

Spring 2014

OFF THE GRID

A large, abstract graphic composed of numerous overlapping, black, geometric shapes. These shapes, which include rectangles, triangles, and polygons, are arranged in a complex, layered fashion that creates a sense of depth and movement. The shapes are oriented in various directions, some pointing upwards and others downwards, contributing to a dynamic and somewhat chaotic visual effect. The overall composition is centered on the page and occupies most of the lower two-thirds of the cover.

Behind-the-Scenes Footage

WHILE RESEARCHING STORIES for this issue of *LSA Magazine*, we uncovered amazing complementary film and video footage spanning 75 years and four continents. Every second of it underscores that there is always more to the stories we tell.

Here are some facts behind the footage from three of our stories:



Diary of a Cactus Hunter (p. 10)

FOOTAGE SOURCE: The Bentley Historical Library

The camera that Elzada Clover and Lois Jotter's team used to film their harrowing 1938 trip down the Colorado River cost \$30 and had to be wound up before it was used. To protect the camera from moisture, Clover put it in a bucket and covered it with her hat while "riding the bucking waves."

The film they used is silent, but it's easy to imagine the soundtrack as you watch: the roar of rapids churning, the creak of a boat's tether as it pulls at its moorings, the angry hiss of a frustrated snake.



Toxic Tours and Chimp Lasers (p. 18)

FOOTAGE SOURCE: Caleb Vogt in the Ugandan jungle

LSA student Caleb Vogt used a lightweight GoPro camera to record his chimp research in Uganda. The camera was so light that Vogt often attached it to a mount on his head so that he could use his hands to record measurements.

Because the camera pointed wherever Vogt was looking, the footage has an almost breathless, horror-movie feel in some places. With chimps screaming all around him, Vogt turns his head, searching for the source of the sound. Another shot reveals a closeup of a chimp gnawing on a Colobus monkey's head. It's scary enough that you want to grab a bowl of popcorn and shout, "Look out behind you, Caleb!"



80 Buses (p. 62)

FOOTAGE SOURCE: Logan Chadde on three continents

Logan Chadde ('13) took his camera all over the world — Brazil, China, India, South Africa, and the Philippines — to research sustainable transportation systems with his research partner, Rebecca Guerriero ('13).

Between his shots of bike-filled warehouses and bus stops is footage of the world surrounding these transportation systems, including stunning images of the Great Wall of China and a sunset in Cape Town.

Everywhere, the frame is moving as the camera pans, tilts, and refocuses, almost as if the pair's research about the ideas of movement had infected Chadde's camera.

You can see all of our interactive magazine content, including highlights from these videos and a whole slew of slideshows about Arab Spring protest art (p. 26), hula dancing (p. 35), and a summer camp for orphans in Tanzania (p. 48) at www.lsa.umich.edu.



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The Diary of a Cactus Hunter

U-M botanists Elzada Clover and Lois Jotter risked their lives collecting cacti on the Colorado River. They were also the first women to survive a trip through the Grand Canyon.

by Elizabeth Wason

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Toxic Tours and Chimp Lasers

Follow LSA students as they travel the world, measuring chimps with lasers and digitizing guerrilla radio broadcasts.

by Susan Hutton and Elizabeth Wason

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The Art of the Arab Uprisings

The protests of the Arab Spring gave voice to thousands of artists who filled squares and walls with plays, posters, murals, and—most surprisingly—jokes.

by Brian Short

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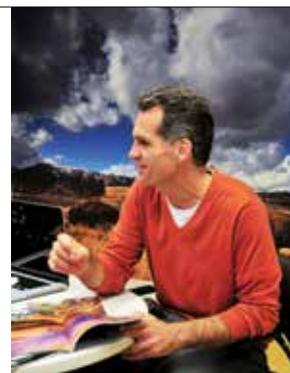
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My Time Off the Grid

THIS ISSUE OF *LSA MAGAZINE* features the theme “off the grid,” with a kaleidoscope of amazing stories involving faculty, students, and alumni. These varied individuals share a determination to reach beyond what is ordinary or familiar.

You will read of research linking Braille and drum kits, of fieldwork tracking remote chimpanzee groups, of a trip around the world to document emerging public transportation systems.

These projects span the globe, and are a reminder of how LSA is itself a global institution, extending far beyond the borders of Ann Arbor.

In what sense is LSA global? Our students hail from more than 75 countries. We have alumni on at least six continents. We send students abroad for coursework, research opportunities, and internships. And of course, as a community of scholars, we strive to understand every aspect of the globe.

This year I have had my own amazing “off the grid” experience, in a metaphorical sense. I stepped aside from my “day job” as a professor — teaching, mentoring students, and conducting research on young children’s language and thought — and have plunged into the altogether different world of academic administration. And what a year it’s been! Some memorable events include:

- The launch of the Victors for Michigan fundraising campaign in November. To date, the College has raised more than half of its \$400 million goal.
- The exciting news that Professor Susan Murphy in the Department of Statistics became LSA’s newest recipient of the MacArthur “genius” award.

- Regental approval of a new biological science building — the College’s first new building for the biological sciences since the construction of the Kraus building in 1915.
- India in the World, the LSA theme semester, filled with coursework, lectures, symposia, and exhibits on Indian art, music, politics, culture, history, and more.
- A Twitter campaign, #BBUM (Being Black at Michigan), launched by the U-M Black Student Union, in which students have shared their experiences of being black on campus.
- A day in January so bitterly cold that the University canceled classes for the first time in 36 years.
- Two LSA students, Meryl Davis and Charlie White, winning Olympic gold in ice dancing.
- Selection of two new leaders at the University: President Mark Schlissel, and Dean Andrew D. Martin!

It is my honor and privilege to welcome Dean Andrew Martin to LSA. Professor Martin is an exceptionally distinguished scholar and award-winning mentor. He comes to us with outstanding leadership experience, having excelled at a range of important administrative roles at Washington University, most recently as vice dean of the School of Law.

Professor Martin has a broad and interdisciplinary background in the liberal arts. The author of numerous scholarly articles, Professor Martin is an expert on judicial decision-making, and has a strong record of awards and federal funding for his research. LSA is a spectacular liberal arts college set within a world-class research university. It is such an inspiring place, and I am confident that it will thrive under Professor Martin’s leadership.

Susan A. Gelman

Heinz Werner Distinguished University Professor
Professor of Psychology
Interim Dean



INSIDE LSA

Susan A. Gelman

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www.lsa.umich.edu



Wherever this symbol appears in the magazine, you can find expanded content on the LSA Today website.



THE ART OF PROTEST

History of Art Professor Chistine Gruber has been cataloging the art of Arab Spring protests from Giza to Gibraltar. Check out our story on her international work (p. 26) and view some of the counterrevolutionary posters and murals in our online slide show.



FROZEN IN TIME

Associate Professor Jeffrey A. Wilson discovered a snake that almost ate a dinosaur—no, seriously—67 million years ago.



LET'S GET DIGITAL

The Nam Center is redefining online education with a Korean studies e-school that expands students' access to scholars and classes.



THE SCIENCE OF BEAUTY

See the best shots from the Department of Ecology and Evolutionary Biology's annual photo contest.

Plus!



Read past issues of LSA Magazine:

www.lsa.umich.edu/alumni/magazine



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Paper Dynasty

It's always nice to see marginalized special collections getting some attention, and the 15 papercuts reflecting the Chinese Cultural Revolution certainly fit in that category. At the time, papercuts such as these were ubiquitous and voluminous, even here in the United States. At least one book was published showcasing these images (*The East is Red: Paper Cuts of the Chinese Revolution* by Lincoln Bergman) and some were reproduced in other media, such as posters. But most of those—at least, those that we know of—recycled earlier imagery from the Chinese Revolution; few actually depicted the Cultural Revolution itself. Your article prompted me to delve into the yet-uncataloged papercuts from that period gathered by Ann Tompkins, whose posters form a key collection at U-C Berkeley's East Asian Library. This period of history deserves much more scholarship, and access to materials such as the papercuts at LSA's Center for Chinese Studies is part of that process. Thank you for sharing it.

Lincoln Cushing

The Daily Beasts

"The Daily Beasts" properly recognized many of the *Michigan Daily's* illustrious alumni. I served with four of those mentioned when I worked on the *Daily* staff between 1966 and 1970, and they certainly are deserving of being mentioned. Unfortunately, the article omitted recognition of Daniel Zwerdling, who may have been the best pure journalist to come out of that era of the *Daily's* history. In his long career at NPR and in other contexts, Dan has received broadcast journalism's top awards, including the DuPont, Peabody, Polk, Edward R. Murrow, Investigative Reporters and Editors, Robert F. Kennedy, and DART awards for investigative reporting, as well as numerous other journalism awards.

Philip Block ('70)

The Odd Quad Goes Mod

There is a history of East Quad that, of course, goes beyond the 1970s. I was part of that history as a resident of the first integrated (male-female) Quad at the University—Prescott House in East Quad in 1952.

Equally a disaster and blessing, it is an experience that all 110 (or so) girls in Prescott will likely remember with fondness. From the gooey chipped beef on toast in the dining room to the greasy fried ham sandwiches at the snack bar, each of my colleagues gained at least 15 pounds in the first three months.

I loved the snowfall in Ann Arbor photos! Fond memories of such events. The sleigh picture looks like it's in front of a house on Hill Street where I roomed my first year at U-M in 1953-54!

H. David Kaplan ('56)

LSA Magazine may only come out twice each year, but there are several ways to connect with LSA (and tell us what you think!) in the meantime. Our LSA Today e-zine comes out quarterly, and we're on social media as well. To connect with us, visit www.lsa.umich.edu.

LSA TODAY



There are many stories remembered and retold among our lucky few, but the most vivid memory for me were the urinals in the bathrooms that were quickly turned into flower pots.

Judy Jennis Thal ('56)

Most popular letter-generating article:
"The Daily Beasts"



TALK TO US

We invite your feedback on *LSA Magazine* content or on topics related to the College. Letters for publication may be edited for style, length, and clarity.

Email: lsamag@umich.edu

Or write to:

Editor
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\$1 billion

The dollar amount the College of LSA is helping to raise to support student scholarships as part of the five-year-long Victors for Michigan fundraising campaign. Last year, the College awarded more than \$7.8 million in student support.



The J. Ira and Nicki Harris Family Head Football Coach

The new, official name of the University of Michigan's head football coaching position, after a \$10 million gift by J. Ira and Nicki Harris.



Crispy-Fried Pigs' Tails

Grass-Fed Sirloin à la Poêle

Moroccan "Upside Down" Carrot Cake

MENU OPTIONS AT CRAIGIE ON MAIN, THE RESTAURANT OF JAMES BEARD AWARD-WINNING CHEF **TONY MAWS ('92)**, WHOSE MARROW-ENRICHED HAM-BURGER WAS RECENTLY ON THE COVER OF *BON APPÉTIT*.

Love in the Future

The name of John Legend's new album, for which **Andy Horowitz ('05)** produced and wrote songs. The album includes the epic ballad "All of Me," which Legend claimed "will be played at every wedding one day," according to Horowitz.



The number of Twitter followers of @Djehutymose, a mummy whose elaborate coffin is a treasured Egyptian artifact at LSA's Kelsey Museum of Archaeology.

@Sierra_Grant

Two female U of M astrophysicists were offered the Einstein fellowship. Incredible. #MichiganDifference

Follow the College of LSA on Twitter @UMichLSA

@bri4nn3

My @UM_English lecturer already referenced @DowntonAbbey and compared Middle English to moms' incoherent text messages. So, I'm sold.



A NEW HUB FOR SCIENCE

The University of Michigan Board of Regents has approved a new Biological Science Building on campus, slated to open in 2019. The new space will house the Department of Molecular, Cellular, and Developmental Biology, the Department of Ecology and Evolutionary Biology, and the Museums of Anthropology, Natural History, Paleontology, and Zoology.



"We have a better understanding of why plaque forms fast in Alzheimer's and found a way to **slow down** plaque formation."

YANZHUANG WANG, AN LSA ASSOCIATE PROFESSOR OF MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY, ON BREAKTHROUGH RESEARCH THAT CAN HELP DECODE WHY PLAQUES FORM IN THE BRAINS OF ALZHEIMER'S PATIENTS.

Welcome Dean Martin and President Schlissel!

LSA's new dean, Andrew Martin, and the University of Michigan's new president, Mark Schlissel, both begin their terms of office on July 1. Test your knowledge about U-M's president-elect with our quiz on page 63.



DOUBLE meaning

The phrase "off the grid" can refer to a building without electricity or a person who is untraceable—without a cell phone, email address, or Snapchat account.

Your Amish cousin, for example, is both *off the grid* and *off the grid*.

Down Those Stairs...

How do you smash protons together at high speeds? With the Large Hadron Collider (LHC) in Switzerland, of course! But once your protons collide, where is all the data stored and where are all the numbers crunched? In the basement of the LSA Building, naturally! U-M computer servers are part of the Worldwide Large Hadron Collider Computing Grid, a global effort to share computing power for the LHC.



LOCATION, LOCATION, LOCATION

The origins of several stories in this issue and online:

- Uganda
- Guatemala
- Cataract Canyon, Utah
- Geosynchronous Orbit
- Angell Hall Auditorium B
- California
- Iowa
- Asgard
- Turkey
- India
- Alaska
- Tanzania

FIFTEEN

U-M's ranking as a top university in the world according to the Times Higher Education World Reputation Rankings, based on results from an invitation-only survey that included 10,536 academics from 133 countries.

The number of LSA scientists who won Arthur P. Sloan Research Fellowships. They are:

3

Emanuel Gull (physics), **Pavel Nagorny** (chemistry), and **Nathaniel Szymczak** (chemistry).



“Kids always search for heroes, so we might as well have a say in it.”

BRAD MELTZER ('92), AUTHOR OF *I AM AMELIA EARHART*, ON WHY HE WROTE A CHILDREN'S BOOK ABOUT THE PIONEERING PILOT. THE BOOK IS PART OF MELTZER'S SERIES, "ORDINARY PEOPLE CHANGE THE WORLD."



Gaining Perspective.

YOU CAN HELP.

Last summer, LSA sophomore Tim Rhein interned abroad in Turkey, lecturing to Turkish foreign ministers and meeting with Kurdish activists and wounded Syrian soldiers. Thanks to the LSA Fund for International Internships, Rhein uncovered his passion for the people, history, and politics of the Middle East.

CONSIDER THE FUTURE.

Today, Rhein possesses an additional layer of understanding that makes him a better student in his U-M classes. He's considering graduate school to further expand his understanding of the Middle East. He also hopes to return for an even longer study abroad experience in Jordan.

TAKE ACTION.

Give a gift today to help Tim and countless students like him become LSA Victors.

