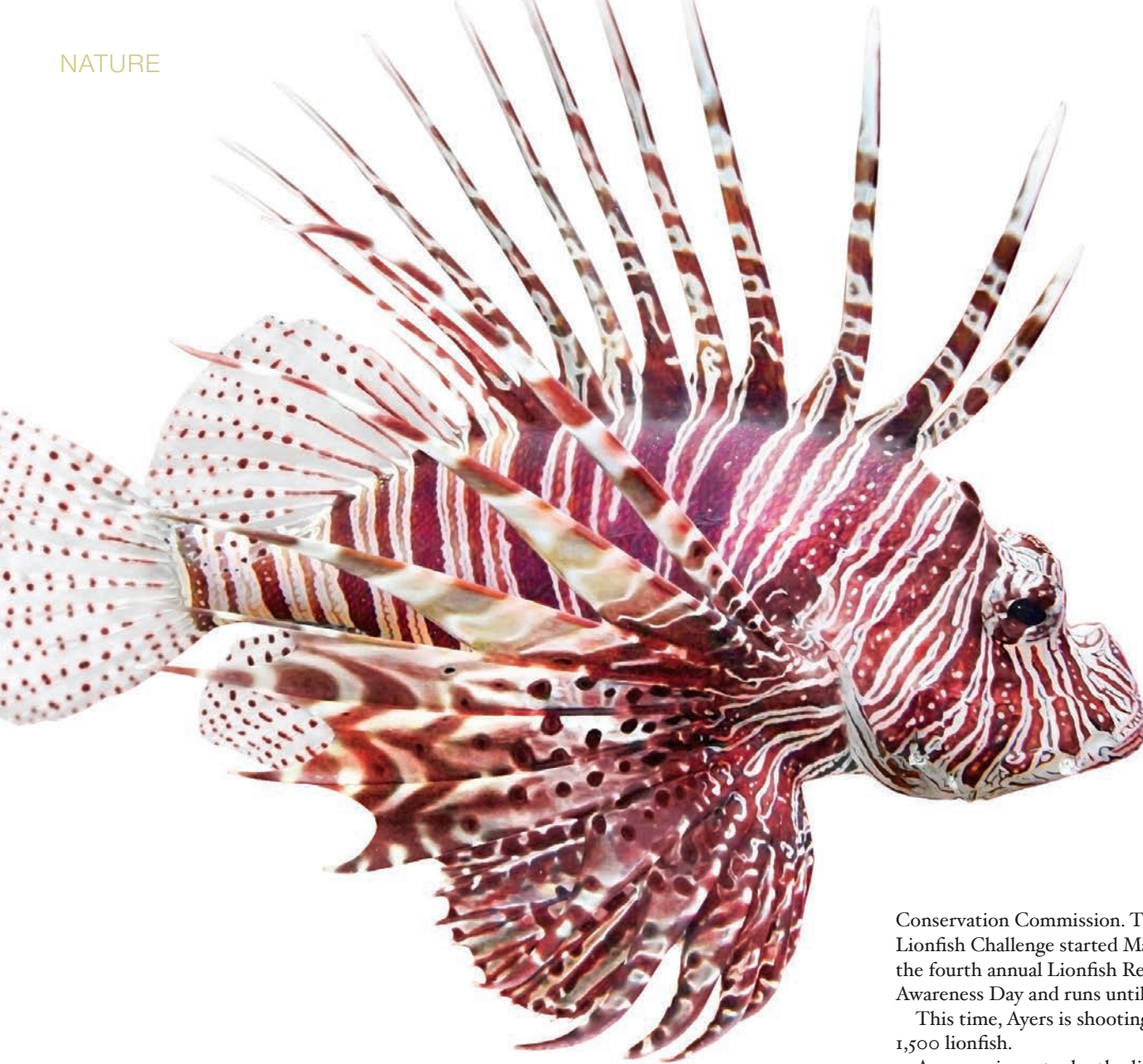
I EITHER DO THINGS AS HARD AS I CAN OR NOT AT ALL.

Hyncicova, now back in Europe, will devote the next two years to skiing full-time and proving what she's capable of when focused solely on racing. Sooner or later, she'll move on, likely to a career in physical therapy, she said.

She'll have a head start, thanks to the four years she devoted to twin dreams: Earning two CU Boulder degrees while skiing her way into the Olympics.

"I would do it again," she said.

Contact Eric Gershon at editor@colorado.edu.



The LIONFISH King

A CU ALUM TAKES ON AN INVASIVE FISH.

By Amanda Clark

FLORIDA HAS A LIONFISH problem.

The invasive sea creature, though remarkable to look at, is destroying marine ecosystems by eating everything in sight.

Ken Ayers Jr. (MTeleComm'87) is doing more than his fair share to fight back. He was named the state's 2017 Lionfish King after removing 1,250 invasive lionfish off the coast in a statewide competition. And he's still at it.

"The only way right now to successfully hunt lionfish is with a pole spear while diving," said Ayers, an Air Force veteran and master dive instructor with more than 1,700 dives under his belt.

Last year, Ayers and fellow participants removed 26,321 lionfish during the four-month competition, sponsored by the Florida Fish and Wildlife

Conservation Commission. This year's Lionfish Challenge started May 19 with the fourth annual Lionfish Removal and Awareness Day and runs until Sept. 3.

This time, Ayers is shooting to catch 1,500 lionfish.

An aquarium staple, the lionfish is famous for its colorful vertical stripes, 18 venomous spines and feathery fins. It's native to the South Pacific and Indian Oceans and is part of the scorpionfish family.

The exact cause of Florida's lionfish invasion is unknown, but many experts speculate the species was introduced to local waters in the 1980s, when citizens began releasing unwanted aquarium fish into the Atlantic Ocean. More are said to have escaped from damaged tanks when Hurricane Andrew swept across the Bahamas and Florida in 1992.

Once introduced, the fecund fish spread through the marine ecosystem like wildfire. According to the National Oceanic and Atmospheric Administration, a single female lionfish can spawn more than two million eggs a year.

This is where Ayers comes in.

After retiring from the Air Force in 1995, he moved to Hawaii, where he learned to scuba dive. When he moved back to Florida in 2013, he started to spearfish.

"I was looking for a way to help our environment and dive too," he said. "Spearfishing became a perfect fit."

That year, Ayers shot 95 lionfish off the coast of Panama City in Florida, where he lives.

"After that, I was hooked," he said.

On one of Ayers' first lionfish hunts, he got distracted by all the colorful fish and lost track of how much oxygen was in his tank.

"Before I knew it, I was down to less than 100 [cubic feet] in my tank," he said. "You should end your dive at 500 so you can make a safe ascent and do a safety stop."

If a diver collects too many fish in one dive, they can be buoyed to the surface by the dead fishes' expanding swim bladders. Ken learned this the hard way, after collecting 55 lionfish and finding himself rocketed upwards.

Invasive lionfish are found along the southeast coast of the U.S., the Caribbean and in parts of the Gulf of Mexico. They infest coral reefs and feed on more than 50 species of fish and crustaceans.

Since lionfish have no natural predators in Atlantic waters and reproduce abundantly, they can upend the food chain by eliminating native plants and animals and monopolizing limited resources.

The lionfish boom has serious implications for marine ecosystems, and the problem is unlikely to go away soon, if ever — despite Ayers' efforts.

HIS NEW GOAL: CATCHING 1,500.

Still, one way to fight back, he says, is to fry up the fish for dinner.

Seafoodwatch.org, a website for environment-conscious fish eaters, lists lionfish as a "Best Choice" option: "When you buy lionfish, you're helping to prevent the spread of this invasive species in U.S. waters."

Ayers' favorite way to eat lionfish is pan-fried and smothered in butter. His cats prefer it sashimi-style.

Comment? Email editor@colorado.edu.

A close-up, high-angle photograph of a woman with dark hair tied back, focused on her work. She is leaning over a wooden textile loom, her hands positioned to weave. The loom is made of light-colored wood and has several horizontal threads stretched across it. The background is a bright, slightly blurred workshop or studio with other people and equipment visible in the distance.

We're All CHAMELEONS Now

COULD LAURA DEVENDORF'S HIGH-TECH FABRICS CHANGE THE WAY WE EXPRESS OURSELVES?

By Daniel Strain

LAURA DEVENDORF HAS A ready answer for how she spent the summer: The CU Boulder information scientist taught herself how to weave, an experience equal parts relaxing and infuriating — “like brushing doll hair forever,” she said.

On any given day in Devendorf’s lab, part of the university’s ATLAS Institute, where students and faculty commonly mix art and science, you’ll find at least three wooden looms — the old-fashioned kind with a hand-operated shuttle. They sit next to circuit boards, wires and other high-tech toys.

That’s because Devendorf, an ATLAS fellow and CU assistant professor since 2017, is diving into the zeitgeisty field of smart textiles — fabrics that look and feel like wool and cotton but exhibit dynamic properties.

Last year, designer Julianna Bass made waves at New York Fashion Week when she introduced a line of garments that changed color as models sauntered down the catwalk. Google’s Project Jacquard recently teamed up with Levi’s to design a denim jacket that lets you answer your phone by simply tapping the sleeve.

But Devendorf has a distinct attitude toward wearable technology, inspired

by her eclectic interests in art, sustainable design and feminist theory. She’s more interested in expressive potential than utilitarian value. In this vein, she’s exploring how clothing can connect our bodies to the environment, for example, or reveal and record influences on the body as an aid to memory and reflection.

PURPLE TO PINK TO WHITE IN SECONDS.

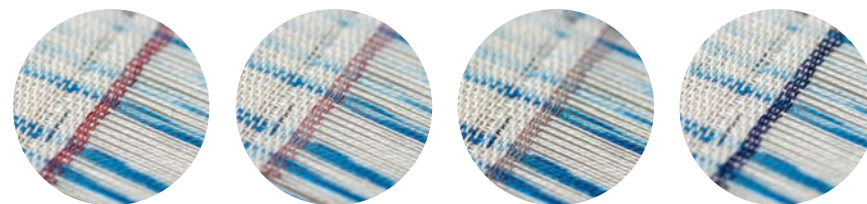
Rather than developing technologies of convenience, she said, she’s interested in “whether or not it’s possible to build a different kind of relationship with technology that’s slower and more thoughtful.”

OLD MEETS NEW

Although Devendorf has a bachelor’s degree in computer science and enjoys writing code, she is in some ways an odd fit for the world of smart textiles. She’s skeptical about aspects of tech culture and is predisposed to physical craftsmanship. She once spent a summer drawing handmade cards for tourists in Santa Barbara, Calif., seemingly more in tune with another of her degrees, in art.

“My husband says I have an analog fetish,” she said. “I still collect vinyl. I like sending letters in the mail. I don’t really like technology, but it’s not going away. So my focus is how do we do something more interesting with it?”

Much of that old-meets-new tension is embodied in a special delivery Devendorf is expecting this fall: A custom-made TC2 Jacquard loom. The device looks more like a 3D printer than one of the doll-hair combers in her lab now, and can seamlessly weave more complex patterns of traditional textiles and high-tech threads, such as wires coated in thermochromic



Devendorf helped invent a fabric that interlaces ordinary and thermochromic threads.

pigments that change color in response to an electric current.

Among the projects Devendorf can carry forward with this computer-meets-loom is Ebb, a fabric she helped invent as a graduate student at the University of California, Berkeley. It interlaces ordinary yarn with thermochromic threads, yielding a fabric with designs that can morph from purple to pink to white within seconds. Devendorf has experimented with designing Ebb shirts that change color as the skin undergoes tiny shifts in sweatiness — like a human blush in cloth.

These subtle changes can indicate various types and degrees of excitement — from physical exertion to mere anticipation, true anxiety, even sexual arousal. Ebb-based garments would manifest how the wearer is feeling, signaling a change for all to see.

“We have five senses,” she said. “Smart textiles can partner with those and give you this other sense.”

SPEAKING TWO LANGUAGES: ART AND SCIENCE.

Because smart textiles make public what might otherwise be private, and because clothing is more intimate than a phone you can set down and ignore, Devendorf approaches these projects with caution. “It represents you to the world.”

Steven Frost, an instructor in CU Boulder’s College of Media, Communication and Information who has collaborated with Devendorf, said she has a rare ability to blend technology and artistic creativity.

“What’s really exciting about working with Laura is that she really does speak both languages,” Frost said.

THE PRESSURES ON US

Much of Devendorf’s recent work focuses on a topic she thinks about a lot:

Parenthood. The mother of a 2-year-old and a 5-year-old, she describes it as a vulnerable experience.

And while many technologies aimed at parents seek to ease stress, Devendorf embraces the vulnerability.

At a May workshop at the Boulder Museum of Contemporary Art, she asked participants to design what she called an exoskeleton for caregivers — think an Iron Man suit for people covered in baby vomit. The group’s ideas included small, autonomous robots that would crawl over your body to clean your clothes and a hoop skirt that could double as a playpen for toddlers.

Devendorf herself is interested in using technology to lay bare the tensions inherent in parenthood — including the fact that, as a mother, she often feels like her body isn’t her own. In her free time, she’s been crocheting a poncho made of pacifier nipples to make visible a common feeling among nursing mothers.