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A1

B1

B2

B3

B4

THE GRID

C1

C2

C3

C4

D1

D2

E1

E2

F1

F2

F3

LIVING OFF THE GRID

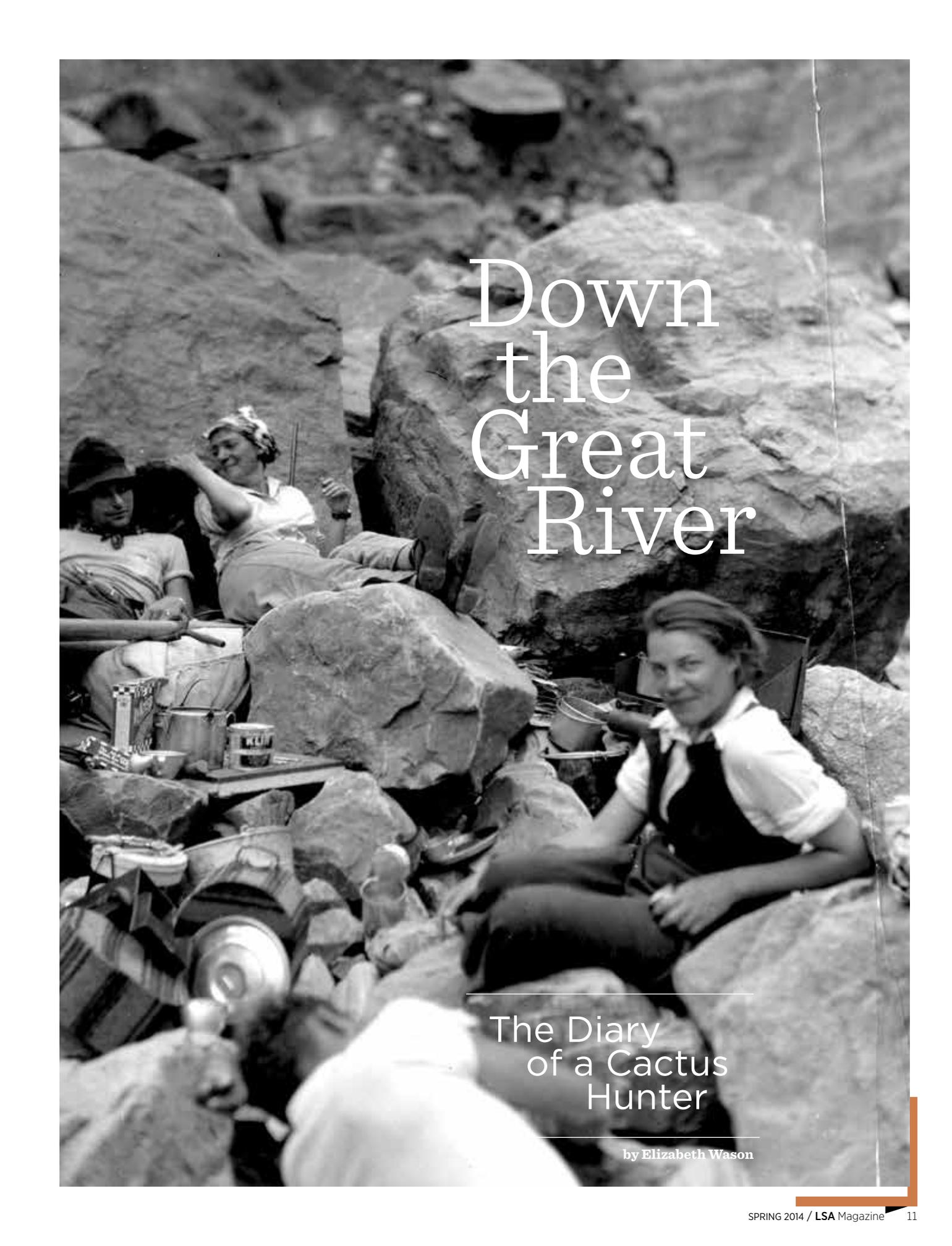
can mean generating your own power or using well water instead of the local utility. It's hard work. Ground water can leave calcium and metal deposits in a home's pipes, fouling up the plumbing. For homes with solar cells, cloudy days can mean less power, so you can charge your cell phone but you can't watch *Mad Men* or play on your Wii.

It requires strength and vision and a peculiar stubbornness to go off the grid. It takes real courage to try out new ideas, to go one way when everybody else is going another.

These stories remind us of the grit and fearlessness it takes to push into new territory. For some, the accomplishment itself is fulfilling enough. Others explore so that they can then reach back and help others find the way **forward.**







Down the Great River

The Diary
of a Cactus
Hunter

by Elizabeth Wason

In the Depression-era southwestern United States, before propane stoves replaced Dutch ovens and cell phones supplanted signal fires, members of a scientific expedition risked their lives on the Colorado River in search of cactus specimens. U-M botanists Elzada Urseba Clover and Lois Jotter were the crew's botanists—the first women in recorded history to raft through the Grand Canyon and make it out alive. Against the odds of their era, Clover and Jotter explored the frontiers of science, geography, and human endurance on their river adventure. They were prepared to die—but they were even more prepared to survive.

THREE SCIENTISTS STOOD OUTSIDE the Kraus Natural Science Building at 4:30 P.M. on a June afternoon, saying goodbye to friends and colleagues for perhaps the last time in their lives. They planned to travel through the Grand Canyon by boat on the Colorado River, in an era when their survival was a possibility, not an assurance.

This was 1938, and the threat of dismemberment, disappearance, and death matched the pitch of general excitement about exploration and adventure — not only for this expedition, but for all. Just the previous summer, Amelia Earhart had vanished with her airplane somewhere over the Pacific Ocean. Most of the southwestern United States remained an unknown desert — the perfect place for an unassuming botanist from Michigan to risk her life conducting the first botanical survey of the Colorado River.

Elzada Urseba Clover held a master's ('32) and Ph.D. ('35) in botany from the University of Michigan, finishing her doctorate at 39 years old. Clover became assistant curator at the U-M Botanical Gardens and taught botany at the University. Her great love was cacti, and she suspected that the Grand Canyon area contained plant specimens that the

Botanical Gardens lacked. She didn't know, of course, what kinds of plants grew there — no botanists did.

Clover was particularly interested in how plant species were distributed across the Grand Canyon landscape. The few people who visited the region came for geological exploration or gold, not for plants. So when Clover bumped into a boatman who was eager to collaborate on a botanical expedition down the river, she



San Juan College
 FLORA OF NORTH AMERICA
Scleroctactus parviflorus Clover & Tutin
 var. *parviflorus*
 Kenneth D. Heil 1990

TYPE - COLLECTION OF
Scleroctactus havasupaiensis var. *roseus*
 Clover
 Reference: Amer. Jour. Bot. 29:173 1942
 Verified by L.P. Lord Date: Oct. 6 1952
 Remarks: Holotype Clover 6403

Type 1
 June 16, 1952 E. H. C.



MICH
 University of Michigan Herbarium
 1001408 A

PLANTS OF THE CANYON OF THE COLORADO
 HAVASUPAI CANYON, COCONINO COUNTY, ARIZONA
 OBSERVED BY THE BOTANICAL GARDEN, UNIVERSITY OF MICHIGAN
Scleroctactus havasupaiensis
 var. *roseus* Clover
 Occasional on top of Supai Formation
 associated with *S. havasupaiensis*
 side table.
 Elsie U. Clover
 No. 6403
 14 April 1941

immediately began planning logistics.

Clover admitted in her journal, “I felt guilty asking any other woman to share the physical and mental punishment which would be ours.” Nevertheless, she invited her teaching assistant in the Department of Botany, Lois Jotter (’35, M.S. ’36, Ph.D. ’43), to join the expedition. Clover and Jotter were former roommates; Clover reasoned that Jotter was agreeable in close quarters and could help with the plant collections, camp cooking, and photography. At 24 years old, Jotter was studying at U-M for her Ph.D. “I think I’ll never get such another chance,” she wrote in letters to her father before the trip. “Also has some element of danger,” she added, which greatly appealed to her.

Clover and Jotter were flippant, even macabre, about their upcoming adventure. “. . . [I]t seemed like the easiest way to handle being warned that you were probably not going to come back,” Jotter said.

The completion of their expedition would mark the first time that any woman came through the canyons alive. Ten years before, a young man and woman took a rafting honeymoon through the Grand Canyon and disappeared; neither their bodies nor their boat were ever found. No other woman had even attempted the trip. The risks terrified Clover and Jotter, yet they anticipated thrills; Clover insisted that she’d prefer to die doing something exciting.

A Dangerous, Foolhardy, Crazy Exploit

The pair of botanists stuffed their equipment into the car of Gene Atkinson, a young U-M zoology graduate student (Clover had enlisted him to help row the boats), and the three scientists drove away from campus toward their launching point on the Green River, north of the Colorado River.

Clover, Jotter, and Atkinson met up with the other three members of the expedition crew near their starting point in Utah: Norm Nevills, a skilled boatman hoping to leverage the publicity from this expedition into a river-running career of his own; Bill Gibson, an artist from San Francisco invited to film and photograph the trip; and Don Harris, a U.S. Geological Survey employee recruited to row.

Nevills designed and built the boats with some construction help from Harris. Each wooden boat was 16 feet long and weighed 600 pounds, with waterproof hatches to safeguard plant specimens and camping gear. With electricity unavailable at the launch site, Nevills and Harris inserted all 2,000 screws in each boat by hand — a total of 6,000 screws for three vessels.

The handmade boats did not touch water until the assembled crew embarked. “When we got into the boats, I wasn’t even sure they were going to float,” Jotter said. But they had no problems

with a few practice laps before launching. “I was really quite relieved,” Jotter recalled.

Many had called the trip a dangerous, foolhardy, crazy exploit, but the first few days of boating along the Green River turned out to be downright enjoyable. They spent the days moving with the current, singing and sunning on the boat decks. At one of their campsites, the crew found a large, flat rock that served as a kitchen table, “and later [a] living room for harmonica players Elzie and Don,” Jotter wrote in her journal, “and still later as Elzie’s and my boudoir,” with the help of a couple of air mattresses.

One seven-mile bend in the Green River swung out widely and skirted a 500-foot-tall ridge. Clover, Jotter, and Nevills decided to hike to the top of the hill so they could view both sides of “Bowknot Bend.” They may have clambered more than climbed; on the way up, sizable rocks crashed onto Jotter’s head and cracked her helmet. From the top, the three photographed Atkinson, Gibson, and Harris as they appeared at the other side of the ridge rowing the boats.

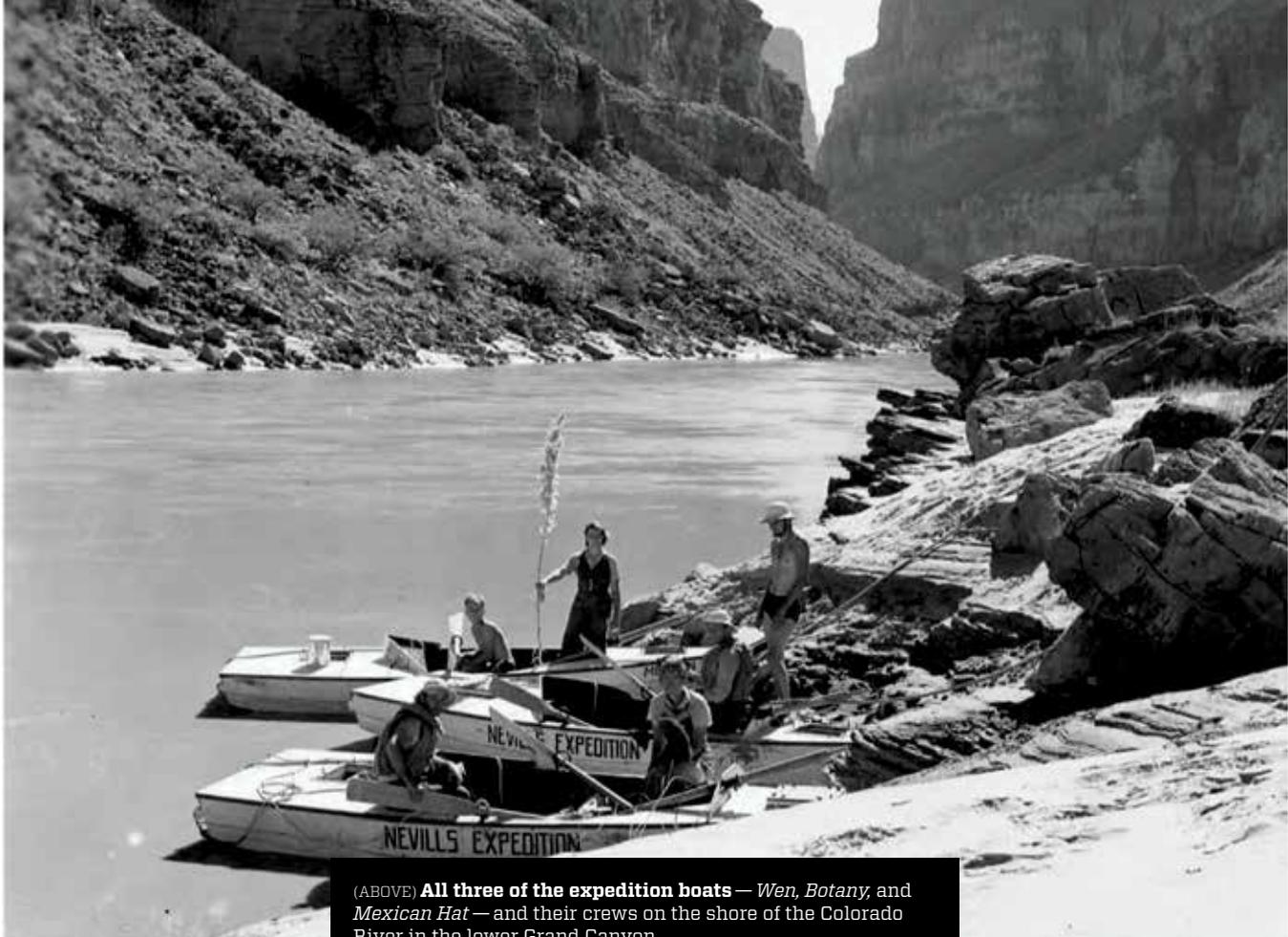
A Great River with a Hundred Personalities

Farther on, the crew reached the confluence of the Green and Colorado Rivers. There, “the character of the river changed, and slowly we realized the force of the Colorado,” Jotter wrote. “You could hear the noise of the first series of rapids. Ominous is the wrong word, but we were all pretty serious.”

Cataract Canyon was the “graveyard of the Colorado,” the place where the expedition would be “cut off from any hope of getting out in case of accident, illness, or fright,” wrote Clover. With more than 60 rapids in that first 45-mile stretch after the confluence, Cataract Canyon averaged more than one rapid per river mile. Giant waves collided loudly enough to stun the crew to silence. They watched turbulent whirlpools eject logs and tree trunks at 20 or 30 miles per hour and witnessed landslides that sent giant boulders crashing into the river.

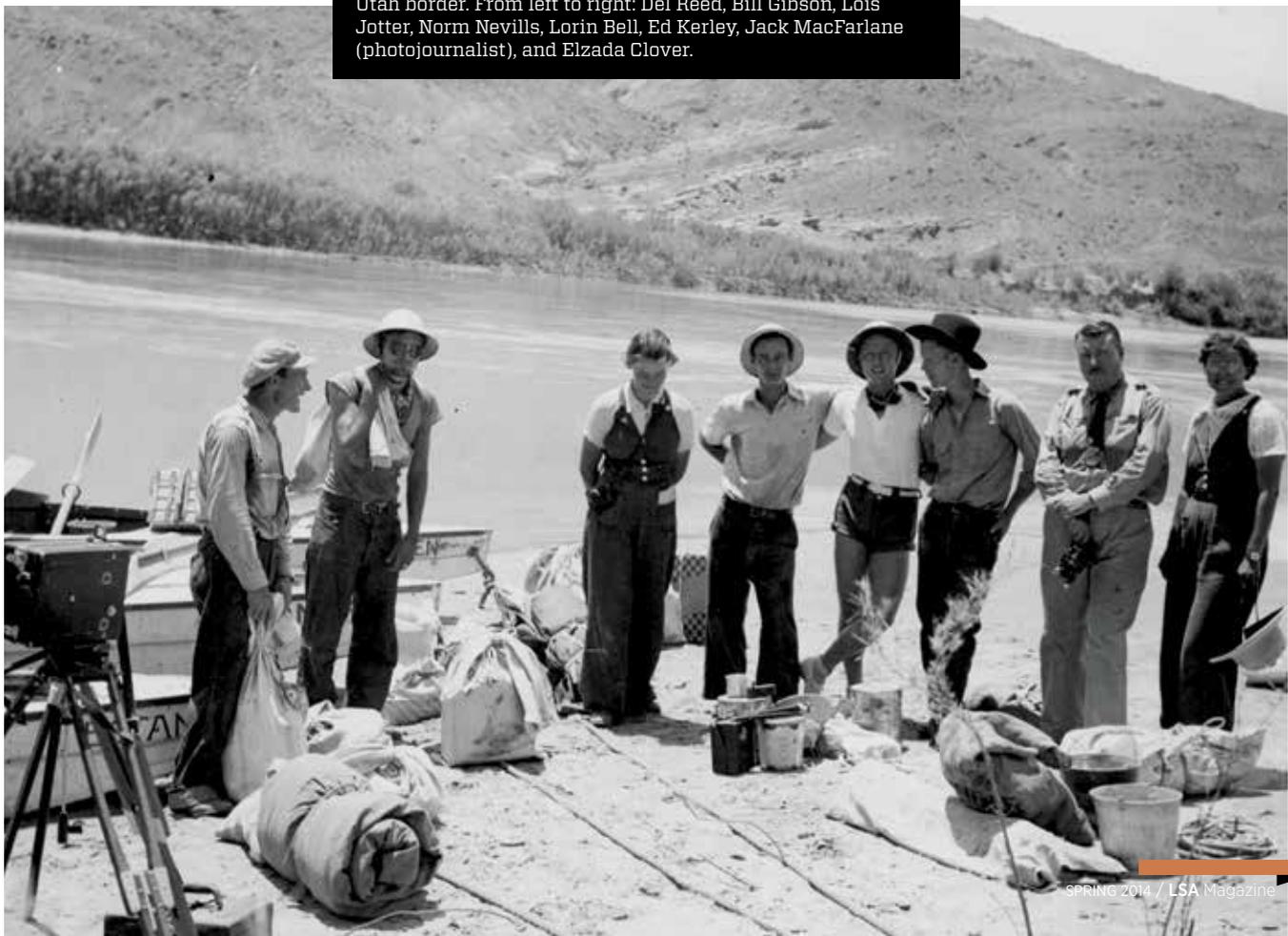
Members of the crew hiked downstream to assess whether and how they could pass the rapids. During this reconnaissance, Harris spotted one of the boats careening down the river — without any passengers. He shouted and raced across rocks toward the remaining boats, calling frantically for Jotter to join him in chasing the errant vessel. They leapt into a boat and unthinkingly paddled straight into the roiling water, dodging jagged boulders. They plowed through seven rapids before coming to rest in an eddy near a sandbar.

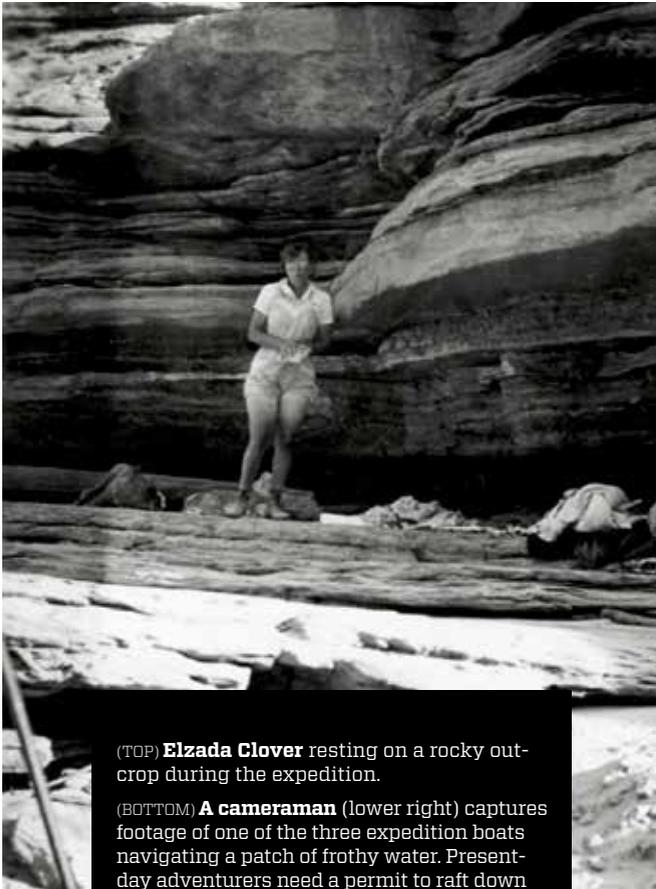
With no sign of the runaway boat, Jotter and Harris were discouraged and exhausted by the chase. The boat carried one-third of their supplies, enough to put the crew in danger of starvation on the river. So they were jubilant and relieved when



(ABOVE) All three of the expedition boats — *Wen*, *Botany*, and *Mexican Hat* — and their crews on the shore of the Colorado River in the lower Grand Canyon.

(BELOW) The expedition crew at Lees Ferry, near the Arizona-Utah border. From left to right: Del Reed, Bill Gibson, Lois Jotter, Norm Nevills, Lorin Bell, Ed Kerley, Jack MacFarlane (photojournalist), and Elzada Clover.





(TOP) **Elzada Clover** resting on a rocky outcrop during the expedition.

(BOTTOM) **A cameraman** (lower right) captures footage of one of the three expedition boats navigating a patch of frothy water. Present-day adventurers need a permit to raft down Cataract Canyon's 14 miles of rapids.



they found the missing boat, miraculously intact, stuck in an eddy at the far end of the sandbar.

Their success, both in retrieving the lost boat and in tearing through the rapids unharmed, encouraged the crew. But the expedition continued cautiously. "It's a great river with a hundred personalities, but it is not kind," Clover wrote.

To pass impossibly dangerous rapids, the crew either lined or portaged the vessels. Lining, a process of pulling the boats without passengers over rapids, allowed the crew to control the boats from shore using rope and brute strength. Portaging was even more physically strenuous. The process involved emptying the boats of all equipment, then carrying the cargo downriver across rocky terrain. The 600-pound boats were lifted and maneuvered overland, downstream of obstacles in the river. At a particularly hazardous rapid, the crew struggled for four days trying to pull the boats up and over a 60-foot cliff at a 45-degree angle.

Meanwhile, the crew dealt with other discomforts. Personality rifts among the crew and beckoning jobs led to the departure of Atkinson and Harris, who were replaced hastily with two more men — willing adventurers Lorin Bell and Del Reed — who happened to be close to a supply stop at the expedition's halfway point.

The climate fluctuated between "hot as Hades" during the day to "colder than hell" in the evenings. When fresh water from natural springs was unavailable, the crew left buckets of river

water overnight to let the silt settle to the bottom before drinking. Most of the time, they would just drink from their helmets, which sometimes led to a clay film in the mouth and throat, along with stomachaches.

Meals were sufficient and palatable most of the time. But after a boat overturned, the crew was forced to salvage their food with limited success. Grape-Nuts — a fixture in the food packs of adventurers during the early 20th century because they were lightweight, nonperishable, and nutritious — were “dried in aggregates, like great big marbles,” Jotter said. Hammering them into smaller pieces was futile. Even when dried, the lumps remained wet at the center and molded, leaving Jotter with a lifelong aversion to their taste.

Amid discomforts, the crew couldn't help but notice beauty on the river. One of Clover's favorite memories was singing “Moonlight on the Colorado” while floating under a gorgeous moon. “The night was so beautiful that I couldn't sleep,” she wrote.

Keeping the Mind on Mere Plants

Clover and Jotter collected just a fraction of the botanical specimens they sought. They were busy beating the rapids, staying fed, avoiding rattlesnakes, finding decent campsites, and only then, as Jotter described it, “snatching as many specimens as possible in the time between landing boats and falling into bed.” There just wasn't much opportunity to hunt cacti and dry them in the plant presses that Clover and Jotter carried in the boats. Clover despaired in her journal, “You've no idea how difficult it is to keep the mind on mere plants when the river is roaring and the boats are struggling to get through.” But she and Jotter diligently alternated the collecting and cooking duties at camp, sometimes pressing plants until well after dark.

In addition, preserving plant specimens in transit was tricky. On windy days, Clover had to swing her leg over a plant press to keep it from flying off the boat deck. Specimens got wet in the rain and the river, and keeping them dry required creative solutions. “I had a bad time, had to dry plants in Lois's pack,” Clover wrote. “The work is difficult under these conditions.”

Moreover, although the boats ran the rapids capably, their waterproof hatches were too small to accommodate many bulky, spiny cacti. The botanists had to send the specimens they gathered back to Ann Arbor when the expedition stopped twice to replenish supplies.

Oddly, Clover also voiced suspicions (in her journal and in letters to Jotter) that their boatman and trip co-leader, Nevills, deliberately misplaced some of the plants they collected, although what may have motivated him to lose the plants intentionally remains open to speculation.

The expedition crew also explored the cave of an extinct giant ground sloth, and Clover examined ancient sloth dung that had preserved the undigested remains of nine different plant species. Cactus spines embedded in the poop provided insights about the animal's diet and the potential mode of dispersal for plants in the area.

All told, Clover and Jotter managed to discover several new cactus species. The representative specimens are held at the U-M Herbarium to this day. *Echinocereus decumbens*, *E. canyonensis*, *Opuntia longiareolata*, and *Sclerocactus parviflorus* were previously unknown, and Clover grew specimens of these cacti at the Botanical Gardens upon her return. She became a key collector of the gardens' oldest plants, although the Grand Canyon specimens in particular have not survived through the years.

When the expedition ended, the strong camaraderie of the crew tapered off as they separated. Clover felt regret as the last rapid came into view. “No more would we have that feeling of uncertainty and expectation,” she wrote. “People who have not fought with such elements can't realize how petty and trivial are the things two-thirds of us do in civilization. What a shame to have to get back.”

The Challenges of Civilization

The botanists returned to civilization, although they didn't necessarily stay there. Lois Jotter finished her Ph.D. at the University of Michigan and later spent decades as a professor at the University of North Carolina at Greensboro. More than 50 years after the seminal expedition through the Grand Canyon, Jotter returned for a trip on the Colorado River with other historic river runners (and modern amenities) when she was 81 years old. She died in April 2013 at age 99.

Elzada Clover took another short trip on the San Juan River and collected fossil plants in Texas before heading back to Michigan after the expedition. Upon her return to Ann Arbor, Clover entertained large, diverse, and widespread audiences with tales and film footage from the adventure. She conducted research and taught in the Department of Botany and the Biological Station until 1967. Her plant specimens strengthened the collections of both the U-M Herbarium and the Matthaei Botanical Gardens and Nichols Arboretum. Clover chased cacti and adventure in the deserts of Guatemala, Mexico, and Haiti for the rest of her career, zipping around waterways by motorboat into her 80s. She died in 1980 at age 83.

[Elizabeth Wason is the science writer for the College of LSA.](#)

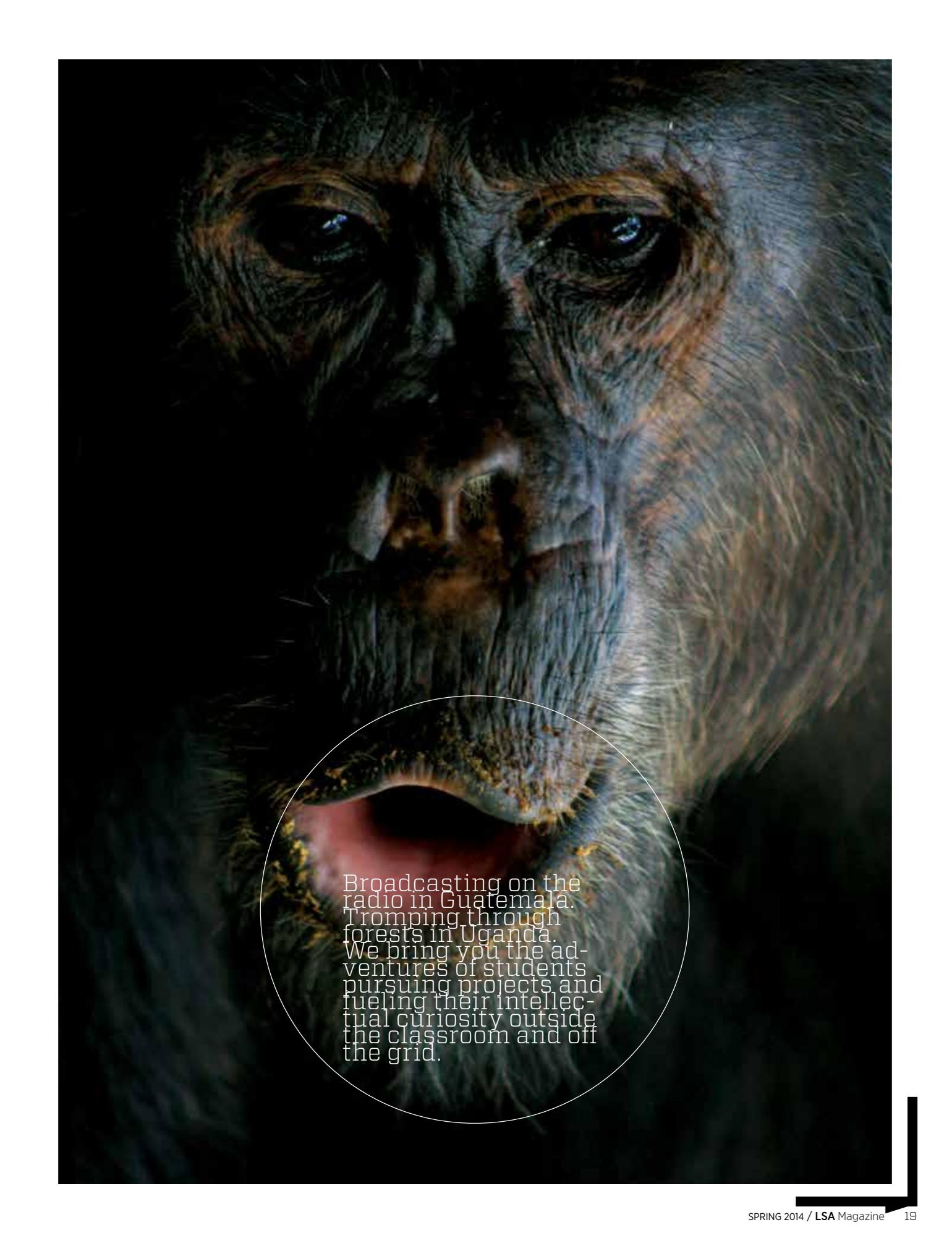


WATCH FOOTAGE FROM THE TRIP WITH EXCERPTS FROM
ELZADA CLOVER'S DIARY
www.lsa.umich.edu

Sources: Elzada Clover journals (University of Michigan Bentley Historical Library, 1938). Clover, Elzada. “Danger Can Be Fun,” *Michigan Alumnus Quarterly Review*, February 1939. Jotter, Lois. Journal and personal correspondence (Northern Arizona University Cline Library, 1938) and oral history interview (Northern Arizona University Cline Library, 1994). Webb, Roy. *High, Wide, and Handsome: The River Journals of Norman D. Nevills* (Utah State University Press, 2005).