She’s also begun developing a drape with small pressure sensors to record how parents hold their newborns, allowing production of maps

showing the evolving physical relationship between parent and child.

“I like the idea of how our memories might change if we remember the pressures on us,” she said.

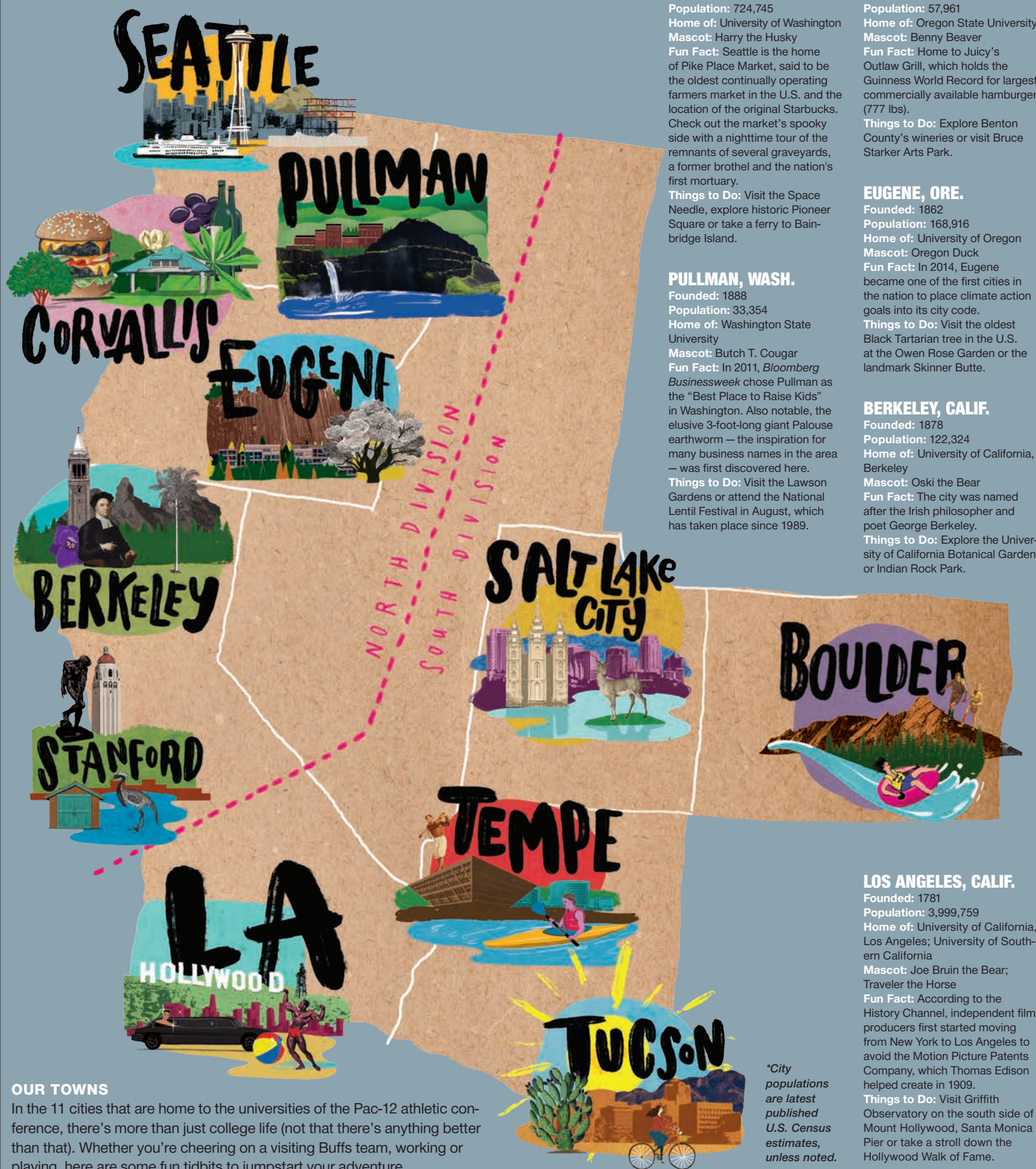
Ultimately, Devendorf hopes more technology will move in this direction — enhancing how people experience reality and caretaking rather than alienating them from it.

“So much of technology is about self-realization and no longer having to struggle or care for anything because you have the technology to do that,” she said. “I like the idea of actually amplifying that struggle instead, because maybe that’s where the meaning comes from.”

Comment? Email editor@colorado.edu.



◀ Devendorf’s students working on the textiles of the future.



OUR TOWNS

In the 11 cities that are home to the universities of the Pac-12 athletic conference, there's more than just college life (not that there's anything better than that). Whether you're cheering on a visiting Buffs team, working or playing, here are some fun tidbits to jumpstart your adventure.

SEATTLE, WASH.

Founded: 1851
Population: 724,745
Home of: University of Washington
Mascot: Harry the Husky
Fun Fact: Seattle is the home of Pike Place Market, said to be the oldest continually operating farmers market in the U.S. and the location of the original Starbucks. Check out the market's spooky side with a nighttime tour of the remnants of several graveyards, a former brothel and the nation's first mortuary.
Things to Do: Visit the Space Needle, explore historic Pioneer Square or take a ferry to Bainbridge Island.

PULLMAN, WASH.

Founded: 1888
Population: 33,354
Home of: Washington State University
Mascot: Butch T. Cougar
Fun Fact: In 2011, *Bloomberg Businessweek* chose Pullman as the "Best Place to Raise Kids" in Washington. Also notable, the elusive 3-foot-long giant Palouse earthworm — the inspiration for many business names in the area — was first discovered here.
Things to Do: Visit the Lawson Gardens or attend the National Lentil Festival in August, which has taken place since 1989.

CORVALLIS, ORE.

Founded: 1845
Population: 57,961
Home of: Oregon State University
Mascot: Benny Beaver
Fun Fact: Home to Juicy's Outlaw Grill, which holds the Guinness World Record for largest commercially available hamburger (777 lbs).
Things to Do: Explore Benton County's wineries or visit Bruce Starker Arts Park.

EUGENE, ORE.

Founded: 1862
Population: 168,916
Home of: University of Oregon
Mascot: Oregon Duck
Fun Fact: In 2014, Eugene became one of the first cities in the nation to place climate action goals into its city code.
Things to Do: Visit the oldest Black Tartarian tree in the U.S. at the Owen Rose Garden or the landmark Skinner Butte.

BERKELEY, CALIF.

Founded: 1878
Population: 122,324
Home of: University of California, Berkeley
Mascot: Oski the Bear
Fun Fact: The city was named after the Irish philosopher and poet George Berkeley.
Things to Do: Explore the University of California Botanical Garden or Indian Rock Park.

STANFORD, CALIF.

(unincorporated area in Santa Clara County)
Founded: 1885
Population: 13,809 (2014 est.)
Home of: Stanford University
Mascot: the Cardinal, the Stanford Tree (both unofficial)
Fun Fact: There's a long history of fountain hopping at Stanford — jumping in water fountains around campus.
Things to Do: Visit the Computer History Museum in nearby Mountain View, walk the salt marshes of Baylands Nature Preserve or explore adjacent Palo Alto.

SALT LAKE CITY, UTAH

Founded: 1847
Population: 200,544
Home of: University of Utah
Mascot: Swoop, a red-tailed hawk
Fun Fact: The Salt Lake Temple, the largest Mormon temple in the U.S., took nearly 40 years to complete.
Things to Do: Visit the Great Salt Lake or Antelope Island State Park.

TEMPE, ARIZ.

Founded: 1894
Population: 185,038
Home of: Arizona State University
Mascot: Sparky the Sun Devil
Fun Fact: Tempe is home to a thriving music scene. Bands such as the Gin Blossoms, Roger Clyne and the Peacemakers and the Refreshments all started there in the '80s and '90s.
Things to Do: See a comedy show at the Tempe Center for the Arts or rent a kayak, pedal boat or paddle board at Tempe Town Lake.

TUCSON, ARIZ.

Founded: 1775
Population: 535,677
Home of: University of Arizona
Mascot: Wilbur and Wilma Wildcat
Fun Fact: One of America's sunniest cities, Tucson gets more than 350 days of sunshine annually.
Things to Do: Pedal on the city's 1,000-plus miles of bikeways or explore Saguaro National Park.

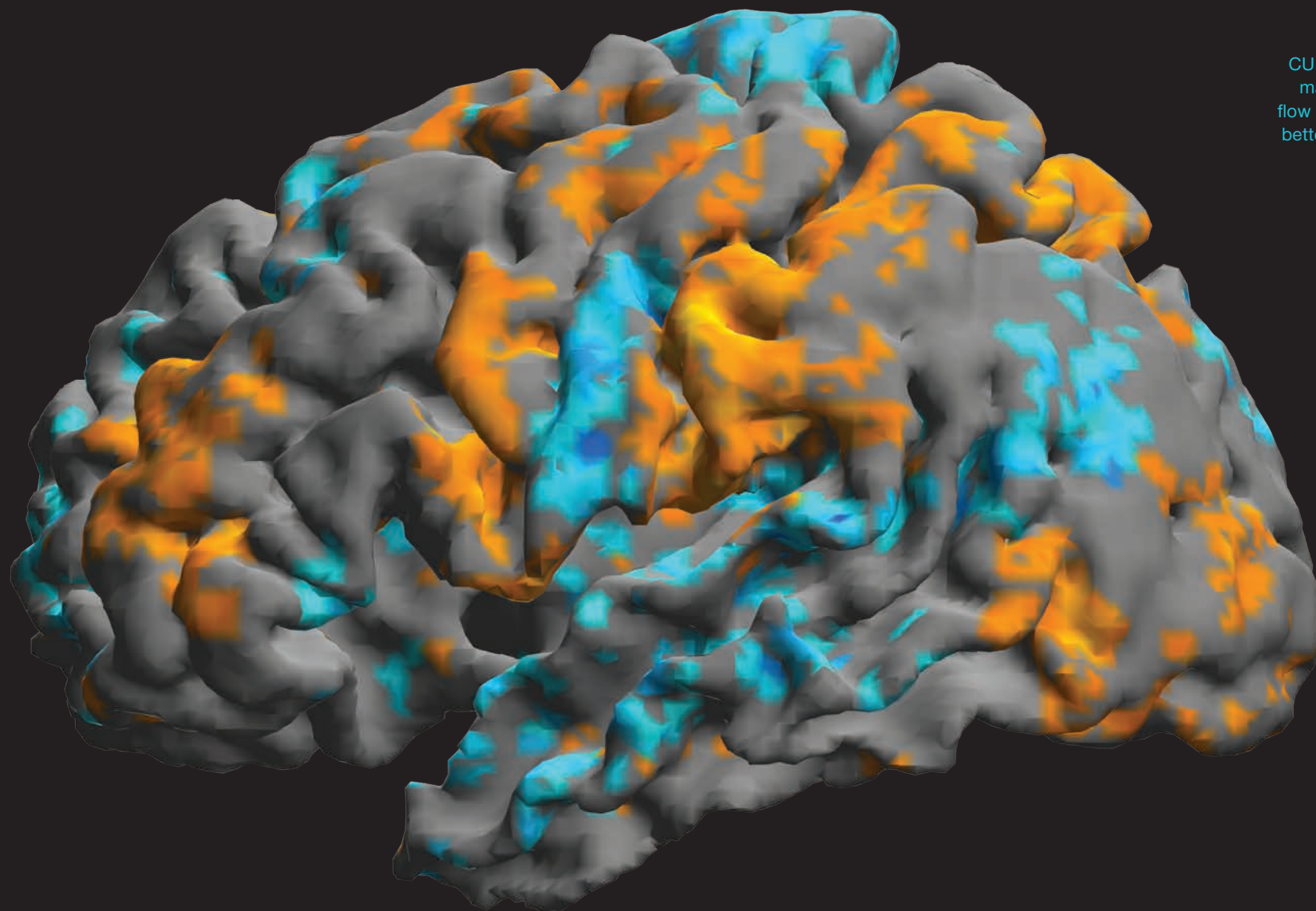
BOULDER, COLO.

Founded: 1871
Population: 107,125
Home of: University of Colorado Boulder
Mascot: Ralphie the Buffalo
Fun Fact: America's happiest city, according to *National Geographic* (2017)
Things to Do: Spin past the new Google campus at 30th and Pearl, eat hydroponic greens grown at Williams Village Dining Hall, hike to the Royal Arch in Chautauqua Park.

LOS ANGELES, CALIF.

Founded: 1781
Population: 3,999,759
Home of: University of California, Los Angeles; University of Southern California
Mascot: Joe Bruin the Bear; Traveler the Horse
Fun Fact: According to the History Channel, independent film producers first started moving from New York to Los Angeles to avoid the Motion Picture Patents Company, which Thomas Edison helped create in 1909.
Things to Do: Visit Griffith Observatory on the south side of Mount Hollywood, Santa Monica Pier or take a stroll down the Hollywood Walk of Fame.

**City populations are latest published U.S. Census estimates, unless noted.*



CU scientists are mapping blood-flow in the brain to better understand chronic pain.

Unlearning PAIN

CAN CHRONIC PAIN PATIENTS THINK THEMSELVES INTO WELLNESS? AN UNPRECEDENTED BRAIN IMAGING STUDY AIMS TO FIND OUT.

By Lisa Marshall

CHERI GOULD DOESN'T REMEMBER exactly when the pain first began to creep across her shoulders, down her spine and into her back. To this day, she's not sure what started it.

But she remembers what life was like before.

She played soccer and softball, ran regularly and was full of energy and drive.

"I have never been one to let things stop me," she said.

But after 12 years, multiple diagnoses and futile tries at everything from physical therapy and Botox injections to opioids, the 48-year-old mom and teacher — like many of the 100 million Americans suffering from chronic pain

— has grown weary of the way pain interferes with her life, and desperate for nondrug, nonsurgical treatment options.

"I've heard a lot of talk about tapping into the mind-body connection, but I am a science person. I need evidence," she said, before slipping on some blue scrubs, lying flat on her back inside a functional magnetic resonance imaging (fMRI) machine, and letting a team of neuroscientists peer inside her brain. "That's why I'm here."

Gould is among 150 or so chronic back pain patients who made their way to CU Boulder last summer for the largest brain imaging study ever to explore mind-body treatments for chronic

pain. The study hinges on a question that spiritual practitioners have been asking for centuries: Can thoughts and emotions have a measurable impact on physical well-being?

CU graduate student **Yoni Ashar** (PhDNeuro, PhDPsych'18), a former software engineer who made his way to neuroscience via his own spiritual quest, is now asking an even more specific question:

"Can we think ourselves out of chronic pain?"

"The assumption for a long time has been that chronic pain is driven by problems in the body. The neck. The back. The tissue," said Ashar, who

is leading the study. “But there is a paradigm shift underway. People are realizing that for many patients, the brain is at the center. To get at that pain, we have to change the way we think and feel about it.”

MEDITATING MONKS

Eight years ago, Ashar was sitting in a synagogue in Jerusalem watching a slide presentation of red-robed monks having their brains scanned when he realized what he wanted to do with the rest of his life.

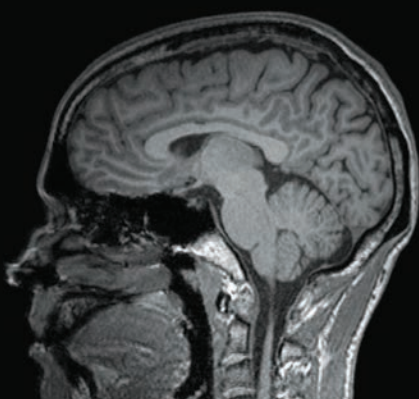
Bored and unsatisfied, he had quit his job as a computer scientist in Washington, D.C., in his early 20s and moved to Israel to study spirituality.

He considered becoming a rabbi.

But as he heard the presenting neuroscientist explain the clear changes that occurred in monks’ brains as they meditated, something clicked.

“I had zero background in psychology. I had never taken a neuroscience class. But I remember feeling electrified at the thought that you could use scientific tools to study these things I had been reading about in spiritual texts,” he said.

Basic structural MRI image of Yoni K. Ashar



Ashar scoured the internet looking for the world’s leaders in functional MRI research, which maps blood flow in the brain to examine neural activity. He emailed a dozen of them offering to work as a software designer to get his foot in the door.

Tor Wager, director of CU Boulder’s Cognitive and Affective Neuroscience Lab, emailed him back.

Today, Ashar is finishing up dual doctorates in neuroscience and clinical

psychology and has shifted his focus from how spiritual practices alter the brain to how thoughts and emotions impact its pain-related regions.

He points to numerous recent studies suggesting that, even in the absence of tissue damage, misfiring neural pathways can cause or perpetuate pain.

“The brain learns to be in pain,” he says. “But can it be unlearned?”

In one famous case study, a construction worker arrived at an emergency room with a 6-inch nail protruding from his boot, the pain so excruciating he had to be sedated. When the boot came off, doctors discovered the nail had passed between his toes, never puncturing him.

Other recent studies have shown that sham surgeries — in which the patient is sedated and a surface-level incision is made — can be as effective for pain relief as real ones.

Another paper, published in 2013, showed that while acute pain from a tissue injury lives in a region of the brain commonly associated with pain (what Ashar calls the “I just stubbed my toe” region), chronic pain resides in a different region — one closely associated with reward and emotion.

That could help explain why some chronic pain sufferers feel their symptoms flare up around a mean boss or an estranged relative, Ashar said.

“Pain is a danger signal that tells you to stop what you are doing so you don’t do more damage. But sometimes these danger signals can be activated even in the absence of injury,” or linger after the injury is gone, said Los Angeles-based pain psychologist Alan Gordon, who is collaborating with Ashar on the study.

Added Ashar: “It’s like a false alarm that is stuck in the ‘on’ position.”

SHUTTING OFF THE ALARM

That is not to say the pain is “all in your head.”

“There is no such thing as imaginary pain,” Gordon said. “If you feel it, it is real.”

Over the past 10 years, he has worked with hundreds of patients with intractable chronic pain, using mind-body methods to help them shut off the false alarm, after ruling out serious structural causes.

For instance, if someone always experiences pain when they sit, Gordon

might ask them to sit slowly, paying close attention “in a detached, curious way” to how this feels physically and the fearful thoughts that come with it, and to evaluate whether those fears are justified.

After a few repetitions, the pain often lessens.

“The goal is to break that learned association — to teach the brain that something they learned to interpret as dangerous is actually safe.”

THE BRAIN LEARNS TO BE IN PAIN. CAN IT BE UNLEARNED?

While he has seen such methods work time and again in his own practice, he realizes that it will take scientific evidence to convince the broader medical community.

That’s where CU Boulder comes in.

“Tor and his team are among the most respected groups of scientists in the world when it comes to fMRI studies,” he said. “We are really excited to be working with a group with so much credibility.”

YOUR BRAIN ON PAIN

On a recent July day, Gould was lying on her back inside a tube-shaped \$2 million MRI machine at the Intermountain Neuroimaging Consortium facility on the Boulder campus clicking a button near her right hand to rank her pain as researchers remotely applied pressure, first to her lower back, then to her thumb.

Three-dimensional images of her brain appeared on the screen before them, providing detailed baseline information about which regions light up during pain, and by how much.

Over the course of the study, she and the other participants would be assigned to one of three treatment groups exploring noninvasive, nondrug approaches to treating pain.

A month later, they would have their brains scanned again.

Ultimately, the researchers hope the project will accomplish two goals: First, they hope to develop a brain marker, or signature, which doctors can use to assess a patient’s pain. (State-of-the-art measurement today, believe it or not, involves asking patients to rank their pain from 1 to 10 or choose from a series of sad-to-happy faces.)

Second, they hope to use the brain scans to assess scientifically just how effective psychological treatments are, and precisely how they work.

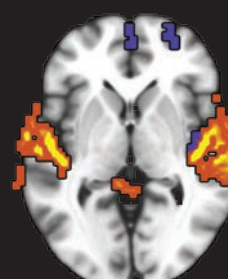
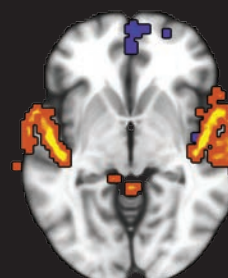
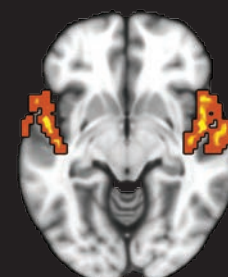
Published results are months away. But in the end, the research could change lives.

Said Ashar, “We think this study stands to make a large impact on the field and on the treatment of chronic pain in general.”

Comment? Email editor@colorado.edu.

Photos by Yoni Ashar

Study subjects’ brains reacting to a knife scraping a glass bottle.



IF YOU
FEEL IT,
THE PAIN
IS REAL.



Long-Distance COMMUTER

JIM VOSS HAS BEEN TO SPACE FIVE TIMES. HE CAN HANDLE THE HOUSTON-TO-BOULDER COMMUTE.

By Eric Gershon

JIM VOSS IS NO stranger to work travel.

In one two-year stretch, he flew monthly between Houston and a job site in Star City, Russia, near Moscow.

That wasn't even extreme: As a NASA astronaut, Voss (MAero'74; HonPhD'00) circled Earth more than 550 times during five Space Shuttle missions.

He spent 201 days in space, 163 as a resident of the International Space Station. In 2001, he and a crewmate floated outside it for 8 hours, 56 minutes, setting the record for longest spacewalk.

Now 69 and three times retired and unretired, Voss continues traveling

long-distance for work. Since 2009, he's been teaching in CU Boulder's aerospace engineering program, commuting twice a month from Houston, where his wife, Suzan, still works for NASA.

Usually Voss flies Southwest Airlines to Denver. But every few months he pilots himself in one of two small aircraft he owns, a single-engine, four-seat Cirrus SR22 with tan leather interior. He's also got a two-seat Rutan Long-EZ experimental aircraft he built himself.

"There are never traffic jams," he said in a June interview at Rocky Mountain Metropolitan Airport, where he keeps

both aircraft in a meticulously organized hangar adorned with the flags of CU Boulder and Auburn University, his undergraduate alma mater.

Voss enjoys flying for most of the usual reasons: The views, the solitude, the sense of freedom. He also likes the technical challenge and convenience.

On “Voss Airlines,” he said, “there’s no rush, no schedule.”

THERE ARE NEVER TRAFFIC JAMS.

Commuting by plane also gives him a chance to practice something he does for fun anyway. He’s flown over the Grand Canyon, up and down the Hudson River, past Mount Rushmore and to the Bahamas. He once took the Long-EZ all the way to Alaska.

One year, en route to Oshkosh, Wisc., for the Experimental Aircraft Association’s annual fly-in, he took a detour to Dayton, Ohio, to check out the Air Force museum there.

And when his wife joins him in Colorado, he’ll pilot her and friends to a favorite vacation spot in Durango.

In Boulder, Voss and airport pals fly in formation to Fort Collins, Steamboat Springs and Greeley for lunch at little airport restaurants.

From time to time, Voss, who averages about a flight a week year-round, takes his aerospace graduate students for a spin.

Voss learned to fly more than 40 years ago, as a hobby. He later attended Naval Flight School, becoming a flight test engineer, a person who helps establish an aircraft’s capabilities.

Though it was never his job to pilot the Space Shuttle, Voss logged enough Shuttle time to appreciate why the commanders usually came from the ranks of the military’s elite test pilots. Upon reentry to Earth’s atmosphere, the Shuttles, which went out of service in 2011, moved blazingly fast and on an unusually steep path to the runway.

“You can’t afford to make a mistake,” he said.

In 1981, before becoming an astronaut, Voss began building the



Jim Voss, a retired NASA astronaut who teaches

in CU Boulder's engineering college, maps a route to Boulder from his Houston home.

Long-EZ, following a design by legendary aircraft designer Burt Rutan. Given work obligations that often kept him away from home, it took him 13 years to finish the fiberglass-and-foam plane.

But it never felt like work, he said.

“This is fun for me,” he said during a break from his annual piece-by-piece inspection of the Long-EZ.

On the day the *Coloradan* visited, he was planning to reinstall the nose gear.

“I take good care of my airplanes,” he said. “My life depends on it.”

Voss began commuting by aircraft in 2003, while teaching at Auburn, near his hometown of Opelika, Ala. Flying in the Long-EZ was less of a hassle than taking a commercial flight to Atlanta or Birmingham, then driving two hours to Auburn. He was going almost weekly.

He bought the Cirrus in 2004. Faster and safer, it’s got a full-aircraft parachute for dire circumstances. Fortunately, he’s never had to use it.

While teaching at CU, Voss has mostly been commuting on commer-

OVER 13 YEARS, VOSS HAND-BUILT AN EXPERIMENTAL AIRCRAFT.

cial airlines. It’s less expensive than using his own plane, and more reliable — commercial airliners can handle weather Voss wouldn’t risk.

Being a passenger is also less taxing: As pilot, he said, “You have to pay attention all the time.”

When Voss flies himself from Texas to Colorado, he steers a diagonal course northwest from Houston, across Texas and the Oklahoma panhandle, into Colorado, then north. He’ll stop at Dalhart, Tex., or Amarillo for lunch and gas. In the Cirrus, the trip takes five-and-a-half hours.

As much as Voss enjoys flying, he’s looking forward to the 2019 opening of the new

aerospace engineering center on East Campus. It’s less than a mile from his Boulder condominium.

“I’m gonna walk,” he said.

Contact Eric Gershon at editor@colorado.edu.

ASTRONAUT, PILOT, PROFESSOR

NAME: Jim Voss (MAero’74; HonPhD’00)

TRIPS TO SPACE: 5, last in 2001
Shares record for longest **SPACEWALK:** 8 hours, 56 minutes (2001)

STARTED TEACHING AT CU: 2009

LIVES: Houston and Boulder

TRAVELS BETWEEN THEM: Twice a month

TRIP TAKES: 5.5 hours in his Cirrus SR22

VOSS’ OTHER AIRPLANE: Rutan Long-EZ experimental aircraft

YEARS HE SPENT HAND-BUILDING IT: 13

LIKES: Tiny airports

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Alumni

News FALL 2018

Forever (Young) Buffs

FLAT TIRES WON'T KEEP CU BOULDER'S YOUNGEST ALUMNI FROM A GOOD TIME

A FLAT TIRE ALMOST stopped **Chancee Forestier** (Fren, Psych'16) from getting to Glenwood Springs, Colo., for the inaugural CU Wine and Whitewater young alumni weekend in June. Fortunately, a good Samaritan helped her get on her way.