Toxic Tours and Chimp Lasers





Broadcasting on the
radio in Guatemala.
Tromping through
forests in Uganda.
We bring you the ad-
ventures of students
pursuing projects and
fueling their intellec-
tual curiosity outside
the classroom and off
the grid.



(ABOVE) LSA student Amy Mar (front row, third from left) with members of Sierra Club Detroit at a joint rally with Canadian environmental group Windsor on Watch to raise awareness about petroleum coke piles.

(OPPOSITE PAGE) LSA sophomore Caleb Vogt with one of the chimpanzees he studied in Kibale National Park in Uganda. Learning to identify the chimps was a difficult process. “But it felt so good when I started to understand — ok this chimp has a scar; this one has a notch out of its right ear,” Vogt says.

porches. The toxic hazards were closer to Detroit residents than she’d imagined — literally in their back yards.

Through the Undergraduate Research Opportunity Program (UROP), Mar spent two months working closely with the Environmental Justice Program at the Detroit branch of the Sierra Club. “I had never considered environmental justice before,” she says. “My idea of it was nothing like what it turned out to be.”

Her internship focused mainly on grassroots organization and community outreach in three downriver areas of Detroit — River Rouge, Ecorse, and 48217 in Southwest Detroit, the most polluted zip code in the state.

One major outreach project, the White Cross Campaign, raises awareness about unusually high cancer rates in these communities and the link between environmental pollution and public health. White crosses are distributed to residents, who place one in their yard if a family member has been diagnosed with cancer. The extent of the disease is visible as the crosses line some city blocks; the scene facilitates conversation and illustrates the shared experience of many in the community.

“The work they do at the Sierra Club is very closely tied to public health,” says Mar, currently a junior studying biopsychology, cognition, and neuroscience. After getting her bachelor’s, she intends to pursue a graduate program that will build on her environmental justice experiences. “I want to learn more about what’s going on in our local community, because there’s so much that is happening outside of the college bubble,” she wrote during her internship. “Reading about it is not the same as seeing it in action.”

by Elizabeth Wason

SEVERAL TIMES DURING HER SUMMER

internship in Detroit, Amy Mar boarded the “toxic tour” bus. Her internship advisor led passengers such as LSA professors, high school students, and community residents through Detroit neighborhoods, pointing out urban industrial sites including the wastewater treatment plant, steel factory, power plant, and petroleum refinery. Mar saw a factory fence abutting one resident’s property line and petroleum coke (a dusty byproduct of oil extraction from tar sands) piling onto people’s



by Elizabeth Wason

LAST SUMMER, LSA sophomore Caleb Vogt spent five weeks living in a dome tent under an A-frame roof at the Kibale National Park in Uganda. By day, he went “chimpanzeeing” — what LSA anthropology professor John Mitani and a handful of his graduate students call their method of hiking through the forest, observing chimpanzees. Approximately 200 chimps live within the park, and Vogt followed groups of 10–30 of them at a time with the other researchers. Vogt was in charge of documenting chimp body size to address the question of whether a chimp’s size relates to its social hierarchy in the troop.

“Whatever happened to be showing at the time — whether it was their face or their butt — I had to be able to recognize them,” he says. “For the first two weeks, I was getting it wrong more than I was getting it right. But it felt so good when I started to understand — ok, this chimp has a scar; this one has a notch out of its right ear.”

Vogt received a research grant from the Undergraduate Research Opportunity Program (UROP) to join Mitani in the field. He strapped an unobtrusive and nearly indestructible video camera to his head as he trailed the chimps, filming everything he

observed. Because electricity was limited at their field site, Caleb had to recharge his camera using car batteries, which in turn were recharged using solar panels.

Despite the limited power supply, Vogt and the research team used lasers as one of their primary field tools. They aimed a set of parallel lasers at male chimpanzees and snapped a photo once they had an unobstructed view. “There are certain trails that you can walk along and chimps choose to walk along, but 95 percent of the time, they’re going off the trail,” Vogt says. “They’re going through dense bush, and I’m crawling along after them, trying to get a picture of them with no obstructions.” Back at the lab, the known distance between the two laser dots visible on the chimp in the photo was extrapolated to estimate the chimp’s body size.

“It was a huge challenge for me to sit there and wait for them to cross my path in just the perfect way, for that two-second window to take the picture. I might go out for 12 hours in a day and get two good shots.”

Moving forward, Vogt wants to combine his chimp research with his previous UROP

project studying the mouse vestibular system, which helps to regulate balance. Focusing particularly on field observations of the head movements of older chimps, Vogt hopes to identify links between irregularities in the vestibular system, imbalance, and falling events in elderly people.

“I think doing the project in Uganda made me realize that, as someone who’s interested in research, the fieldwork part of it is hugely important to me,” he says. “I know that you can learn a lot in the lab, and lab work will play a big part in my career. But I know that at the end of the day, I’m always going to look forward to the summers when I can go and collect the data for myself. And that was a big revelation for me.”

“One of the really cool things about primatology and studying these animals is that we might not have them for much longer. We might make it out of the 21st century, but I’m not sure the chimps will,” Vogt says. “It’s going to be really important for us to collect these data on these chimpanzees, because future generations may not have the opportunity to study them. We need to learn all we can now, before it’s too late.”



WATCH EXCERPTS FROM CALEB VOGT’S
“CHIMPING” RESEARCH
www.lsa.umich.edu



SE BUSCA



**JOSÉ EFRAÍN RÍOS
MONTT Y LOS
INTEGRANTES DE SU
ALTO MANDO MILITAR
DE 1982**

**POR CRÍMENES
CONTRA LA HUMANIDAD
Y CRÍMENES DE GUERRA**

- COMUNIDADES VÍCTIMAS**
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(17 - JULIO - 82) | VIBITZ
(9 - SEPTIEMBRE - 82) |
| TUCHABUC
(13 - MAYO - 82) | PLAN DE SÁNCHEZ
(18 - JULIO - 82) | AGUA FRÍA
(14 - SEPTIEMBRE - 82) |
| PUENTE ALTO
(7 - JULIO - 82) | RANCHO DE JUCO
(29 - JUNIO - 82) | CHIPASTOR
(22 - SEPTIEMBRE - 82) |
| PETANAC
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CHIPASTOR
(22 - SEPTIEMBRE - 82)
SANTA ANITA LAS CÁNDOAS
(13 - OCTUBRE - 82)



by Elizabeth Wason

IN THE VIOLENT CHAOS of the Guatemalan civil war, radio was a savior to the indigenous populations experiencing genocide. Guerilla fighters in the 1980s and '90s established temporary radio stations by hiding antennas in the mountains. They transmitted updates on the location of military forces, along with other news about the war.

An important guerilla radio program in these efforts was *Voz Popular*, and recordings of its broadcasts still exist.

Through the support of a Raoul Wallenberg International Summer Travel Award, history senior Paul Stromberg helped to preserve these taped broadcasts during his internship at an indigenous radio

station outside of Quetzaltenango, Guatemala. Last summer, Stromberg digitized the recordings, working with veteran guerilla fighters and younger members of the community.

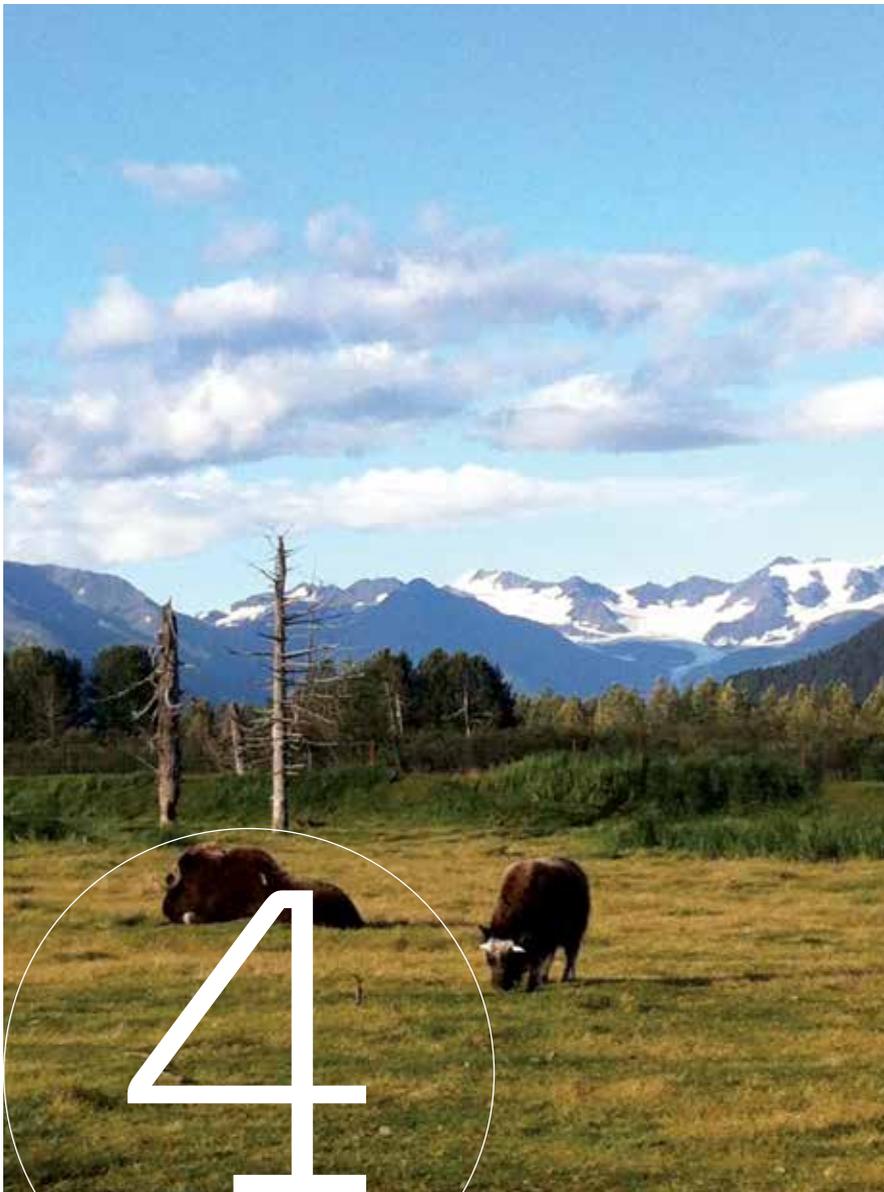
“The purpose of the project was to digitize and categorize the tapes so they wouldn’t continue to deteriorate,” Stromberg says. “They were literally in somebody’s basement, because the government didn’t want them exposed. As I spent time with the veterans, they started talking to me about the importance of the historical preservation project and the importance of teaching their children and their children’s children about the genocide, because it hasn’t been discussed that much. The ex-guerilla fighters understood their role in the radio station as part of the arc of history.”

And the arc of history continues with the younger generation in the indigenous community. Stromberg taught local kids basic radio techniques, such as editing audio using computer software. Stromberg drew from his own involvement at WCBN-FM, the student radio station at the University of Michigan.

“I’ve listened to public radio since I was in the womb,” he says. “[This project] was kind of too good to be true.”

(ABOVE) **Cassette tapes of *Voz Popular*** broadcasts. While studying abroad in Guatemala, LSA student Paul Stromberg worked to digitize and preserve the guerilla radio recordings. He also taught local kids rudimentary radio editing and production techniques.

(OPPOSITE PAGE) **Demonstrators** protesting the anniversary of a government raid that evicted human rights activists from the Spanish Embassy in Guatemala. The Guatemalan Civil War lasted from 1960 to 1996, and included brutal crackdowns and counterinsurgency missions by the military-backed government.



by Susan Hutton

WHEN PEOPLE THINK OF HUNGER in America, they probably imagine homeless families or the elderly struggling to choose between prescriptions and groceries. Chances are, they're not picturing the Inuit, the indigenous people who live in the arctic regions of Canada, Greenland, and Alaska. For the Inuit, food insecurity has complicated causes, and addressing them requires thinking about hunger from a non-Western perspective. It means more than filling in the holes in a food

pyramid or on a plate.

Just ask LSA senior Salima Sewani, who assessed Inuit food security as a summer intern with Inuit Circumpolar Council (ICC) in Anchorage, Alaska, through the International Institute. "To the Inuit, food security means subsistence hunting and fishing that's done in specific, traditional ways," Sewani explains. "For example, they only hunt for seal over ice. They prepare the meat a certain way. They say particular words in their native language, Inupiaq, to honor the animal. They offer meat to the elders before it's consumed. Every step has an important cultural meaning."

The Arctic region in which the Inuit live is at the far edge of the food supply chain. Food that doesn't emerge from the

environment has to be transported there, creating, in effect, a broad food desert surrounded by thousands of miles of ocean, tundra, or ice. Not only does a gallon of milk cost \$11 in the local grocery, but warmer annual temperature averages make sea ice less stable, killing the animals the Inuit have hunted for thousands of years.

Through her research, Sewani uncovered a connection between food insecurity and mental health — especially in relation to substance abuse and suicide in young Inuit men. "Climate change, modernization, and increased federal and state regulations are all factors," she says. "In addition, many younger Inuit don't speak the traditional languages. They were sent away to high school, and they don't quite feel like they belong when they come back."

During her internship, Sewani aggregated data from primary sources to build a way to understand food insecurity from an Inuit perspective. These data are part of a larger research project that ultimately aims to increase the Inuit role in policy decisions, such as federal and state hunting regulations. "Before my internship, I only thought of food security in the Western way: in terms of calories or nutritional requirements. But, as a scientist with an interest in advocacy, I saw the value in different kinds of data. I learned I might get a better understanding of an issue if I'm open to all of it."

A neuroscience major and community action and social change minor, Sewani sees herself eventually attending medical school, where she can continue her work helping minority populations navigate the health care system while supporting their values.

"Sometimes doctors make recommendations in opposition to patients' cultural practices — and, of course, they don't work. I don't want to be that kind of doctor. This amazing intercultural experience made me think about health differently, and it will help me to be a better doctor."



(THIS PAGE) An Inuit drum featuring a design with a seabird and fish. LSA senior Salima Sewani photographed the drum on her trip to the large village of Kotzebue in northwestern Alaska. Her time there featured singing and dancing, and Sewani was taught a few dance moves and their significance. "I was able to witness the lifestyle," Sewani says

(OPPOSITE PAGE) A group of Alaskan bison graze under sunny skies. Like other Alaskan fauna, bison face a number of challenges including a changing climate and food scarcity.

The Art of the Arab Uprisings

Beginning in January 2011, the Arab Spring rocked the Middle East. Protesters used murals, graffiti, plays, and jokes to attack regimes and reclaim public spaces. One professor explains what happened when she waded into the government crackdown in Turkey and began to study the art of the protesters.





A finger puppet caricature of President Bashar al-Assad from the play *Top Goon: Diaries of a Little Dictator*. The play and the puppets were created by the Syrian artists' group Masasit Mati. The group used humor and satire to depict the Syrian government's brutal response to protests in the country.