This summer, young alumni rafted in Glenwood Springs.

The 26-year-old Buff, fresh from Europe, went on to meet up with 40 other CU alumni and friends at an evening pool party to kick off the weekend.

"I had been living in France the last year, so I really hadn't even seen a CU shirt other than my own in a while," said Forestier, now a graduate student in Georgia with an eye on medical school. "I loved singing the fight song and sharing our CU pride."

The trip, which sold out, included nine miles of whitewater rafting and visits to three wineries in nearby Palisade, all by bicycle. It was one of several new events

and programs this year developed specifically for graduates of the past decade.

This fall, young alumni (and those young at heart) are invited to tailgate with the CU Young Alumni Chapter (CUYA) before every home football

game in campus parking lot 308 and to gather in Denver at Blake Street Tavern to watch all road games. During Homecoming Weekend, the Young Alumni After Hours event will convene Buffs at Pearl Street haunts old and new Oct 26.

The Alumni Association will offer two free online career-development sessions aimed at young alumni: An Oct. 9 session for aspiring entrepreneurs and another on Nov. 13 with Buffs working in the outdoor industry.

The annual Buffs at the Butte young alumni ski weekend in Crested Butte, Colo., is scheduled for early 2019. **Marlee Glasgow** (Advert'14) has attended four years in a row and will be there again this year.

"I plan on keeping the streak alive," she said. "It's nice to be reminded that the community that made CU great still exists outside of school."

For more information about CU Young Alumni events and programs, visit colorado.edu/alumni. To suggest a young alumni event idea, contact Taylor Stratton at 303-492-8485 or email taylor.stratton@colorado.edu.

HOMECOMING WEEKEND 2018

This Homecoming, **Jeff Randall** (Geog, Soc'78) of Boston and **Jeff Gray** (Psych'78) of Los Angeles will reconnect in Boulder to hike, visit friends, roam Pearl Street and rally behind the Buffs at Folsom Field. They and a core group of pals do it every few years.

"It's Boulder and CU that brought us all together in the first place," said Randall, who, with Gray, is co-hosting a 40-year reunion for the Class of 1978.

Also at Homecoming 2018 (Oct. 25-28), the Alumni Association will host its annual awards ceremony in the Glenn Miller Ballroom, a series of Buff Talks — short, Ted Talk-style lectures — in Old Main and Buffs on Tap, an afternoon of beer and wine tasting in Koenig Alumni Center's backyard. There's the Homecoming parade and pep rally on Pearl Street and the alumni tailgate before the big game against Oregon State.

In addition to the 40-year reunion, which includes a dinner at the Hotel Boulderado, more than 15 other reunions are planned.

Visit colorado.edu/homecoming to register.



ALUMNI ASSOCIATION TIDBITS

This summer, more than 600 people gathered in Colorado, California and Alaska for exclusive alumni showings of a new 30-minute documentary about CU's history, *The Light Shines On: A Celebration of CU Boulder*. See the film yourself on campus during Homecoming Weekend.



The NorCal alumni chapter has new leaders: **Summer Vaughn** (Phil'16) and **Jenna Kinsinger** (Fin'16). **Kelly McKee** (PolSci'94) has taken over the Orlando chapter. Catch Buffs games this fall with alumni in your area. Visit colorado.edu/alumni/chapters to see which group meets nearest you.



Join us on Duane Field before every home CU football game for our Ralphie's Corral Tailgate. The free event, located south of Folsom Field, begins three hours prior to kickoff. Take a photo with live mascot Ralphie, pick up alumni swag, play games with your kids and get a bite to eat. On the road, we'll hold Buffs Bash tailgates at USC, Washington, Arizona and Cal.



The Alumni Association welcomes its newest advisory board members: **Chip Bollendonk** (MechEngr'17), **Kyle Evashevski** (Econ'96), **Timothy Gurba** (Chin, Fin'04), **Svein Hasund** (MechEngr'67), **Mina McCullom** (ArchEngr'09), **Landon Mock** (Psych'07), **Floyd Pierce** (ApMath, Econ'17), **Laurie Porter** (Mktg'88) and **Chrissy Renegar** (Jour'06). The roughly 40-person volunteer board provides guidance and feedback to Alumni Association staff.

2019 TRIPS



SAILING THE WINDWARD ISLANDS

Feb. 26-March 5, 2019



ISRAEL: TIMELESS WONDER

April 6-17, 2019



SOUTHERN GRANDEUR

April 7-15, 2019



MOUNT EVEREST BASE CAMP TREK

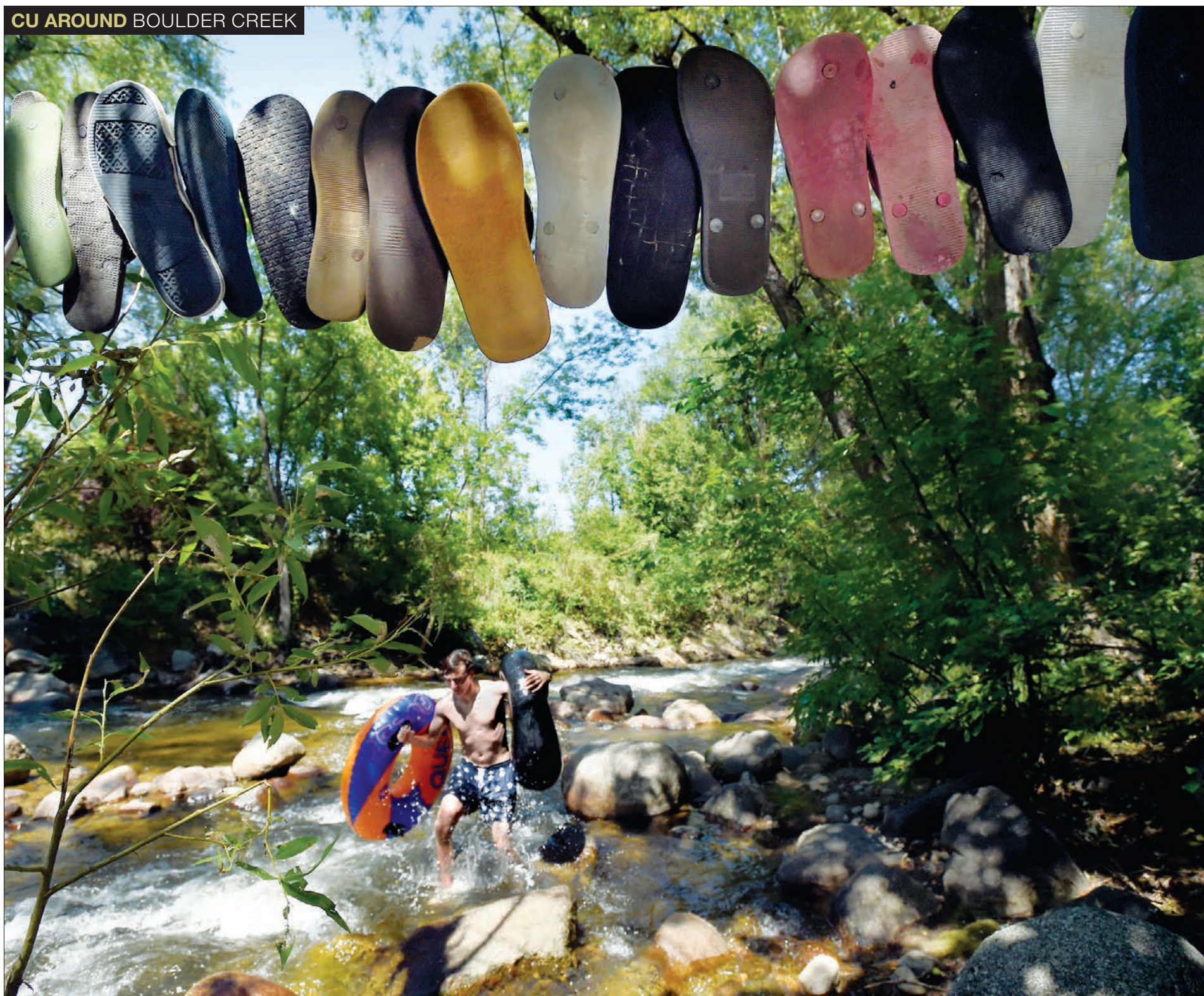
April 23-May 9, 2019



WONDERS OF PERU

April 25-May 6, 2019

For more information about the Roaming Buffs travel program, email lisa.munro@colorado.edu, call 303-492-5640 or visit colorado.edu/alumni/travel.



LOST AND FOUND

Twenty years ago, Tom Blumenthal was surprised by the number of flip-flops washing up at the bottom of the steps leading from his yard to Boulder Creek. He started collecting them.

"I had the idea of the 'art' installation vaguely in mind after the first season," said the recently retired CU Boulder professor, a former chair of the molecular, cellular and developmental biology department.

Before long, Blumenthal and his wife, Betsy, an artist, had boxes and boxes of lost footwear.

This summer, they strung together 231 flip-flops to catch the eyes of oncoming tubers floating past from nearby

Eben G. Fine Park, west of 6th Street.

With no plans for further art installations, they discarded the rest.

"Non-scientist friends who have known me for a long time seem pleased that they can

finally understand something I've done," joked Blumenthal, who has published more than 100 articles on RNA and chromosomes. "My scientist colleagues are just amazed and bemused."

ALSO ADRIFT:

1. A paddle
2. Hats
3. T-shirts
4. Bottles
5. A watermelon



FIFTY-FIVE YEARS (AND COUNTING)

University of Colorado President Bruce Benson (Geol'64, HonDocSci'04) has announced plans to retire next summer. Here he looks ahead.

When I announced in July that I would retire as CU's president in July 2019, many faculty, friends and alumni asked me what I was most proud of from my decade-plus leading our university. While we had some notable accomplishments, I think I surprise people when I say I prefer to look ahead, not back.

I find myself wondering what the CU of the future will look like. It may seem odd coming from someone who just turned 80 and has a history with the university that dates back some 55 years.

It's analogous to my predecessor George Norlin. At the end of his presidency in 1939, CU had about 4,500 students and a budget of just over \$1 million. He probably never imagined CU Boulder as the flagship of a university system with four campuses, more than 70,000 students and a \$4.5 billion budget.

I can't help but wonder what changes are in store for our university. Technology will continue to change the way we deliver education. CU offers more than 45 degree programs online, and online enrollments grew from 30,000 to 56,000 in a decade. That could jump

significantly. We recently launched an engineering master's degree delivered entirely by Massive Open Online Courses (MOOC), which has the capacity to reach tens of thousands. MOOCs didn't exist at CU a decade ago; now we have more than 2 million enrollments in 30 courses, and offer them for credit, which is a revenue producer.

The bachelor's degree may be supplanted in the future by a series of peer certificates matched to societal and industry needs. Competency-based education will increasingly allow students to demonstrate their knowledge and test out of courses.

I believe the trend toward more STEM degrees will accelerate dramatically, and it should to meet the needs of an increasingly technological society.

Demographics and economics will have a big impact. A recent study shows that in 20 years, half the population of the country will live in eight states, including Colorado. This will likely lead to increasing consolidation of educational institutions and the very real possibility that some will close (but no CU campuses).

Whatever the changes, one thing will remain the same. I have every confidence the CU of the future will be as great as the university that has served Colorado and our nation so exceptionally for the past 142 years.

Illustration by Melinda Josie



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Sports

News FALL 2018

Engineering a Better Football Helmet

A CU BOULDER ALUMNUS PUTS ON HIS THINKING CAP

YOU COULD SAY **CHRIS YAKACKI** is making serious headway in the effort to develop a safer football helmet.

The CU Boulder alumnus, now a CU Denver mechanical engineering professor, is developing and testing a new kind of helmet padding made of a class of elastic materials called liquid crystal elastomers (LCEs).

Yakacki (MechEngr, MS'04; PhD'07) and colleagues at Impressio Inc., a firm he helped found, believe an LCE-based foam fitted for existing helmet designs will significantly improve energy absorption, lessening the energy transferred to the athlete during a collision.

"It behaves like a natural tissue," Yakacki said. "It's soft, it absorbs a lot of energy and it's directionally dependent. It's kind of like a rope — you pull a rope and it's really strong in one direction, and the other direction it's soft."

The helmet is top of mind in discussions about how to minimize football-related brain injuries, which can compound over time with devastating effects.

Yakacki originally thought LCEs, which aren't yet used

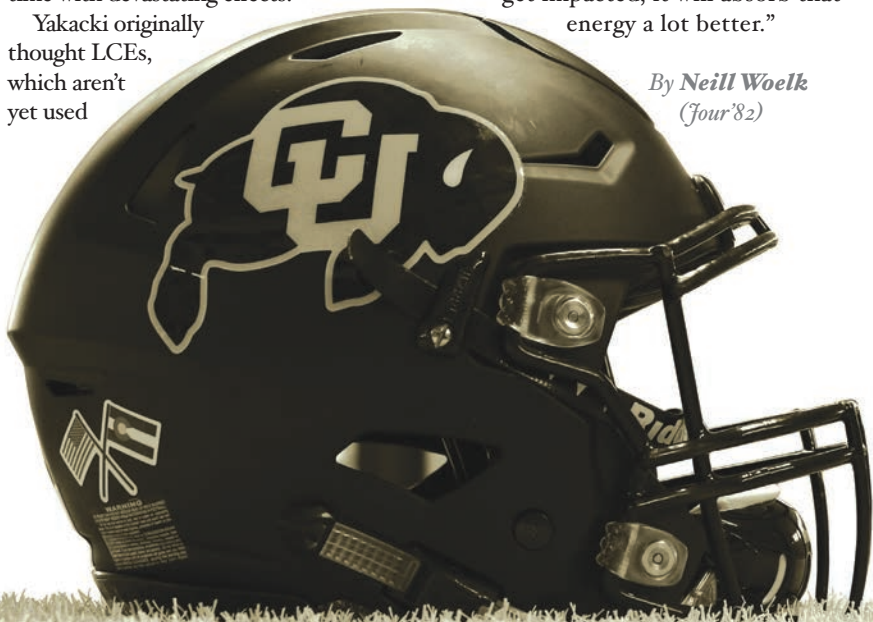
in any products, might be a good material for use in knee implants and back repairs — a kind of shock absorber inside the body. When that idea didn't elicit much investor interest, he and Impressio turned their attention to football helmets. The NFL and the State of Colorado are now both supporting the research.

Yakacki regularly confers with CU Boulder Associate Athletic Trainer Adam Holliday and team physician Dr. Sourav Poddar. Impressio hopes to have a product ready for testing in actual helmets this football season.

If the new technology proves effective, Yakacki can imagine the helmets being used by other athletes, such as skiers, and perhaps by soldiers also.

"Our goal is to put [the LCE foam] in the helmet and they won't even notice we did anything different," Yakacki said. "[Players] are going to put it on and, if anything, it will feel a little more comfortable because it's softer. But the difference will be when you get impacted, it will absorb that energy a lot better."

By **Neill Woelk**
(Four'82)



BUFFS BITS Women's golfer **Brittany Fan** (Advert'18) graduated with a career stroke average of 74.24, the best in CU history. Men's golfer **Yannick Paul** (Mgmt'18) was CU's team leader in stroke average, at 70.24. ... Former Kansas State women's tennis head coach Danielle Steinberg joined CU as head coach. She takes over for Nicole Kenneally, who retired after 19 seasons. ... **Bruce Cranmer** (Engl'73) retired in July after 18 seasons as CU's head Nordic ski coach. He coached 12 skiers to individual NCAA Championships and helped lead the Buffs to four team NCAA titles. Former assistant Nordic coach **Jana Weinberger** (IntlAF'06) succeeds him. ... During the 2018 NBA Draft in June, **George King** (Soc'18) was selected by the Phoenix Suns in the second round with the 59th overall pick. He is Colorado's fifth NBA draft pick in eight years.

FOLSOM'S 500TH GAME

CU football's Nov. 17 matchup versus the Utah Utes will mark the 500th game at Folsom Field. In honor of the six home games on this season's schedule, we celebrate here six notable past Buffs victories at Folsom.

'61 Colorado 20, Kansas 19: The Buffs overcame a 19-0 deficit to achieve what was then the school's biggest comeback. CU went on to win its first Big 8 title.

'70 Colorado 41, Penn State 13: CU ended the No. 4-ranked Nittany Lions' 31-game unbeaten streak. The win landed linebacker **Phil Irwin** (Acct'71) on the cover of *Sports Illustrated*.

'86 Colorado 20, Nebraska 10: Marking a turn toward renewed national prominence, the Buffs defeated No. 3-ranked Nebraska for the first time since 1967.

'89 Colorado 27, Nebraska 21: No. 2 CU defeated No. 3 Nebraska — both undefeated — in a thrilling game that sent the Buffs to the Orange Bowl to play for the national title.

'94 Colorado 41, Iowa State 20: Eventual Heisman Trophy winner **Rashaan Salaam** (Soc ex'95) cruised past the 2,000-yards-rushing mark with a 67-yard touchdown run.

'01 Colorado 62, Nebraska 36: CU scored the most points ever against a Husker defense at the time in this win over No. 2 Nebraska, undefeated until then. It shocked the college football world.

Would you have picked other games? Email us at editor@colorado.edu.

Photos courtesy CU Athletics

Ask about the
Coloradan Gift Fund



STATS

ONE

New name for Coors Events Center: CU Events Center.

28

Years the arena had Coors in its name.

\$5M

Coors Foundation gift to CU, leading to the name "Coors Events Center."

1977

Groundbreaking.

\$3

Cost of student tickets for men's basketball games during the first season, in 1979.

1989

First sell-out crowd, for CU Women's NCAA Tournament game versus UNLV.

2016

Year the Dalai Lama spoke in the building.

**ELDER STATESMAN**

Australian *James Stefanou* (Jour'21), a 31-year-old former soccer pro who is the Buffs' star placekicker, is the oldest active player in big-time college football. This interview took place in July, during the World Cup.

Do your teammates tease you?

Not anymore. All the seniors from last year left.

You made nearly 80 percent of your field goal attempts last year. A hundred percent of your extra point tries. You won the most outstanding freshman award. Seems like maturity has helped.

I don't know if I would have done that well coming in at 19. It was good fun. That was the main thing.

What are some of the ways that being older helps?

Experiencing pressure before in life. Not just on the sports field, but in working life.

What were some highlights of your soccer career?

I played Under-19s for the Australian schoolboys team. We crossed the ditch and beat the Kiwis, which was good for us. I played very briefly on a pro level.

Have you been watching the World Cup?

I have — I'm missing Brazil vs. Belgium now. Thanks for that.

Sorry.

That's alright.

Australia was in it for a brief time...

We gave it a crack. Played with a lot of heart, but just fell short.

How did you decide you were going to get into U.S. football?

There's an academy back in Melbourne called Prokick Australia. They scout you and teach you how to kick, mostly punting. Nathan Chapman, who was on the Green Bay Packers — he's taken the reins, and he's working with John Smith. He kicked in Canada and was on the Patriots. They do a lot of scouting, communicating with colleges over here. Johnny kept calling me every week or two saying, 'You gotta come down.' I ended up committing to it full time at about 29. Then Colorado said they were interested.

Your goal going into that camp was...

In the beginning, it was 'Let's just have some fun while playing soccer.' I was working as well, and I was making pretty good coin. As I got older, I saw it more as an opportunity to have another crack at playing

pro sport. Then it was, like, 'Yep, let's go to the U.S. Let's see where this goes.'

Did any of the other guys you met at the camp also come to U.S. colleges?

I've just had four mates leave this morning. They came to visit me for the July Fourth week, or Fourth of July, I should say. One is a punter at UConn, one's at Berkeley. One's at Toledo. One's at Weber State.

Talk to us about connecting with CU.

I was talking to a few other schools. Hawaii was very interested. Maryland. The Longhorns, for a brief moment. Houston... I had a chat with [CU] Coach Mac, and I just felt it was real genuine. It was a different kind of phone call than I had from other schools. I wasn't wrong — the guys here really care about their athletes, about being students first and athletes second and actually developing better men.

Talk to us about the main challenges in learning to kick a football for a person who's already skilled at soccer.

The main obstacle is having people trying to block you with their hands.

Have you been tackled yet?

We tried to run a fake play against UCLA and they were onto me pretty quickly. I dropped the ball, which wasn't my

proudest moment, and I got crunched.

How bad was the tackle?

I've still got a scar on my arm. I can say I played football now.

Have you made a tackle yet?

No. That'd be pretty fun.

You got married before you came here. Do the guys come to you for relationship advice?

They don't want to get married yet.

You haven't attended an NFL game yet, but you have played in an NFL stadium.

Yeah, Mile High. First game I'd ever been to — then I had to run on and kick and it was like, 'Oh, I'm part of this. Let's go, let's do it.'

Any thoughts about life after CU?

I try not to focus on it too much. In terms of football, I'd love to play in the league.

The NFL?

That's my aim. Hopefully I have another good year and someone knocks on the door. But I'm happy to be at CU for as long as they'll have me. I love it here.

Interview by Eric Gershon. Condensed and edited.

PROTECT YOUR TEAM

The **responsibility** to maintain an athletics program that operates within **compliance** of all **NCAA, Pac-12, and University regulations** does not fall solely on **CU** and its **leadership**, it is also the responsibility of **every Buffalo supporter**.

Did you know that CU is held accountable for the conduct and actions of its athletics representatives and all organizations that promote the institution's athletic programs? If a violation of NCAA rules occurs, even unintentionally, it may jeopardize a prospect's or current student-athlete's eligibility.

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OCT. 6 ARIZONA STATE
FAMILY WEEKEND

OCT. 27 OREGON STATE
HOMECOMING

NOV. 10 WASHINGTON STATE
MILITARY APPRECIATION

NOV. 17 UTAH
SENIOR DAY

Notes CLASS

50s, 60s & 70s FALL 2018



The usual ho-hum of daily commuting took a fun turn during the annual Tube to Work Day on Boulder Creek. This year's July 11 event caused a splashy, wacky traffic jam of inner tubers dressed in costumes.

'54 For **Richard Knowlton** (Econ, Geog) and **Nancy Knowlton** (A&S'57), Alzheimer's hits close to home. Dick is in the late stages of the disease, writes Nancy. To help bolster the search for a cure, the couple do-

nated \$500,000 to the Colorado Chapter of the Alzheimer's Association. Before retiring, Dick was the CEO of Hormel Foods Corporation, where he had worked for nearly 40 years.

'55 **Graydon "Dee" Hubbard's** (Acct) novel *At the Altars of Money* was the No. 1 best seller on Amazon related to wealth management.

The book captures the American ethos about money, and scripts the financial meltdown of 2008. "That's gotta be a first for an expat 30-year Colorado CPA gone rogue and turned novelist," he writes. Dee and wife Bonnie live in St. George, Utah.

'58 **Thomas Richard** (Econ) and **Ann O'Malley Spoor** (CommDisor) celebrated

their 60th anniversary on July 5. The couple writes that they still attend many CU football and basketball games, and look forward to returning to Boulder every few years to revel in the majesty of the Flatirons. "Go Buffs! Thank you forever for our cherished time there," they write.

'62 After 40 years of research, **Jean-Paul Valette** (PhDEcon) and **Rebecca Loose Valette** (PhDFren'63) published the book *Navajo Weavings with Ceremonial Themes: A Historical Overview of a Secular Art Form*. Rebecca's parents were introduced to Navajo rugs by their neighbor, famed archeologist **Earl Morris** (Psych1914; MA1916). "Their love of these beautiful weavings was passed on to me, and then also to my husband," writes Rebecca. In the 1970s, the couple acquired a Navajo blanket and began investigating its history and origin. Over the next four decades, they assembled a collection of more than 100 ceremonial-themed textiles, published several articles in *American Indian Art Magazine* and curated two museum exhibits of Yeibichai weavings.

'64 On June 16, **Herb Davis** (PhDPhys) and wife Donne celebrated their 50th wedding anniversary in a not-so-ideal place: The emergency room. "ER or no ER, it's still a joy to be together and in love after all these

years," writes Herb, who was admitted for a flare up of his chronic obstructive pulmonary disease.

'65 For more than 45 years, **Douglas Kimmel** (Psych) has been a champion for the LGBTQ community. He received a lifetime achievement award from political advocacy nonprofit EqualityMaine for his distinguished service as a psychologist working with the LGBTQ community. Doug lives with his husband in Hancock, Maine, where they were legally married in 2013, on their 44th anniversary. In 1969, the couple had a wedding ceremony in Boulder at the United Protestant Center.

'66 **Fran Yardley** (Thtr) published the book, *Finding True North: A History of One Small Corner of the Adirondacks*. It outlines Fran's journey with her late husband, Jay Yardley, as they revived the historic and long-abandoned Bartlett Carry Club in the Adirondacks. In 1999, Fran co-founded Creative Healing Connections, a nonprofit organization offering

retreats for women veterans and women with cancer and chronic illness. Originally from Buffalo, she now lives in upstate New York on Middle Saranac Lake with her husband, Burdette Parks, and their dog, Merlin.

'70 Some might say that **Steve Frenzl** (Mktg) worked an "odd" job while attending CU. In the late 1960s, he worked as an apprentice at Boulder's Howe Mortuary. A retired marketing manager, Steve recently published a two-volume fictionalized memoir of his days (and nights) working at the mortuary, *Coffee & Donuts with the Dearly Departed*. In addition to his book, he published the *Life-Alone Planner*, a free, digital workbook to help survivors prepare for life without their loved ones. Visit his blog at coffeeanddonuts.biz.

N. Stephen Kane (PhDHist) published his new book, *Selling Reagan's Foreign Policy: Going Public vs. Executive Bargaining* in May 2018. Stephen is a former U.S. State Department officer and American University professor. He holds a B.A.