Istiklal Avenue is a pedestrian-friendly thoroughfare in Istanbul's historic Beyoglu district, a tourist hub home to numerous boutiques, cafes, and cinemas. Quaint trams clang past art deco buildings dating from the 1920s, and the thoroughfare is often crowded with people out for a stroll or looking for some strong coffee.

Last summer, Christiane Gruber, an associate professor in LSA's History of Art Department, stepped onto Istiklal to buy bread. Accustomed to seeing people from the neighborhood, Gruber was shocked to see police barreling down the street.

"I looked up," Gruber says, "and pummeling down the main tourist drag came police armed with tear gas and plastic bullets and water cannons.

"The next thing I knew, I was caught in a gas attack. I had never felt anything like it. It really feels like a heart attack."

Gruber found herself at the center of a police crackdown on protesters who had gathered at the nearby Taksim Gezi Park. It began with a group of environmentalists protesting plans to demolish Istanbul's large Taksim Gezi Park in order to build a new shopping center. What started as a local environmentalist demonstration grew into the Occupy Gezi movement, and included hundreds of thousands of Turks and dozens of demonstrations around Turkey (see sidebar on p. 34 for a more complete timeline of the Arab Spring uprisings). Through the protests, frustrated Turks aired grievances, not just about environmental issues, but also about censorship, police abuse, discrimination against the LGBT community, an unpopular ban on alcohol sales and consumption, and what many protesters saw as the creeping de-secularization of Turkish society under the conservative Justice and Development Party.

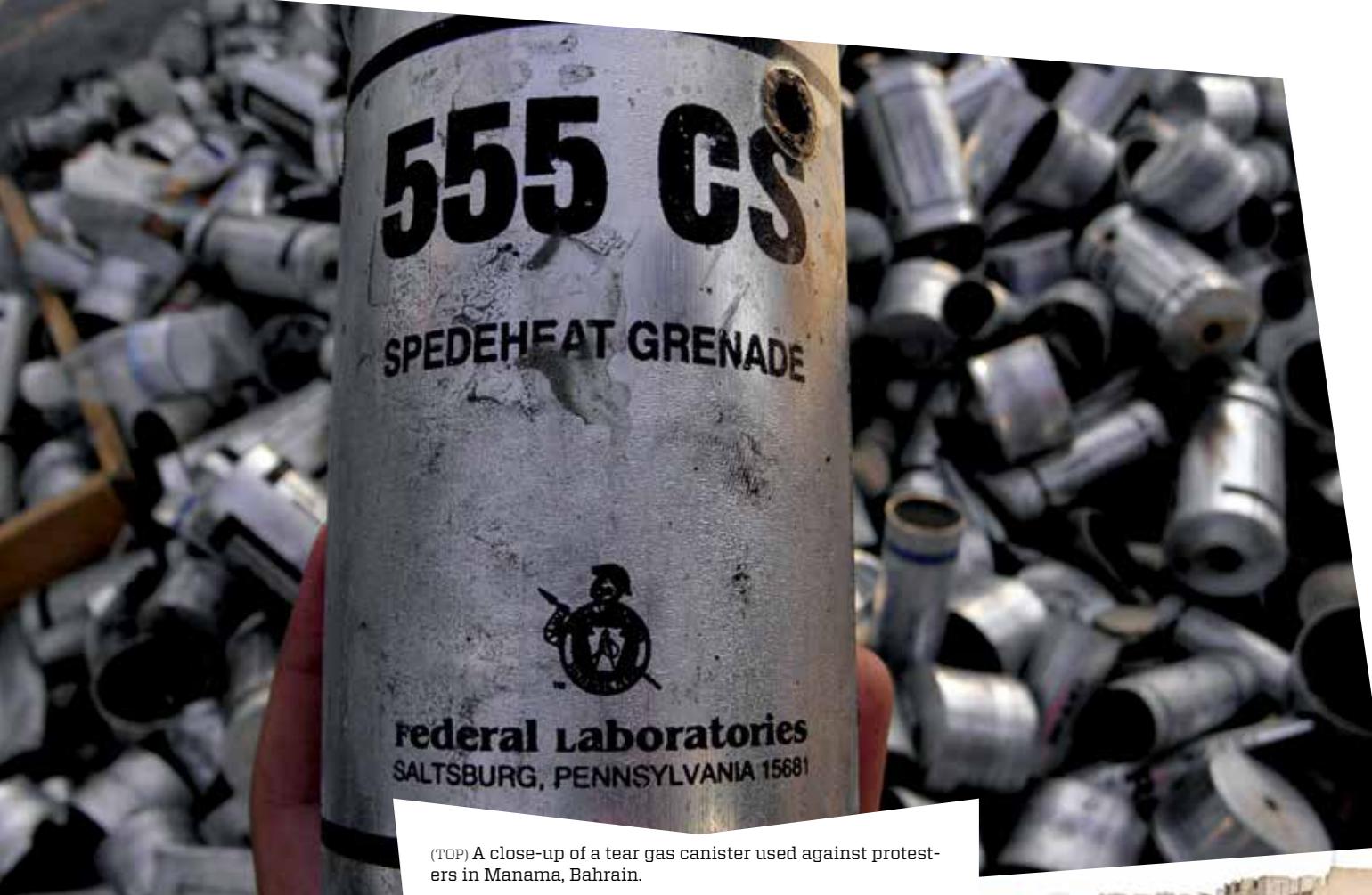
After being caught up in the police action against the protesters, Gruber, a specialist in Islamic visual culture, decided not to return to Michigan or watch the uprisings on TV, but instead waded into the heart of the protests to study them. She spent her days at Gezi Park, observing the protesters, especially their banners and art. She took over 3,000 photos of the protesters' graffiti, which included peace signs, gas masks, and sarcastic mottoes such as "This gas is awesome, dude!" and "Another serving of gas, please!"

There was humor in these slogans but also a powerful reimagining of the effects of violence. One moving example was a series of pepper-spray canisters that had been sawed in half and turned into planters. The saplings that sprouted were a potent symbol of the protesters' desire for Gezi Park and its trees to survive.

"You give us gas canisters," Gruber says, describing the protester-artists' mindsets, "and we're going to make a pot out of it. We'll plant a sapling, which is what you destroyed.

"It's about taking certain instruments of death and destruction, co-opting them, reclaiming them, and giving them a new life. Construction over destruction."

Occupy Gezi came at the end of a two-year period of unrest across the Middle East known as the Arab Spring. The movement began in Tunisia and spread quickly, sending protesters across the region into the streets and starting a chain reaction that toppled autocratic regimes in Tunisia, Egypt, and Libya.



(TOP) A close-up of a tear gas canister used against protesters in Manama, Bahrain.

(BOTTOM) Thousands pray at a massive protest in Sana'a, Yemen, in 2011. Many organizers of the Arab Spring protests used Friday prayers as an opportunity to gather and initiate new demonstrations.

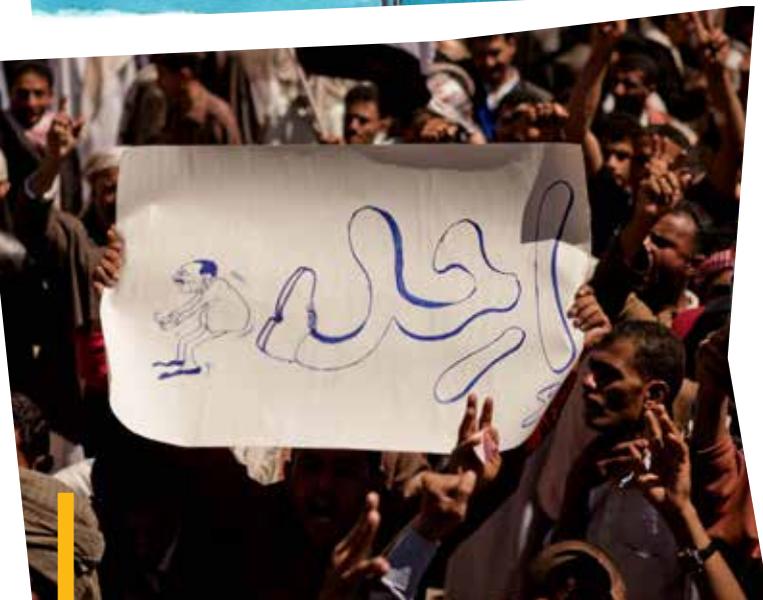


ART = FREEDOM

FREEDOM = RESPONSIBILITY

2 BAN ARTIST = 20 RESPONSIBLE

[RADZ]





The protests also gave voice to thousands of artists who used posters, murals, puppet shows, and plays to express their frustrations and their hopes for the future.

Before the Gezi Park protests, Gruber became fascinated by the Arab Spring, which started in 2010. She studied the chronologies and major players of the movement, as well as the new ways that art forms were being used to express political and personal angers, fears, and desires. In the end, she brought the energy of the protests back to U-M to study how visual culture helped protesters in the Middle East find the courage to take a stand.

Tweets for Change

“To mobilize bodies, you need weapons of communication,” Gruber says, explaining that social media was the first medium to disseminate powerful images and videos, which helped the protests go viral.

Before the Internet, state-controlled media channels controlled the flow of information in many countries in North Africa and the Middle East. But advances in digital communications gave citizens armed with cameras and smartphones the power to make their own news.

Activist bloggers such as Lina Ben Mhenni in Tunisia and journalists such as Wael Abbas in Egypt posted photos and videos of protests that state media refused to cover. Some bloggers posted videos showing the abuse and torture of citizens by national secret police organizations. Often, the content was passed to the bloggers by people within the regime to whom the violence was abhorrent but who were afraid to speak out themselves.

“You see the visual, across the board,” Gruber says, “especially the photograph being used as a counter-argument to state-sponsored media. It’s an alternative medium for claiming truth and reality.”

“If, for example, the state media is saying that foreign agents and thugs are destroying public property and you respond with an image showing police officers attacking peaceful sit-ins, then you’ve got a battling over truth and reality, and the photo stakes a claim in the middle of that.”

Photographic evidence of government abuses got the ball rolling for the Arab Spring protests, but for any revolution to take place, people had to get off of their laptops.

“We can’t call these digital revolutions,” Gruber says, “because, in the end, a revolution happens in the streets with real bodies demonstrating.”



A Protest with a Laugh Track

Once the protests were under way, a different kind of image started popping up: visual jokes.

In Syria, one protester held up a handmade drawing of Russian President Vladimir Putin standing on the front of the *Titanic*, holding Bashar al-Assad as if al-Assad were Rose and Putin were Jack in the famous scene from the 1997 movie. In Libya, a mural imagined Muammar Qaddafi as a rat with his tail in a trap. In Egypt, a demonstrator held up a picture of Hosni Mubarak drawn in reds and blues to resemble President Barack Obama's 2008 campaign poster, with the words "No You Can't" written in bold underneath.

Laughter, Gruber says, allows people to vent their frustrations. "Even in situations of extraordinary violence and trauma," Gruber says, "humans across the board use comedy and humor as a form of tension release and as a way to build group cohesion through laughter."

While many artworks from the protests are meant to embarrass or insult people in power, some also articulate stickier, more difficult truths. One of Gruber's favorite humor pieces points out one of the problems that has kept many people's hopes for the Arab Spring from being realized: protesters' inability to cooperate with each other once the revolution is over.

"It's a cartoon by the Tunisian cartoonist and artist Nadia Khiari that she started right at the very beginning of the Tunisian uprisings. It's called *Willis from Tunis*," Gruber says. "Willis is a cat from Tunis, and he's got a really wry sense of humor. He's basically a young, left-wing secularist cat who comments on politics in Tunisia."

"Khiari has one cartoon with all kinds of cats. She's got cats with pigtailed, which are the feminists, and she's got cats with beards, that's the [conservative Islamist] Salafis. In this one cartoon, she shows all of these cats, some with pigtailed, some with Salafi beards, some who just look clean cut, the secularists, and they're all pointing at each other and they're all screaming, 'Counterrevolutionary!' And the title of the piece is 'Tunisian Political Debate.'"

Many of the pieces that Gruber researches and writes about have a laugh-so-you-don't-cry quality — born, it seems, out of a desire to bring attention to difficult political truths and also to demand that all voices be heard in this new, post-revolutionary world. That includes voices that question the revolution and its aftermath — people who dissent from the dissent.

Eyewitness Accounts

Last fall, Gruber brought many of these themes, ideas, and works of art to U-M. Along with Juan Cole, the director of LSA's Center for Middle Eastern and North African Studies, Gruber co-organized a symposium called "Arts of the Arab World Uprisings," which included presenters from the fields of academia, journalism, street art, and pro-democracy activism. The audience heard about anti-Qaddafi murals from Libya, feminist graffiti from Egypt, and monument destruction in Bahrain. Amr Nazeer, a street artist from Cairo, gave a lecture via video chat.

One of the most powerful moments from the symposium was the presentation by Wael Abbas, an influential blogger and journalist from Egypt. After years of posting controversial videos, Abbas began to receive footage of prisoner abuse that had been recorded inside police interrogation rooms. Once the videos were posted to the Internet, they immediately went viral.

Abbas played snippets from these videos at the symposium. Even the brief glimpses that he showed were enough to cause audience members to gasp and sit upright in their seats.

"It's easy to hear about the uprisings through news analysis," Gruber says. "But I think we get more of a feel for them once we start looking at all of the materials that are so central to mobilizing people and helping them communicate who they are, that are helping them communicate with other people."

"That's why it's important to show these visual materials, I think, in an exhibition setting, because it brings back that feeling. It's hard to describe the experience to those who did not participate in the uprisings. Adrenaline, hope, fear, and violence all entangled into one. It's electric."

"It's this very strange line that you're always walking, where you're being an active and inspired producer of hope and ideology, but at any moment, that elation and togetherness could get dispersed and crushed in one second, with one attack."

Brian Short is the humanities writer for the College of LSA.



SEE A SLIDESHOW OF PROTEST ART FROM THE ARAB WORLD UPRISINGS
www.lsa.umich.edu



Two images of Libyan leader Muammar Qaddafi being forcibly ejected from the country, a motif found in a number of revolutionary murals.

Both murals feature the tri-color pattern of the Kingdom of Libya flag, a symbol adopted by anti-Qaddafi forces. It has since been made the country's official national flag.





The Arab Spring: Genesis and Outcomes

The Arab Spring — which began in December 2010 and included Arab, African, and Iranian populations — started in Tunisia. The month before, a street vendor named Mohamed Bouazizi had doused himself with gasoline and set himself on fire to protest police abuse. Bouazizi had been bullied and beaten by Tunisian police for years. They harassed him constantly about not having a vendor's permit and demanded bribes to let him continue his daily work.

In January 2011, Tunisians, disgusted with police brutality and fed up with government corruption and graft, took to the streets, demanding the autocratic president of Tunisia, Zine El Abidine Ben Ali, abdicate his presidency and leave the country. When Ben Ali left nine days later, it heartened protesters across the region.