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WHEN EIGHT CU ALUMS GATHERED IN SIENA, ITALY, THIS SUMMER, THEY HAD A LOT OF CATCHING UP TO DO: IT HAD BEEN 45 YEARS SINCE THEY'D STUDIED ABROAD TOGETHER IN 1973. **FRANK CEFALI** (GER'75) DESCRIBED THE TRIP AS "A REJUVENATION OF MIND AND SOUL."

and a M.A. from Temple University in Philadelphia and currently lives in Silver Spring, Md.

'72 Since leaving Boulder, **Cathy Crosby** (MPhil) writes that her professional career has included working at the Los Angeles Crime Lab as a senior criminalist and as a chemistry teacher at Santa Monica College. In 2015, she published the book *A Good Catholic Girl: Pro-choice IS Pro-life*. She teaches science to her granddaughters and other little ones at Hidden Gems, her daughter's pre-K school in L.A.

'75 When eight CU alums met up in Siena, Italy, this summer, they had a lot of catching up to do. It had been 45 years since they'd studied abroad together in 1973. **Frank Cefali** (Ger) described the trip as "a rejuvenation of mind and soul." The group revisited the Villa di

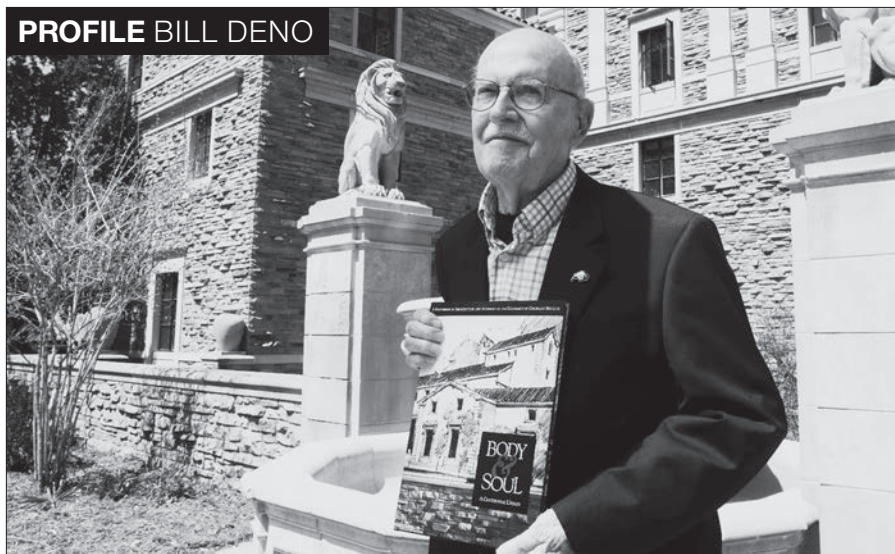
Geggiano, a small estate outside of Siena where their Italian professor, Bianchi Bandinelli, had hosted a farewell *pranzo* (lunch) in 1973. "We were grateful and awed that we could repeat that experience in his honor 45 years later," said **Mary Bellotti** (Jour'74). "This reunion was a gift of a lifetime. My only regret is that we did not do it sooner," said **Susan Levitt Given** (Bio'75). Other attendees included **Elaine Catalano** (Ital'74), **Jim Hagerty** (Geol'75), **Joanne Hindlemann Berger** (Ital'74; MDes'82) and **Annette Bowman Amendola** (PE'73) in memory of husband **Gary Amendola** (Hist'73), who died Dec. 11, 2017.

'78 Susan Cooke Barfield (MEdu), professor emerita at Montana State University Billings, has dedicated her life to advocating for and educating the public about international minorities. A previous Fulbright

Scholar in Chile and Slovakia, Susan is working with three Mapuche elders in rural Patagonia, Chile, to create a trilingual (English, Spanish, Mapundungun) book based on a Mapuche folktale. The book, which will be illustrated by Mapuche students, is supported by a National Geographic Society Explorer Grant. In fall 2018, Susan will travel to the University of Vilnius in Lithuania to work as a Fulbright Specialist.

'79 Carolyn Stefano (Hist), president of the College of Saint Rose in New York, won a Helen Gurley Brown Genius Grant, and Saint Rose was invited to join the BOLD Women's Leadership Network by the Pussycat Foundation. The foundation provides a \$100,000 grant to Saint Rose's President's Fund and \$1 million to fund a program to benefit women student leaders at the college.

PROFILE BILL DENO



KLAUDER'S CHAMPION

IN 1918, CHARLES Z. Klauder wanted to tear down Old Main. It didn't harmonize with the new style the Philadelphia architect envisioned for CU's campus.

The university's first building survived, of course, and years later, in the 1980s, **Bill Deno** (Arch'72; MA'73) oversaw a top-to-bottom renovation that rotated Old Main's chapel a full 90 degrees.

Deno, who retired as CU Boulder's campus architect in 2002, forgives Klauder his readiness to demolish the cherished landmark and, truthfully, never really held it against him: Klauder's subsequent work was too good.

"CU Boulder from many sectors has been called the most beautiful public university in the United States, bar none," said Deno, 90, who began his association with CU Boulder in the late 1960s, as a 30-something undergraduate. Klauder — the most influential architect in CU Boulder's history — and his work star in Deno's 1994 book *Body and Soul* and in the new Centennial edition he self-published this year.

Urged by CU President George Norlin, CU hired Klauder's firm in 1918 to expand and aggrandize what then was a modest campus. Between then and 1938, when Klauder died, he designed 15 buildings in a distinctive style that defines CU Boulder still — textured local sandstone facing, reddish clay tile roofs and limestone trim. Deno calls it "Tuscan vernacular," a reference to the Italian source of Klauder's inspiration.

As campus architect in the 1990s, Deno encouraged firms designing major new buildings to adhere to rudiments of this style, even when using different materials.

If constraints sometimes led to buildings at odds with Tuscan vernacular, the departures sufficiently synchronize with CU Boulder's dominant aesthetic to preserve it, he said: "This campus has continued as no other one has done to commit to a style."

After high school, just after World War II, Deno began pursuing his boyhood dream of becoming an architect. Initially, he attended a two-year college in Los Angeles, learning technical illustration and alphabetic graphics. This led to work with a Seattle firm that sold neon sign advertising.

After assignments around the West, he accepted a transfer to Colorado, in 1960. Already married, he began taking classes at what today is CU Denver, while working full time.

In 1969, Deno enrolled at CU Boulder, earning two architecture degrees. He joined CU's planning office as a student, and assumed campus architect duties in 1983.

ITALIAN INSPIRATION

Deno thinks of the campus as an exquisite park, and visits often. Sometimes he leads tours in a motorized cart.

His dream tourist is Charles Klauder. Even if CU hasn't always lived up to his vision, Deno said, "It would be great fun."

Body & Soul: A Partnership of Architecture and Academics at the University of Colorado Boulder is available at the CU Book Store.

By Eric Gershon

Notes CLASS

80s & 90s FALL 2018



The usual ho-hum of daily commuting took a fun turn during the annual Tube to Work Day on Boulder Creek. This year's July 11 event caused a splashy, wacky traffic jam of inner tubers dressed in costumes.

'80 Boulder-based author **Phyllis J. Perry** (PhDEdu) has written more than 90 books and she's still going strong. In 2017, she received the Lifetime Achievement Award from the Colorado Authors' League. She has four books that she plans to publish this year: *Missing Bones* in June; *Buddies, Bullies and Baseball* and *All About Julia Morgan* in August; and *It Happened in Rocky Mountain National Park* in November.

'84 For 50 years, **Geary Larrick**

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(DMus) has been writing citations in *The Music Index*. He wrote a book review of James Strain's new *Percussion Dictionary* in the Spring 2018 issue of the *National Association of College Wind and Percussion Instructors (NACWPI) Journal*. Geary, who is a retired music professor, has written for the *NACWPI Journal* since 1984. He currently resides in Stevens Point, Wis.

Tracy Lehr (Jour) received the California State Capitol "Woman of the Year" award for her coverage of California's devastating Thomas Fire and Montecito mudslides on Santa Barbara's ABC-affiliated TV station KEYT and social media.

Tracy, who started her journalism career in Vail, has won two Murrow Awards and received three regional Emmy nominations.

"I've traded the Rockies for the Cascades, of which I have a beautiful view during the few weeks per year when the weather clears!" writes **Noel Ludwig** (Geol), forest watershed program manager for the Mount Baker-Snoqualmie National Forest in Washington.

Chett Rubenstein (Acct) left Hewlett Packard Enterprise to join Cisco as director of Cloud Services Incubation. In this role, Chett is utilizing his decades of experience in web-based software and enterprise

cloud services to help Cisco expand its enterprise. "I've come a long way since I wrote software on punch cards at CU in the early '80s!" said Chet, who wrote the first portfolio management system ever used to manage the CU Endowment Fund back in 1983.

'85 Cyndi Boman Thompson (Mktg) writes that she is now vice president at *Cinder*, a business journal in Portland, Ore. Cyndi, who is a licensed financial planner, joined *Cinder* in 2015. She currently serves on the board of directors for the Financial Planning Association of Oregon and Washington.

'86 Rob Stites (MBaSci) presented a workshop titled "The Power of Peer Review" at the Capability Counts 2018 International Conference in Reston, Va., May 1. He published a book, which he started as a CU graduate student, titled *Organized Proverbs: Contrasts in Wisdom from the Holy Bible*. Rob works for CACI, a multinational professional services and information technology company, where he is a project manager for quality assurance.

Timothy S. Tomasik (Advert) was named a fellow in the American College of Trial Lawyers. President-elect of the Illinois chapter of the American Board of Trial Advocates and a member of the International Society of Barristers, he now serves on its board of governors. Away from work, he has served

as board president for the foundation Lawyers Lend-A-Hand to Youth, which provides grants to mentorship programs for Chicago's underprivileged youth. He resides in Western Springs, Ill, with wife Jennifer and their two daughters, McKenzie and Maeve.

'88 Todd Cason (Hist; Law'91) graduated from medical school in May 2018 from Midwestern University in Chicago. Next stop: A pediatrics residency in Brooklyn, N.Y.

'89 After 19 years of full-time family life, **Michelle DuPuis Bradford** (Soc), a former member of the CU Boulder Alumni Association staff, has joined Chick-fil-A in Atlanta as a senior supply chain administrator. Michelle and her husband, **Reed Bradford** (ArchEngr'86), have two sons and are celebrating 31 years of marriage.

Tracie Olson Stephens (Mktg) writes she received a national rating as a USA Gymnastics judge. Outside of gymnastics, Tracie works as a contracts analyst for a government contractor.

She previously spent more than 18 years as a buyer at various Colorado-based biotech companies and organizations, including the University Corporation for Atmospheric Research and Seagate Technology.

'90 Lisa M. Wolfe (Psych), a professor at Oklahoma City University, received the honors program's Distinguished Faculty Award and also the University Outstanding Faculty Award. Her Bible study DVDs, "Uppity Women of the Bible," and companion commentary, "Ruth, Esther, Song of Songs and Judith," were published in 2010 and 2011, respectively.

'91 Herb Ilisaurri Schroeder (PhDCivEngr) received the George Norlin Award from CU's Alumni Association for his work as vice provost for the Alaska Native Science and Engineering Program at the University of Alaska Anchorage. The program, which he founded in 1995, works to eliminate biases against Alaska Native students and empower students to succeed in STEM disciplines.

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For the last four years, **Philip Staehelin** (Econ, IntlAf) has had his eyes on the prize. He's been designing 3D printed eyeglasses to help the more than 1 billion people in developing countries who struggle with vision impairments. He is testing 50 prototype glasses this summer before moving them to manufacturing.

'94 Chris Calvert (BioChem) co-founded the cybersecurity firm Respond Software, which utilizes automated intelligence on cybersecurity teams. After graduating from CU, Chris attended

the Defense Language Institute, a United States Department of Defense educational and research institute in Monterey, Calif. After serving in the Army for 10 years, he became the head of IBM's security operation center (SOC), among other positions, and helped build similar units for Walmart, Vodafone, Shell Oil, Sony and Apple.

'95 Keith Schroeder (Kines) and his family returned to their home in Rushville, Ill., in late April after completing a fifth month-long mission trip to Togo, Africa.

Keith, who is a physical therapist, spent three weeks at the Hospital of Hope in Mango teaching anatomy and physiology for nursing students. His wife Jennifer, who is a physician, and their two daughters, Olivia and Emma, worked at Hospital Baptiste Biblique in Adeta, Togo. "We always enjoy our trips to Togo, seeing old friends, making new friends, and working with the great people of Togo," said Keith.

'96 Lija Fisher (Thtr) published her first novel, *The Cryptid Catcher*. The children's adventure story tells of a boy in search of the Loch Ness Monster and Bigfoot. Lija, who was born in Istanbul, Turkey, became fascinated with cryptozoology after reading about well-organized hunting parties that tracked cryptids, or legendary creatures, in the wilderness. The next book in the series, *The Cryptid Keeper*, will be published in 2019.

'98 Tim Morshead (Arch) was named a partner for San Francisco-based architecture firm WRNS Studio. Tim's portfolio includes an expansion of Microsoft's Silicon Valley campus and the Betty Irene Moore School of Nursing at UC Davis. The promotion marks a new era of leadership within the firm, known for architecture that values beauty and sustainability, Tim writes. WRNS serves clients out of offices in San Francisco, Seattle, Honolulu and New York.

"I'VE TRADED THE ROCKIES FOR THE CASCADES, OF WHICH I HAVE A BEAUTIFUL VIEW DURING THE FEW WEEKS PER YEAR WHEN THE WEATHER CLEARS!" WRITES **NOEL LUDWIG** (GEOL'84), FOREST WATERSHED PROGRAM MANAGER FOR THE MOUNT BAKER-SNOQUALMIE NATIONAL FOREST IN WASHINGTON.

PROFILE CHRISTINE AHN



In May 2015, Christine Ahn and several other women peacefully walked across the DMZ.



PEACE ACTIVIST

WHEN THE DAY CAME, **Christine Ahn** (PolSci'98) grappled with mixed emotions.

In May 2015, she traveled to the demilitarized zone (DMZ) separating North and South Korea for a peace walk organized by Women Cross DMZ, a group she founded to foster peace on the Korean Peninsula.

Ahn, an American citizen who was born in South Korea and lives in Hawaii, and 30 other women activists planned to cross the two-mile-wide zone on foot to call for a final end to the Korean War. Fighting stopped in 1953, but the countries never signed a formal peace agreement.

THE COLD WAR IS STILL RAGING.

Upon arrival, she learned of a possible acid attack by protestors.

"I recall this sinking feeling of being so excited to see my three-year-old daughter and husband, who had traveled from Honolulu to meet me at the other side of the DMZ, but being terrified that they might be the victim of such an attack," she said.

Ahn decided to walk anyway — at the front of the line.

Feminist icon Gloria Steinem and Nobel Peace Prize Laureate Mairead Maguire of Northern Ireland marched with her.

No one threw acid. The peace walkers punctuated their symbolic stroll by rallying with thousands of other supporters,

then convened in Seoul for a women's peace symposium.

With no formal Korean peace agreement signed yet, Ahn forges on, with Maguire and many others at her side.

"[Her] work of bringing Korean women [from both] North and South and international women together for dialogue has shown the importance of women and civil community in peace-making," Maguire told the *Coloradan*.

Encouragement helps. After the walk, Ahn faced public accusations of being under North Korean government influence. South Korea placed her on a blacklist — via orders of then-president Park Geun-hye, who is now imprisoned for political corruption — prohibiting her from traveling to her native country.

"The Cold War is still raging on in South Korea," said Ahn, who frequently comments on Korean affairs for the news media.

It was a busy summer for her on that front, given President Trump's controversial summit with North Korean leader Kim Jong-un.

She favorably viewed the June summit, arguing that peace between the U.S. and North Korea is vital for inter-Korean peace.

"For true peace and understanding to take place, it will take people-to-people engagement, from civil society to business," she said. "That is my hope and what I have been long working for."

By **Christie Sounart** (Jour'12)

Notes CLASS

00s & 10s FALL 2018



The ho-hum of daily commuting took a fun turn during Tube to Work Day, July 11, on Boulder Creek.

'00 Jordan Lipp (Econ, PolSci) joined the law firm Childs McCune LLC as a managing member. He writes that he will continue his practice in outdoor recreation, ski law and commercial litigation and as an adjunct law professor at the University of Denver Sturm College of Law. He is author of *Product Liability Law & Procedure in Colorado, First Edition* (CBA-CLE Books 2015).

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'01 Andrew Cary (Bus, Hist) writes that he is now a partner at Select Sales Agency, which specializes in the sale of horses. He co-founded the firm in 2009. For the past 10 years, he has sold horses that have run in the Kentucky Derby and at Royal Ascot in England. The company's most famous horse, Tepin, won the 2015 Breeders' Cup Mile. "One day I hope to raise thoroughbreds in Colorado, where they can receive superior high-altitude training; it works for the U.S. Olympic team!" he writes.

'02 Juli Rasmussen (Jour) and **Aaron Clymer** (MechEngr'12) won the software competition Go Code Colorado. They were the first team from the Western Slope to win in the competition's five-year history. The team, which included two other members, won \$15,000.

'03 Jennifer McNabb (PhDHist) was named chief reader for the Advanced Placement exam in European history. Each June, AP teachers and college faculty members from

around the world gather to evaluate and score the exams' free-response sections. Jennifer is responsible for over-seeing the scoring of more than 100,000 tests. Additionally, she helps develop tasks and questions for future exams.

'05 Minnesota Lawyer Magazine named **Patrick Fenlon** (Psych) an "Up & Coming Attorney." He specializes in business litigation, and was recognized for his "professional achievements, leadership and community involvement throughout his first 10 years of practice," according to the magazine. In his spare time, Patrick serves on the board of directors of Neighborhood Roots, a Minneapolis-based organization supporting farmers markets and small businesses.

'06 This year, Adam Creapo (Jour; MEdu'13) completed his eighth year of teaching, the past three in Denver Public Schools. Adam is a senior team lead and English language development specialist. He spends half his time coaching teachers and half in the classroom. He lives in Denver with wife Amanda and their 5-year-old son, Colt.

Amanda Menihan (MEdu) won the Presidential Award for Excellence in Mathematics and Science Teaching from the National Science Foundation and the White House Office of Science and Technology Policy. She

SARAH DANSER (EPOBIO'13) PARTICIPATED IN DISCOVERY CHANNEL'S "NAKED AND AFRAID XL" FOR THE SECOND TIME.

also received a \$10,000 NSF award. Amanda teaches seventh-grade math at Altona Middle School in Longmont, Colo., where she resides with her husband and two children.

'07 Natalie Koster (MAGerm) wants to bring the world to CU. The associate director of international recruitment and outreach at CU won the Robert L. Stearns Award from the CU Boulder Alumni Association for her work. She is also a tour leader for the Council of International Schools (CIS) and leads dozens of recruitment tours around the world.

'08 Carlin Karr (Comm) drinks wine for a living: She's wine director for the

Boulder restaurants Frasca Food and Wine and Pizzeria Locale and Denver restaurant Tavernetta. She was named one of this year's "Sommeliers of the Year" by *Food & Wine* magazine, and was featured in an article titled "Liquid Diet: Sommelier Carlin Karr Crushes LaCroix and Tastes 50 Wines Before Dinner Service." Carlin lives in Boulder with her husband, Adam, and their dog, Coche.

'09 Paul Thompson (MBA) opened the Red Rocks Beer Garden in downtown Morrison, Colo. He writes that his philosophy on running a beer garden is simple: Good beer, fast service and easy access. He is eager to host CU watch parties for alums in the area.

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CARLIN KARR (COMM'08) DRINKS WINE FOR A LIVING: SHE'S WINE DIRECTOR FOR THE BOULDER RESTAURANTS FRASCA FOOD AND WINE AND PIZZERIA LOCALE AND DENVER RESTAURANT TAVERNETTA. SHE WAS NAMED ONE OF THIS YEAR'S "SOMMELIERS OF THE YEAR" BY FOOD & WINE MAGAZINE.

'10 In June, **Stu Gillespie** (Law) became the second person to summit Lookout Mountain in Golden, Colo., in a sport called "stand up spike" (SUS), which combines cross-country skiing and endurance long boarding. Stu is a staff attorney for the environmental advocacy organization EarthJustice, where he specializes in protecting public lands and wildlife. Stu was formerly a professional cyclist in Girona, Spain, from 2004 to 2006.

When **Curt Hammerly** (EnvDes) isn't working as technology manager for CU's environmental design program, he's making art, usually ceramics. Curt makes mugs, pots, planters and accessories, as well as posters. He sells his work on Etsy. He started making art after he broke his neck and needed a creative outlet.

'11 **Molly McShea** (Fin) and her sister founded Livalit Travel in 2017. The firm

helps businesses design custom travel experiences — from hikes in Sri Lanka to cheese tours in Holland and Belgium — as a way of building community among their customers.

Mark Simmons (Econ) and brother Chris are embarking on a six-month road trip to the southern tip of Argentina to raise money and awareness for the Range of Motion Project (ROMP), a Denver-based organization that provides prosthetics for amputees from underserved populations in the U.S. and Latin America. Through their clinics, ROMP delivers a prosthetic for just over \$1,000.

'13 **Sarah Danser** (EPOBio) participated in her second survival challenge on Discovery Channel's "Naked and Afraid XL." She was dropped in South Africa's Selati River Basin, near Kruger National Park. The show premiered May 6 and ran for 12 weeks. For her first challenge, she success-

fully survived 21 days on a desert island after being dropped 12 miles from the shoreline on a life raft.

Michelle Newhart (PhDSoc) and her husband have published a book titled *The Medicalization of Marijuana: Legitimacy, Stigma, and the Patient Experience*. Michelle teaches sociology and works as an instructional designer at Mt. San Antonio College in California.

'14 **Sara Staley** (PhDEdu'14) and **Bethy Leonardi** (PhDEdu'14) won the Kalpana Chawla Award from the CU Boulder Alumni Association for their work around topics of gender and sexual diversity in schools. The two research associates and instructors in CU's School of Education founded A Queer Endeavor, an initiative providing educators with guidance, vocabulary and tools for developing school cultures that are safe, supportive and accepting of LGBTQ youth.

PROFILE HAYDEN DANSKY



FOOD FOR THOUGHT
To **HAYDEN DANSKY** (EvoBio'11), it didn't make sense: Every year, nearly 40 percent of all food grown in the United

States was ending up in landfills as tens of millions of U.S. residents lived in food-insecure households.

"I wanted to do something about that," said Dansky, who grew up in North Carolina and moved to Boulder in 2008 to attend CU.

Today Dansky, 28, is executive director and co-founder of Boulder Food Rescue — the first in a series of affiliated food rescue organizations that have sprouted in cities around the country.

The organization's innovative model takes food accessibility to a new level by transporting soon-to-be wasted food directly from local grocery stores straight to doorsteps. With the help of hundreds of volunteers and BFR's eight-person staff, food is picked up from Boulder-area grocery stores 15 times a day, every day of the week, entirely by bicycle.

To date, BFR has delivered more than 2.4 million pounds of food — primarily fruits and vegetables — to food distribution centers and pantries, as well as to low-income housing sites, daycares, elderly homes and preschools. By providing access to food in places where people already gather, the organization removes barriers to access, such as transportation, time restrictions and stigma.

The organization took shape in 2011 after Hayden saw research by **Caleb Phillips** (MCompSci; PhD'12) that concluded enough food is wasted daily in Boulder and Broomfield Counties to feed everyone there who goes hungry.

In partnership with the national food access organization Food Not Bombs, Hayden, Caleb and three others started hosting a free weekly meal outside the Boulder Public Library using food

donated by Ideal Market in North Boulder. They didn't know what to expect for the first meal, and brought enough food to fill 30 stomachs.

Hundreds of hungry people showed up. "I would hear all the time that the meal in the park was the healthiest meal folks ate all week. So we decided to do more," said Dansky, executive director since 2012.

In addition to the weekly meals, the group formed BFR, which today shares its knowledge, resources and real-time data through a website and the Food Rescue Alliance — a BFR-led peer-learning network that connects food rescue organizations across the country. Food rescues can now be found in Denver, Colorado Springs, Fort Collins, Seattle, Jackson Hole, Charlotte and Chicago.

"A lot has been done, but there's still lots to do," said Dansky, who also performs spoken-word poetry around Colorado. "I continue to question why nonprofits are run a certain way and why food systems run in certain ways as well. When I started working on this project, I didn't know how to do anything. That's both the hardest and my favorite part. I get to learn every day."

A central part of BFR's mission is listening to and giving a voice to the people the organization serves, said Dansky.



"You don't know what people need until you really ask. Food is this tool that enables us to have these relationships in order to understand what people really want, and what they really need," said Dansky. "Food connects people."