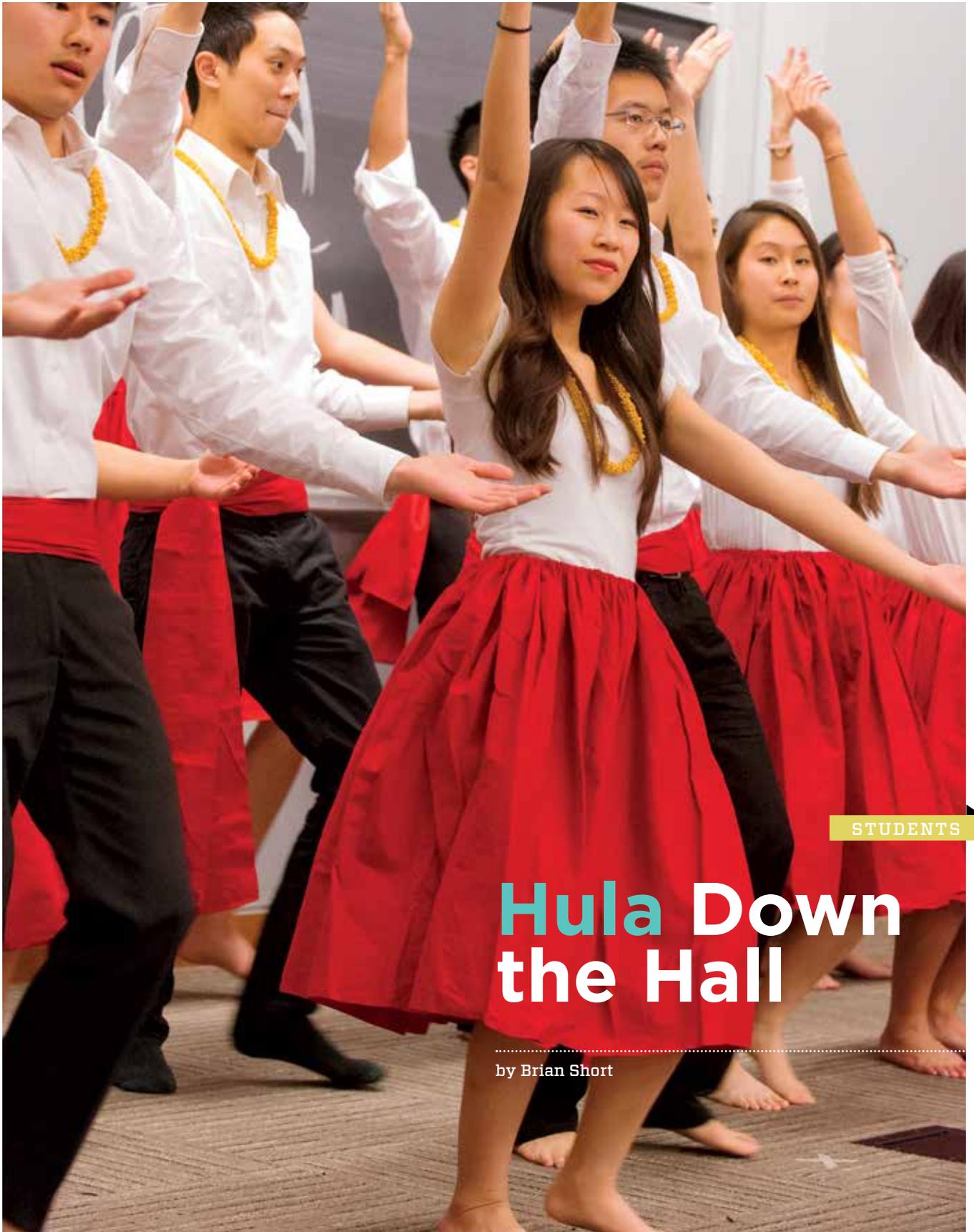
Egyptian protesters, partly inspired by Tunisia's example, occupied Cairo's Tahrir Square in January and February

2011, refusing to surrender it in the face of enormous pressure from government forces. This included an attack on the protesters by paramilitary forces riding horses and camels. Hosni Mubarak, whose regime had ruled the Middle East's most populous country since 1981, resisted for 17 days and then stepped down. Encouraged by these examples, discontented populations across the region rose up almost simultaneously, with massive demonstrations in Jordan, Yemen, Bahrain, Libya, Syria, and elsewhere. The Gezi Park protest in Turkey (see previous article) happened in 2013.

The hope that the pattern established by Tunisia and Egypt — of determined, peaceful protesters outlasting exhausted autocrats — failed to materialize elsewhere. In Libya, for example, demonstrators were attacked by Muammar Qaddafi's forces, and a transition to a democratic government only occurred after a sustained military intervention by NATO. In Syria, relatively small and peaceful protests were met with such an incredibly vicious response from Bashar al-Assad's secret police—a pattern of horrors including murders, kidnappings, and torture—that anti-government forces were galvanized, hurling the country into civil war following widespread unrest in spring 2011. The conflict continues today.

42.22° N, 83.75° W

From dancing to an *ipu* to Professor John Doe, our tour of campus starts here.



STUDENTS

Hula Down the Hall

by Brian Short

NEARLY 40 STUDENTS MARCH to the front of the Angell Hall auditorium. The male students are dressed in black slacks, a red sash belt, and a white shirt. The female students are dressed in full red skirts and white tops. They file onto the stage at the front of the classroom, organize themselves into rows, elbowing each other jokingly, goofing around until the music starts.

The music is rhythmic drumming and chant-like singing, performed by Amy Stillman, a two-time Grammy-winning songwriter and LSA professor of American Culture. Stillman sings and taps on the *ipu*, a Hawaiian gourd drum, while the students perform the hula, a traditional dance of native Hawaiian culture. The students move with bent knees and bare feet. Their hands are flat when face down, and cupped when turned up. As the capstone performance for the Approaches to American Culture course, it seems like the most fun end-of-semester project ever.

But Stillman says getting students prepared for a performance like this is hard work.

“They have to be exposed to a sufficient amount of movement vocabulary and develop an understanding of how movements are combined with poetic texts in order to complete the assignment,” Stillman says.

“These are very bright, intelligent students who have navigated an educational system that challenges the intellect. It’s really cool when they realize that their *movements* are part and parcel of ways of knowing and experiencing the world.”

In addition to getting students moving, Stillman says she also uses the opportunity to debunk the stereotype that “hula is some ha-ha shake-your-booty anything-goes free-for-all while wearing grass skirts and coconut bras.”

Her proudest moment, she says, comes “when students start telling me about having to face down the stereotypes when friends and family learn that they’re in a course on hula.” Stillman says her students can now explain what hula is and, even more importantly, what it isn’t. “Mission accomplished,” she says. ■



SEE MORE FROM THE HULA
CAPSTONE PERFORMANCE
www.lsa.umich.edu



(OPPOSITE PAGE) **LSA students perform** the hula in Angell Hall Auditorium B.

(ABOVE) **Students on stage.** Traditional hula is performed with drums, whereas a westernized version of the hula, called *auana*, includes the guitar, ukulele, and double bass.

(LEFT) **Stillman (right) with her *ipu*** gourd drum and a student. Stillman is a Grammy-winning songwriter, sharing her “Best Hawaiian Music Album” win in 2009 along with collaborators Daniel Ho and Tia Carrere of *Wayne’s World* fame.



FACULTY

No More Professor John Doe

Researchers with common names — think John Smith or Jane Johnson — may not get the credit they deserve when their work is cited, because they're confused with others with the same, or a similar, name. [U-M may be among the first institutions to streamline an ID service for its faculty](#), making it easier for them to share and get credit for their research.

NAMES CAN BE TRICKY.

At the University of Michigan, there are, at last count, 23 faculty named J. Lee, 19 named J. Kim, and 11 named S. Smith — all of whom must contend with the possibility that their work will be confused with that of another researcher.

“So when you multiply U-M by every other university in the world, figuring out who wrote what becomes a difficult challenge,” says U-M librarian Jim Ottaviani, who is part of a new project that develops identification to connect researchers unambiguously to their work.

The Open Researcher and Contributor ID project, or ORCID, creates identifiers that attach to a researcher forever, regardless of whether they change their name, move to a different university, or begin research in a different discipline.

“What can be more compelling than accurately matching a person with his or her research output?” asks Ottaviani, who manages Deep Blue, the U-M repository for scholarly and artistic work. “That would be awesome.”

The ORCID system is based on ResearcherID software created by Thomson Reuters, a company that publishes research journals. Efforts to globally integrate ORCID into research grew out of conversations between Thomson Reuters and Nature Publishing Group in early 2009. Since then, ORCID has become an international collaboration among academic institutions such as U-M, government agencies such as the National Institutes of Health, and charitable foundations such as the Wellcome Trust, along with scholarly societies and publishers.

ORCID identifiers may end up on manuscripts, funding applications, data sets, software, blog posts, Wikipedia entries, inventions, and other research output. Like a thumbprint — or perhaps more accurately a Social Security number — ORCID identifiers are entered into a database that’s traceable and searchable, and each ORCID identifier is unique to each person.

Researchers generally aren’t required to include an ORCID identifier with their submitted manuscripts and funding applications — yet. But when that time comes, the campus and its faculty want to be prepared.

The U-M library system supports the implementation of ORCID and has begun to work with Information and Technology Services (ITS) and others to integrate ORCID with existing systems on campus, such as MCommunity, a directory of people and groups at U-M. The University also acts as a voting member on the ORCID Board of Directors, so U-M will be able to create ORCID identifiers for all researchers and potentially students on campus, making the process easy for everyone.

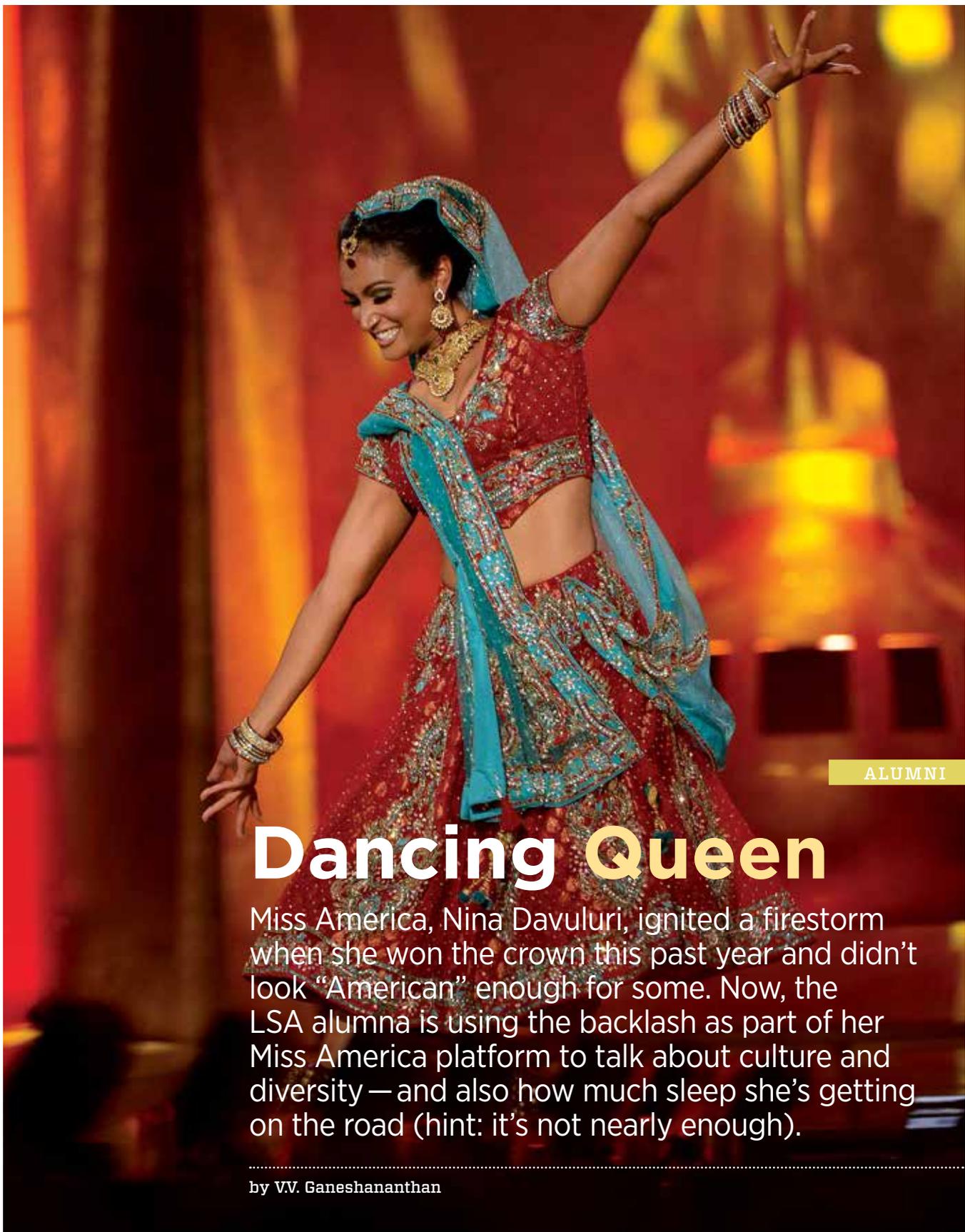
“At a public institution, there are additional reasons why you want your research to be discovered. Taxpayers fund the research, and at [U-M], we have a responsibility to share it. What does that mean for transparency and the University’s impact in this region, the University’s impact on the world?”

In addition to ensuring that scholarship gets attributed to the correct researcher, ORCID also gathers a researcher’s scholarly assets in one place. August Evrard, an astrophysicist with appointments in LSA’s Departments of Physics and Astronomy, doesn’t worry much that his work will be confused with that of another researcher; his name is pretty uncommon. But ORCID still has value for Evrard because, he says, research is moving beyond traditional books and articles to include products like software and shared data sets.

“That means that I can get a 360-degree view of what someone contributes to research,” Evrard says. “To me, that’s the core reason why ORCID can be successful. It helps you as a scholar shine a light on all the things that you’ve done, and it makes sure that the digital record reflects correctly on your contributions.”

Elaine Westbrook, an associate librarian for research at U-M, believes that a comprehensive list of scholarly assets is important for researchers to have and to share. She notes, “At a public institution, there are additional reasons why you want your research to be discovered. Taxpayers fund the research, and at [U-M], we have a responsibility to share it. What does that mean for transparency and the University’s impact in this region, the University’s impact on the world?”

Westbrook reflects, “In 500 years, all these things will be accessible because we made the decision today that this is important.” ■



ALUMNI

Dancing Queen

Miss America, Nina Davuluri, ignited a firestorm when she won the crown this past year and didn't look "American" enough for some. Now, the LSA alumna is using the backlash as part of her Miss America platform to talk about culture and diversity — and also how much sleep she's getting on the road (hint: it's not nearly enough).

by V.V. Ganeshanathan

THERE SHE WENT, MISS AMERICA. Glowing in her sunny yellow gown. Waving her pageant wave. Smiling her Big House-sized smile. Dancing her Bollywood dance.

The girl next door has a new look, courtesy of Nina Davuluri (’11), the first Miss America of Indian descent. Part of what wowed Miss America judges was the talent portion of Davuluri’s program: Fusing Bollywood and classical Indian styles, she danced to the song “Dhoom Taana,” from the movie *Om Shanti Om*.

Putting her cultural background on center stage was a purposeful move. Davuluri grew up in St. Joseph, Michigan, where she says she was “one of maybe three Indian kids.” Childhood visits to her parents’ native India gave her the opportunity to study *Bharatanatyam* and *Kuchipudi*, classical Indian dance styles. After graduating from St. Joseph High School in 2007, she matriculated at

Michigan State; after a year there, she transferred to the University of Michigan, where she found an extracurricular home with the Indian American Student Association. She joined the board and coordinated the group’s

(PREVIOUS PAGE) **Nina Davuluri dancing** in the Miss America pageant’s talent competition with a performance that fused Bollywood and classical Indian dance styles.