By **Amanda Clark** (M'jour'19)

In Memoriam

Sally Dickinson Moore (Art'41)
Orrin E. Watson (MechEngr'41)
Wallace A. De Beque (EIEngr'43)
Mary Elliott Skinner (CompSciAp'43)
Jack E. Bridges (EIEngr'45; MS'47)
Herbert V. Cook (Mktg'45)
Charles B. Howard (A&S ex'45)
Betty Muth Schneider (Jour'45)
Margaret Pannell Fleming (A&S'46)
Betty Longley (A&S'46)
Marilyn Johnston Mertz (A&S'46)
Wallace K. Reed (A&S'46)
Howard M. Rupp (PreMed'46; MD'48)
Jack R. Williams (CivEngr'46)
Mildred Baker Leslie (Nurs'47)
Charles F. Baker (MechEngr'48)
Helen Alexander Bell (DistSt'48)
Bob Bown (ChemEngr'48)
Marcia McWilliams Bystrom (A&S'48)
Marilyn Moore Drendel (A&S'48)
Leonard M. Perlmutter (DistSt'48)
Robert J. Weinberg (Mktg'48)
David E. Brackett Jr. (A&S'49)
Ernest E. Faulk (EIEngr'49)
Ernest E. Hampton (DistSt'49)
John Klemenic (ChemEngr'49)
John M. Longway (Fin'49)
Mildred Island Lusky (Nurs'49)
Kenneth C. Rothschofp (Acct'49)
William A. Wills Jr. (Mgmt'49)
Hugh S. Andrew (CivEngr'50)
Leona Bobrecker Cohen (A&S ex'50)
Lewis E. Gary (Mktg'50)
Robert C. Haring (MFin'50)
Chester L. Johnson Jr. (EIEngr'50)
Jack E. London (CivEngr'50)
Elroy F. Reep (CivEngr'50)
Jeanne Cauthen Smith (A&S ex'50)
Noble C. Smith Jr. (EIEngr'50)
Robert W. Tobey (EIEngr, Fin'50)
Dorothy Wolff Vale (Mgmt'50)
James F. Wilson (EIEngr'50)
Ralph W. Ashton (A&S'51; MS'58)
Stephen F. Axtens (CivEngr'51)
Ernest H. Burgeson (Pharm'51)
David A. Charvonias (MechEngr'51)
Martha Fritz Edwards (Edu'51)
Dane Graves (PE'51; MMgmt'57)
Frank Maldonado (PE'51)
Duncan H. Orr (ChemEngr, Mgmt'51)
Edward F. Butala (EIEngr'52)
Nancy J. Hall (A&S'52)
Mary Sharp De Palatis (A&S'52)
Marilyn Baum Reed (A&S'52)
H. T. Sears Jr. (MechEngr'52)
Homer J. Avery (A&S ex'53)
Donal W. Borland (EIEngr'53)
Wayne L. Gardner (Engr ex'53)
Suzanne Ginsburg Adler (A&S ex'53)
Oliver W. Gushee Jr. (DistSt'53)
Stanley G. Huskey (A&S'53)
William F. Jackson (A&S'53)
Margaret Fox Mandel (MedTech'53)
Patricia Wilson Martin (Pharm'53)
Sharlene Stevens McKibben (A&S'53)
Janice P. Rippy (Art'53)
Kent R. Rogers (ArchEngr'53)
Gerald E. Rudolph (A&S'53)
Charles E. Snyder (Engr ex'53)
Katherine Marshall Black (A&S'54)
Nancy Roberts Buice (MPE'54)
Marian Slininger Gibson Gulardo (A&S ex'54)
G. Keith Eberhardt (CivEngr'54)
Donna Greif Hillmar (Edu'54)
Stephen J. Maddock (Geol'54)
Louis M. Perlmutter (Hist'54)
Bernard B. Powell (A&S'54)
Gerald E. Abrahms (Geol'55)
Frederick A. Esgar (Fin'55)
Gene E. Fischer (Law'55)
Richard S. Olinger (Mgmt'55)
William J. Boyle Jr. (EngrPhys, Mktg'56)
Boyd R. Brown (Geol'56)
Bruce R. Johnson (Acct'56)
Mari C. McGowan (MEdu'56)
Joyce Furstman Meyer (A&S'56)
Dorcas M. Murray (Fren'56)
Richard D. Waggoner (MMus'56)
Philip H. Barry (MechEngr'57)
Tracy N. Burt (Fin'57)
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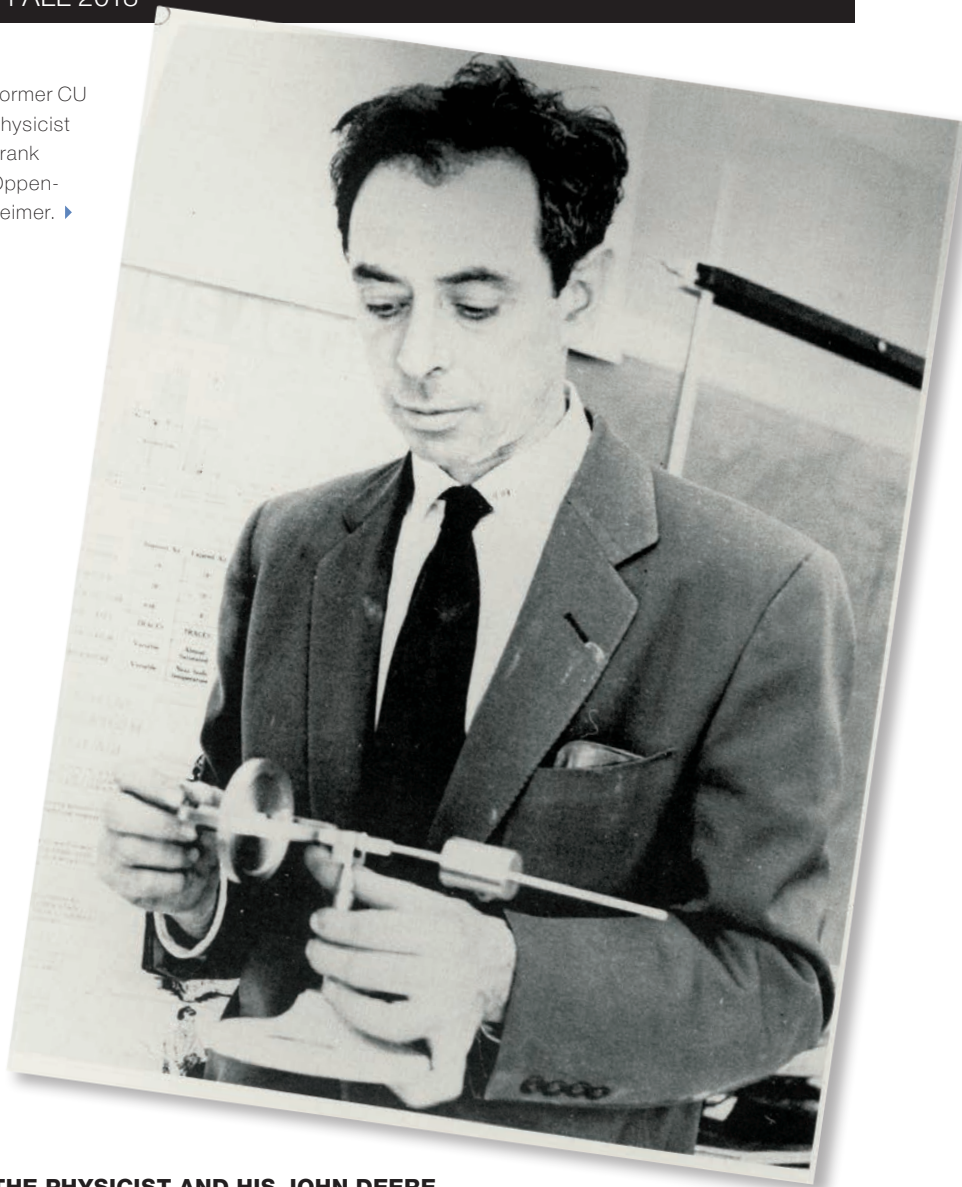
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Letters

FALL 2018

Former CU
physicist
Frank
Oppen-
heimer. ▶



THE PHYSICIST AND HIS JOHN DEERE

PAUL DANISH'S
MEMORIES OF HIS
FRIENDSHIP WITH
FRANK OPPENHEIMER
[SUMMER 2018]
BROUGHT TO MIND
A MEMORY:

As a student in the late 1950s, I accompanied my father to the John Deere dealership belonging to John and Franklin Murphy in Longmont. My father, a Boulder County farmer, had been a customer of the Murphys' dealership since I was a young child. We noticed a load of several farm machines

on a trailer ready to travel to the buyer's property. Quietly, one of the Murphy brothers told us the machines had been purchased by Frank Oppenheimer and his brother Robert for the farm property they had bought near Pagosa Springs.

Shortly after that, Frank Oppenheimer walked past us. I noticed his piercing blue eyes, which seemed to be staring at me. I suspect he was wondering why a girl in her 20s was at a John Deere dealership. I would have wondered why a physicist was buying farm equipment, if Mr. Murphy had not told us a few minutes before.

Irene Eggers
(MusEdu'60)
Wheat Ridge, Colo.

WHAT WORD IS THAT?

Sleighted, slated, sleighed, slighted — what the heck is that word on page 4 [Table of Contents, Summer 2018]? Thanks for giving us many other good words!

Lee Shannon
(MEdu'72)
Denver

Editor's Note: You've caught us inserting an e where none belongs. The word should be slighted, meaning "to treat with humiliating discourtesy." Thanks for reading carefully and for keeping us on our toes.

BIG RED MEMORIES

I enjoyed the recent letters from alumni regarding their memories of past CU games with Nebraska. I have a favorite I'd like to share. Nebraska was not yet the power they became

under Bob Devaney and later Tom Osborne. In fact, we beat them twice during my three years at CU and they weren't even the best team in the conference. We won the conference my senior year and beat the best team, Kansas, 20-19 in the most exciting game I've ever watched at any level.

However, by the time I returned from service as a Marine officer in Vietnam, Nebraska was king of the heap. I attended a game in Boulder easily won by the Cornhuskers in the 1966-67 timeframe. All I recall about the game is they beat us handily. What I have never forgotten, however, was departing Folsom Field among a boisterous but good-hearted crowd of Nebraska fans wearing their red cowboy hats with the white letter N on the front. There was some good-natured ribbing going on with their declaration of victory again over our school, which I was able to bring to a halt by turning and agreeing that they had the best football team, but then calling their attention to what we had: The great snowcapped Rocky Mountains in the background. Knowing that they were heading back to nondescript Nebraska, they had no comeback and were forced to eat humble pie!

Lynn I. Terry (Jour'62)
Sedona, Ariz.

LUCILE

What an inspiring story about **Lucile Berkeley Buchanan Jones** (Ger1918) ["Lucile," pp.

21-24, Summer 2018]. Having been inducted into the CU Heritage Center's gallery of notable alumni the same year as **Ruth Cave Flowers** (A&S'24), I am glad to see Lucile get her overdue recognition. It reminds me of the story about my great-uncle James Herman Banning. For years, aviation historians and his own family thought Banning was the first African American to earn a pilot's license in the United States, in 1926. However, about 10 years ago we all learned that Emory Malick was indeed the first, having earned his in 1912. Of course, the first African American woman to earn a pilot's license was Bessie Coleman, who earned hers in France in 1921. These pioneer pilots are all included in my Oxford University Press online photo essay "Early African American Aviators."

Philip S. Hart (Soc'66)
Los Angeles



F-35s

Enjoyed the story of the two CU grads that fly the F-35. I graduated from CU in 1962 and was the first VP and program manager of the F-35 at Lockheed Martin.

David Wheaton
(AeroEngr'62)
Colleyville, Texas

ABOUT CLASS NOTES

We each receive our own issue of the alumni magazine. My summer issue had Class Notes about **Kim Christiansen** (Jour'84), **Chauncey Billups** (Soc ex'99) and **Hosea Rosenberg** (Engr-Phys'97). The other issue had notes about **Nathan Coats** (Econ, Law'77), **Dave Grusin** (Mus'56) and **Bruce Bartleson** (PhD-Geol'68). We enjoyed all six very much but wonder why there are (at least?) two different versions of the same issue.

Estella Cole (MEdu'80; March'89) and **James Cole** (PhDGeol'77) Boulder

Editor's Note: We produce three editions, differing only in the Class Notes section. Readers receive the version with notes for the decade they graduated and one or more adjacent decades. Class Notes for all years are available to all readers online at colorado.edu/coloradan.



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GETTING SOCIAL



@CUBoulderAlumni: Just, wow. 🌸 (📷 @dirksenphoto)



@CUBoulderAlumni: This view is always better with a friend. 🐕❤️ (📷 @mwlee19)



@JohnBranchNYT: Cool to get hard copy of @CUBoulderAlumni magazine, Coloradan. Thanks, @Gershonicus for the interview. And how about that pic I took of Jesse Wright? #thelastcowboys

LIST OF 10

10 CU STARTUPS

1. Rebound Technologies

Cooling
Kevin Davis
(MMechEngr'12)

2. Pagedip

Digital content creation
Alex Milewski
(MechEngr'13),
Sherisse Hawkins
(MEngr'00)

3. Specdrums

Music
Steven Dourmashkin
(AeroEngr ex'19)

4. Mallinda LLC

Carbon fiber composites
Chris Kaffer (MBA'14),
Philip Taynton
(PhDChem'15)

5. Informu Inc.

Artificial intelligence
Shuliang Mei (Mgmt'17)

6. Agribotix

Precision agriculture
Daniel McKinnon
(Phys'09;
PhDChemEngr'14)

7. OPX Biotechnologies

Biofuels
Michael Lynch
(Chem'17)

8. Inscripta

Gene editing
Andrew Garst
(PhDBioChem'12)

9. ColorLink

Photonics
Gary Sharp
(PhDEngr'92)

10. Shinessy

Vintage clothing
Chris White
(MBus'15),
Jens Nicolaysen
(Mktg'10)

Coloradan

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THEN

JULY 29, 1978

Folsom Field hosts the Eagles. The band opened the show with "Hotel California" and concluded with a four-song encore: "Rocky Mountain Way," "James Dean," "Take It Easy" and "Tequila Sunrise."

Been to a concert at Folsom? Send a memory of your first or favorite to editor@colorado.edu. We'll publish a selection of anecdotes in an upcoming issue.