(BELOW) **Davuluri beaming** after her Miss America win. She hopes to use the attention that she has gained from the pageant to promote a range of issues including women in science and support for the arts.

cultural show, an experience that still makes her face light up.

Before winning the national title, Davuluri was first Miss Syracuse and then Miss New York. In 1983, the first black Miss America, Vanessa Williams, followed the same path. Davuluri won the national pageant three decades later to the day (as she happily noted during an appearance on the television show *Live with Kelly and Michael*). She has made the platform for her year as Miss America “Celebrating Diversity through Cultural Competency,” enlarging the conversation about race started by her famous predecessor.

Such conversation is still sorely needed. While Davuluri’s groundbreaking victory was met with plenty of Asian American (and Indian) elation, it has also seen its fair share of backlash. In the wake of Davuluri’s success, many people took to Twitter wondering why Miss America didn’t look “American.”

Davuluri supporters were outraged at the idea that Miss America had to be white, but Davuluri herself, who is active on Twitter, was neither surprised nor daunted; she’d faced similar



reactions as Miss New York. “There’s nothing wrong with sharing my culture and heritage,” she says firmly.

Although she has an official platform as Miss America, Davuluri is also mounting a multi-pronged attack on a variety of other issues close to her heart. She says she is the first Miss America to go into a STEM-related field — her LSA major was brain behavior and cognitive science — and she is interested in promoting women in science. Her efforts and role as a pageant queen may prompt mixed feelings for some: When she spoke about women in science, she also mentioned that one pageant sponsor is a cosmetics company that will let her design her own lip gloss in a lab.

She has been vocal about her history as a bulimic, her efforts to become healthier, and her recognition that many people did not pay her the same kind of attention when she weighed more.

Davuluri’s interest in brains doesn’t preclude talking about beauty, and her openness about various aspects of her background has cleared space for some tough conversations. She has been vocal about her history as a bulimic, her efforts to become healthier, and her recognition that many people did not pay her the same kind of attention when she weighed more. “I was 55 pounds heavier and I was treated very differently,” she says.

Nor is her weight the only aspect of her appearance up for discussion. After she was crowned, some Indians asked whether the dark-complexioned Davuluri could have won a pageant in her parents’ native country, where skin-lightening products remain popular and lighter skin has long been problematically prized. Davuluri wants her success to encourage girls in India to address issues of bigotry related to skin color.

Add to this her support for the arts and her interest in mental health issues and awareness, and it’s clear that Davuluri’s Bollywood dance card is getting full. Increased visibility and influence come at a cost, though — it turns out that life on the road is grueling. “When you win Miss America, all your relationships suffer,” Davuluri admits. She is now the keeper of a journal that has been passed from titleholder to titleholder. Her own entries in it began as elaborate sentences; now, however, she’s whittled her contributions down to bullet points. When she has a few minutes, she’s grateful for a snooze.

Still, she has a future to plan. In November 2013, six weeks into her reign, Davuluri returned to her alma mater, speaking to a packed house at the India Business Conference. There, she told the crowd that her Miss America scholarship money will pay for medical school — and yes, Ann Arbor’s back on her list. ■



MORE THAN JUST A PRETTY FACE

MISS AMERICA’S INFLUENCE EXTENDS BEYOND THE CROWN

Vanessa Williams

Miss America 1984

Mission: **To find her voice**

The first African American Miss America, Williams (pictured above) went on to a successful acting career. As a singer, she scored a hit single with “Save the Best for Last”

Heather Whitestone

Miss America 1995

Mission: **To bring good news**

Whitestone, the first deaf contestant to win Miss America, is an advocate of hearing-related issues and the author of four religious-themed books.

Nicole Johnson

Miss America 1999

Mission: **To educate the world about diabetes**

A Telly Award-winning journalist and author, Johnson has helped raise more than \$26 million for diabetes research.

Erika Harold

Miss America 2003

Mission: **To reduce the nation’s debt**

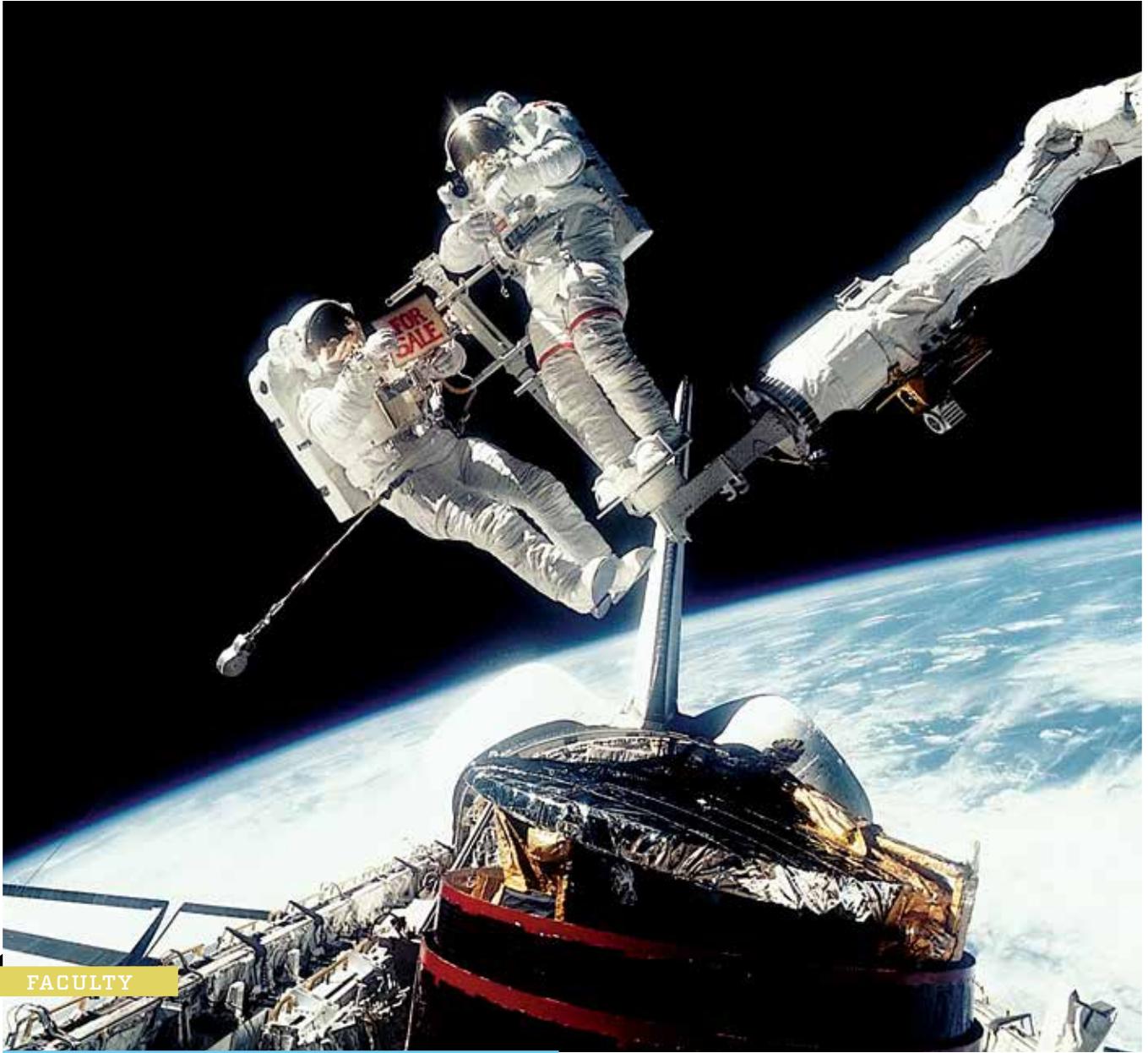
A Harvard Law School graduate, Harold ran to represent the 13th District of Illinois in the House of Representatives in 2012.

Lauren Nelson

Miss America 2007

Mission: **To catch a predator**

After winning the crown, Nelson posed as a teenager online to help cops bust Internet predators.



FACULTY

Polluting the Heavens: The Problem of Space Junk

When the Soviet Union launched a satellite into orbit in 1957, Sputnik was the first human-made object in outer space. In the half-century since then, thousands of satellites have entered orbit around Earth, which has yielded a new challenge — increasingly crowded orbits crammed with space debris.

EVEN BEFORE A SATELLITE MAKES ITSELF USEFUL IN SPACE, it leaves a trail of litter in its wake. A satellite hitches a ride into orbit aboard a launch vehicle, which jettisons its spent engines, one by one. Pieces of the dismantled rocket continue to orbit Earth, creating a floating trail of discarded bolts and tanks in outer space.

Some of those rocket engines may not yet be entirely empty of fuel. When leftover chemicals mix or pressure builds up in an old tank, the resulting burst multiplies one piece of space flotsam into hundreds or thousands of spiraling shards, creating even more orbital junk.

The satellite payload, meanwhile, separates from the launch vehicle and circles Earth in a prescribed orbit. Throughout its functioning lifetime, a satellite might help you get directions using GPS, check the weather, or watch an international sporting event on TV. After about 10 years, the satellite dies. Often, it is decommissioned and abandoned, left to circle Earth unattended as a “zombie satellite.” Zombies clog useful orbits, and their crisscrossing trajectories may intersect with other space objects at just the wrong moment.

/ CRASHING SPACE JUNK

Collisions happen. In 2009, an accidental, unpredicted crash between a defunct Russian satellite and a live U.S. communications satellite sent splinters of debris every which way. That one moment of impact congested the surrounding orbits with more than 2,000 trackable pieces of space debris, along with countless smaller pieces.

By far the biggest upsurge in space debris was intentional. In 2007, a Chinese anti-satellite weapon test-blasted a dead weather satellite into smithereens. A high-velocity cloud of debris formed immediately, comprising some 3,000 visible fragments and countless more, each of which careened into its own separate orbit.

Any orbiting object that does not perform a useful function — discarded rocket pieces, zombie satellites, shards from satellite collisions and dismemberments — becomes space debris. What once seemed like a vast, empty, infinite belt of outer space has turned out to be an increasingly scarce natural resource, especially in terms of elbow room for orbiting satellites.

And when the space gets scarce in outer space, things can get really bad really fast.

/ RUNNING OUT OF SPACE

A cascade of satellite collisions produces a chain reaction known as the Kessler syndrome, which causes an exponential increase in the number of space objects orbiting Earth. In this scenario, the resulting population of space junk won't stop multiplying, even if humans quit launching new satellites.

Have we passed the point of no return? We're not to that point yet, says LSA Astronomy Professor Patrick Seitzer, but we do

need to take measures to control the amount of debris in space. He notes that the highest densities of space debris occur in two orbits — low Earth orbit (LEO; where important satellites like the International Space Station and the Hubble Space Telescope hover) and geosynchronous orbit (GEO; the orbit of choice for communications and weather satellites).

Seitzer studies debris at GEO, which contains a special orbit above the equator called the geostationary orbit. Satellites in geostationary orbit circle Earth in the same amount of time that the planet rotates, in a 24-hour cycle, which makes the orbit especially useful for applications like satellite TV. Geostationary satellites float directly above a single point on Earth at all times, so a satellite dish mounted on your house can receive TV broadcasts by staying pointed at one spot in the sky.

At an altitude of nearly 36,000 km (almost 22,500 miles), GEO is the most distant orbit with a notable number of artificial satellites. Only the brightest objects at GEO are visible without the use of ultra-powerful telescopes under the darkest of skies, which is why Seitzer conducts his research in Chile. At the Cerro Tololo Inter-American Observatory, Seitzer uses U-M's Curtis-Schmidt telescope in a NASA-supported project called MODEST (for Michigan Orbital DEbris Survey Telescope) to track space debris as small as 20 cm (about 8 inches) at GEO. He can view even smaller objects at Las Campanas Observatory, using the twin Magellan telescopes owned jointly by U-M. Seitzer studies the distribution of space objects in GEO and whether their numbers are increasing, with the aim of preventing collisions in orbit.

/ HOW TO CLEAN YOUR ORBIT

Tracking existing pieces of space debris is one way to keep live satellites and orbiting astronauts safe from impact; active removal of space debris is another. Special spacecraft can retrieve zombie satellites from space, deliberately burn them in Earth's atmosphere, or kick them into unoccupied “graveyard orbits.” But when it costs \$3,000 to send something the size of a soda can into orbit, space junk cleanup missions are a last resort.

Prevention may be the easiest method of reducing space debris. Engineers can design launch vehicles to minimize jettisoned debris in the first place, and engineers on the ground can prevent accidental explosions by remotely draining and venting spent fuel tanks.

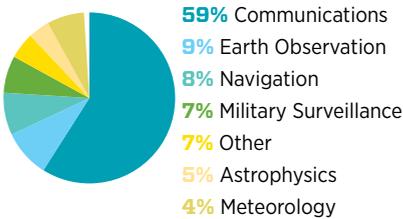
In any case, one thing is clear: As humans surround Earth with a floating landfill, we will need to come up with more innovative, and more desperate, ways of clearing out that same space to keep our satellites working. If not, all the critical things that satellites make possible — communications, satellite TV, GPS navigation, weather reports, military systems — could get lost in contemporary constellations of tumbling space junk. ■

Satellite Demolition Derby

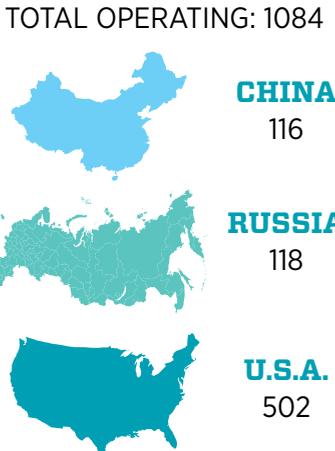
The first accidental collision of two intact spacecraft occurred between Iridium 33, an operational U.S. communications satellite, and Kosmos 2251, a dead Russian satellite. They smashed into each other on February 10, 2009.

It was the first collision — but it won't be the last.

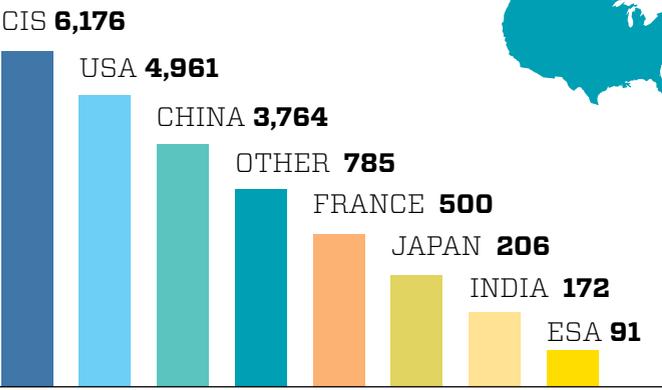
TYPES OF SATELLITES:



SATELLITE QUICK FACTS:



TRACKED SPACE OBJECTS



Source: Union of Concerned Scientists and NASA.

EXTRATERRESTRIAL SMACK-DOWN

- The Kosmos-Iridium crash was the first and only collision (so far) to involve two intact spacecraft.
 - The speed of the Kosmos-Iridium impact was more than 26,170 miles per hour. That's about 10 times faster than a bullet.
- Source: *Orbital Debris: A Technical Assessment*, 1995.

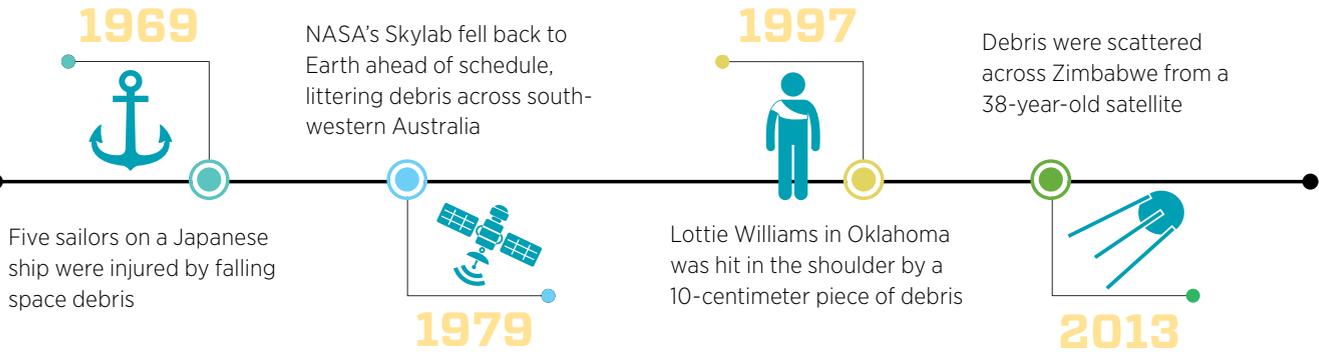
RE-ENTRY

- Every year, 200–400 pieces of debris reenter Earth's atmosphere.
- Almost 100 percent of the objects burn up before hitting Earth.

DEBRIS

- Debris hurl away from a collision site at a velocity determined by the direction of the objects relative to each other, their velocities at impact, and the angle at which they collide.
- Debris range in size from paint flecks to whole satellites.
- Cosmic collisions and explosions result in clouds of debris gradually spread out across space. Each fragment in a debris cloud ends up traveling in its own new, unique orbit.

TIMELINE





ALUMNI

Helping Survivors

On the reality TV show *Survivor*, contestants brave the elements, physical challenges, and one another for the chance at winning a million dollars by being the last one standing. LSA alumna Becky Lee landed on the show in 2006, but winning wasn't her only goal: She wanted to use *Survivor's* stage to bring awareness to victims of domestic violence.

ALUMNA BECKY LEE ('00) traces it all back to a lecture in the Women in Prison class she took during her junior year. The lecture that day was given by a U-M law professor whose practice included women imprisoned for murdering their abusive partners. The professor was describing a woman she'd defended, who had been repeatedly stabbed by her husband and then dragged screaming down the street by her hair. Many parts of the story horrified and upset Lee, but the part of the woman's experience Lee couldn't shake was that no one had stepped forward to help her.

Determined to do something to help, Lee started volunteering at the local women's shelter when she was an undergraduate. She distributed information about community resources outside of the Ann Arbor courthouse, and she trained judges and police to work with survivors in a supportive way. She found a dearth of legal resources available for battered women to deal with custody, immigration, and protection orders, so she went to law school to help meet that need. Lee felt like she was making a difference, but she wanted to make more of an impact.

Frustrated, Lee became a contestant on the reality show *Survivor* in 2006.

"I was recruited to audition for the show on MySpace," Lee says. "The show was popular, and I knew it

would be a great platform for talking about domestic violence."

As a contestant on the show, Lee balanced atop a pole her teammates carried through waist-high water. She stayed put inside a barrel as it bumped clumsily over logs, and she discussed domestic violence at every opportunity.

"I talked about domestic violence issues on the show from day one. Raising awareness was my objective, and it showed the other contestants who I was and gave them a reason to trust me. And after my season had ended, I got to use the follow-up media spots to talk about my work as a lawyer with domestic violence survivors. Sadly, one of the biggest issues surrounding domestic violence is that, unless someone has been murdered or suffers some kind of headline-grabbing tragedy, no one talks about it," explains Lee. "So the chance to use the show's national platform to talk about it was a big draw."

Lee's third-place finish garnered \$85,000, which she used to start Becky's Fund, a nonprofit organization whose mission is to

fight domestic violence proactively. She persuaded her season's winner, Yul Kwon, to donate \$25,000 of his prize money to the organization, and he joined the Becky's Fund Board of Directors, too.

Becky's Fund approaches the problem of domestic violence through a

(PREVIOUS PAGE) **Becky Lee** used the money she won on *Survivor* to start Becky's Fund, a nonprofit dedicated to reducing and preventing domestic violence.

(THIS PAGE) **Lee** (bottom row, third from the left) and other Becky's Fund volunteers don black gags to illustrate an important point: One in three women is affected — and often silenced — by the issue of domestic violence.



range of strategies and programs such as Men of Code, a mentoring program directed toward high school athletes, and

violence rather than just react to it. “One advantage to starting Becky’s Fund was getting to ask different

““Sadly, one of the biggest issues surrounding domestic violence is that, unless someone has been murdered or suffers some kind of headline-grabbing tragedy, no one talks about it.””

Peace at Home, a program that partners with mental health professionals and the military. There’s also financial literacy support, which provides domestic violence survivors the practical budgeting and planning skills they need to create a safety plan to leave — and stay away from — their abusers. In this way, Becky’s Fund takes steps to prevent domestic

questions. It wasn’t, why doesn’t she just leave, but why does he get away with abusing and how can we prevent that? What are kids being taught — or not being taught? What are they not being told? And coming up with different programs to get at the answers.”

Lee has not been personally affected by domestic violence, and she’s often asked

why she’s so passionate about preventing it. “Everyone wants to be in love,” she explains. “It’s fundamental to being human. Domestic violence targets people when they are at their most vulnerable. It limits the person you can become, and, for already vulnerable groups, it’s very difficult to overcome.

“People often say, oh, I should have known,” Lee continues. “Because there are warning signs, and that person you sit next to at work, who you hang out with — they’re often just waiting for someone to ask, is everything okay? What’s going on?”

“I want to help shape a world where people do ask these questions,” she concludes, “and then I want to help make a world where no one ever needs to.” ■

(BELOW) **Before Becky’s Fund**, Lee worked as a volunteer at a women’s shelter, distributed information about community resources, and became a lawyer to better help women victimized by domestic violence.



by Susan Hutton



ALUMNI

We Meet Again, Dory Gannes

In 2006, *LSA Magazine* introduced readers to an LSA senior who had just returned from an internship in Tanzania and had started a small nonprofit. Eight years later, Dory Gannes has turned that small project into a long-term commitment to help some of the neediest kids in the small village of Olevolos, Tanzania. In addition, she's expanded her international work to help girls around the world. We thought it was high time to give Dory Gannes another look.

IN THE FIRST TWO YEARS of the Olevolos Project, Dory Gannes (’07) was repeatedly betrayed, swindled, lied to, and intimidated. She was threatened by a man wielding a club and pretending to be a security guard, who’d been hired to frighten her. A lawyer she’d hired failed repeatedly to file essential papers and asked, again and again, for more money. When Gannes finally refused to pay more he responded, “My dear, this is not how business is done here in Tanzania.” So Gannes found someone else.

Gannes first appeared in *LSA Magazine* in 2006, after she completed a summer internship teaching English in Tanzania. She’d just started what she originally named the Yatima Project — “yatima” being the Swahili word for orphan — that aimed to use chickens to sustainably provide food and funding for multiple Tanzanian orphanages.

“I built the first three chicken coops and realized they were nicer than the homes where the kids were living or the schools they were attending,” Gannes says. So she scaled up: She raised more money, bought two acres of land, and built a building to house a joint primary school and community center. In 2007, the Olevolos Project was born, benefiting some of the neediest children in the small village of Olevolos.

Over the next five years, the Olevolos Project grew. At its height it employed 10 local Tanzanian staff to run myriad programs from a nursery school to an adolescent girls’ group to a livestock and agriculture project. Gannes has scaled down the broad range of programs to focus on creating an environment that provides 24-hour care and a good education.

Today, Olevolos gives 23 children, nearly all of whom are orphans, the chance to go to a private school 45 minutes outside the village. It also provides whatever additional support the students need, including food, uniforms, tutoring, books, and a community of caring supporters.

It’s critical work in a country beset with issues, from corruption to a lack of infrastructure to widespread poverty. In the 1990s, Tanzania’s education reforms made primary school available to everyone, but it didn’t create provisions for about half of the nation’s children whose families could not afford the mandatory fees for uniforms or books. Gannes says that more than half of students in Tanzania never make it through primary school. But Gannes is confident that she can, with help, get all 23 Olevolos kids through primary and secondary school.

Gannes is working to meet these objectives while also carrying out a full-time day job. Until April 2014, she worked as a partnership officer at Girl Up, a United Nations campaign headquartered in Washington, D.C.

Girl Up encourages American girls to fundraise, advocate for, and teach others about the issues adolescent girls face globally, such as child marriage, teen maternal death rates, and access to education.

“The principle behind Olevolos and Girl Up are similar,” says Gannes. “Investing in kids’ education makes a big difference to everyone in the community. Girl Up gives me the chance to do this work on a broad scale; in Olevolos I see it play out with kids I know.”

Each year, Gannes makes one or two trips back to Olevolos. Between visits, the Olevolos Project’s on-site director oversees day-to-day operations and talks to Gannes over Viber (video chat) two or three times per week, depending on what’s happening on the school calendar. Last summer, Gannes designed and led an Olevolos Camp, taking the kids canoeing, camping, and on a safari.

Gannes also fundraises, helping connect donors to the kids they support. Equally as important, she connects the kids to the broader world where their dreams of becoming a pilot or a safari guide are possible, supported, and nurtured.

Since graduating from LSA, Gannes has received two master’s degrees — one in international development and human security from Tufts, and one in education from Harvard — but it was the help and support of friends at the University of Michigan that launched her global and nonprofit experiences.

“Our first [Olevolos] benefit was at the Michigan Theater — filled with Michigan students and professors and Ann Arbor families. The Michigan community has always provided our biggest fans.

“I hope it always will be that way,” she says. “I hope Michigan will always support our work, inspire us, and encourage us. Michigan is a huge part of Olevolos. I even painted the buildings [in Tanzania] maize and blue.” ■

SEE A SLIDESHOW OF PHOTOS FROM THE OLEVOLOS PROJECT
www.lsa.umich.edu

(PREVIOUS PAGE) **Dory Gannes** with four children helped by the Olevolos Project, which Gannes founded.

(RIGHT) **The Olevolos Project’s summer camp** included activities such as camping, camel riding, and canoeing, exposing many campers to the world outside of their village for the first time.



by Susan Hutton



ALUMNI

The Unlikely Recruit

Ryan Friedrichs spent 10 years doing nonprofit work that made him a national name in the world of civic engagement. And then he surprised almost everyone by leaving it to enlist in the Army's airborne infantry.

IT WOULD HAVE BEEN HARD TO FIND a more unlikely recruit than Ryan Friedrichs.

Friedrichs ('99) spent the first 10 years of his post-college career working to engage young voters and other underrepresented groups in Washington, D.C., and Detroit. He got a master's in public policy at Harvard's Kennedy School and made a national name for himself in the world of civic engagement, finding real success in a highly competitive field. Then he surprised almost everyone by leaving it to enlist and serve in the Army's parachute infantry company, 173rd Airborne Brigade.

On its face, the decision looks like a wild turn away from a carefully curated career. But Friedrichs sees it instead as keeping his professional life aligned with his ideals — in this case, spreading out the deployment burden by offering his own shoulders to help carry its weight.

“Year after year I'd watched too small a group of soldiers carrying too heavy a deployment load for way too long. And, as so often happens, it looked like the underprivileged were carrying the burden and the privileged were on the sides. To me, it looked like those carrying the heaviest weight were those in the infantry — the airborne enlisted infantry to be even more specific. And that's where I ended up heading.”

Friedrichs had thought about enlisting since September 11, 2001. He'd considered it while he completed his master's, and during the years he worked as the executive director of the grassroots organizations State Voices and Michigan Voice. When he completed the five years he'd pledged to the organizations, he found himself still drawn to serve. He discussed it with his wife, Jocelyn Benson, who is currently the interim dean of Wayne State University Law School in Detroit, and they agreed 2010 was the right time for him to enlist.

Friedrichs signed up for a three-year tour of duty plus additional training. His unit went to Afghanistan in July 2012, and remained there until the spring of 2013, when they returned to their base in



(OPPOSITE PAGE) **Soldiers from the 173rd Airborne Brigade** of the Army's parachute infantry company wait to board a C-17 transport aircraft in Italy.

(ABOVE) **Soldiers resting in the shade** while on tour in Afghanistan, waiting for helicopters to arrive and carry them to their outpost.

(LEFT) **Parachute infantry soldiers** often make jumps carrying a hundred pounds of gear strapped to their bodies.

Vicenza, Italy, where they are stationed today. In between his soldier duties, such as patrolling villages near the unit's outpost or jumping out of an airplane with 100 pounds of equipment strapped to his body, he's using his organizing experience and policy skills to think about what it will mean to integrate a million veterans into civilian life in the next few years.

To that end, Friedrichs wants to help round out the picture that's usually painted of returning vets. The record levels of divorce, the soaring rates of post-traumatic stress disorder, and the high suicide rates are accurate, but Friedrichs believes it's a mistake to keep the focus narrowed only on veterans' struggles. He wants people to know vets are also skilled,

hardworking, and potentially incredible employees.

“Veterans can lead and they can serve and they should be asked to do so. Too many people see veterans as possibly damaged goods,” he says.

For example, Friedrichs points to the resourcefulness of his fellow soldiers. His team learned Dari, the main Afghan dialect spoken where he and his team were operating, and they patrolled continually with Afghans. Every interaction they had required amazing reserves of intelligence, sensitivity, professionalism, and nerve — a set of skills that make veterans incredibly valuable employees.

“I would love to hire these guys. They are some of the most disciplined and responsible people I've ever met who've been through a tremendous number of complicated experiences.”

It's a topic to which Friedrichs hopes to

bring attention when he returns to the United States as a veteran himself in 2014.

Working in tandem with these goals is the nonprofit his wife recently started, Military Spouses of Michigan, which helps military spouses combat isolation and help one another. It's part of an overall goal to increase awareness and educate people about those who serve in the military.

"I know I want to continue to work on veterans' issues," Friedrichs says. He also notes that the timing is critical. "I feel like the next few years are a huge opportunity for us as a country. More than a million veterans will pour back into our ranks, a whole new generation of veterans coming into the United States. If we get their reintegration right, we strengthen everything—veterans and the country. If we get it wrong, we'll pay a heavy price for a long time." ■



(ABOVE) **Ryan Friedrichs** during a quiet moment between jumps in Afghanistan. He is slated to return from duty in December 2014.



Serving First

VETERANS COME FROM—AND GO ON TO— DIVERSE AND UNLIKELY CAREERS. HERE ARE A FEW FAMOUS VETS WHO YOU MIGHT NOT KNOW SERVED IN THE MILITARY.

Johnny Carson

Before making fortune-teller jokes as "Carnac the Magnificent," funnyman Johnny Carson decoded encrypted messages as a communications officer in the Navy.

Drew Carey

TV star Drew Carey served in the U.S. Marine Corps for six years before starting a successful comedy and acting career. Carey now gives away washer-dryer sets and glossy catamarans as host of *The Price is Right*.

Adam Driver

After 9/11, Adam Driver joined the U.S. Marine Corps. Now the actor has multiple movie credits, including *Lincoln* and *J. Edgar*, but is best known as Hannah's strange and obsessive boyfriend on HBO's *Girls*.

Morgan Freeman

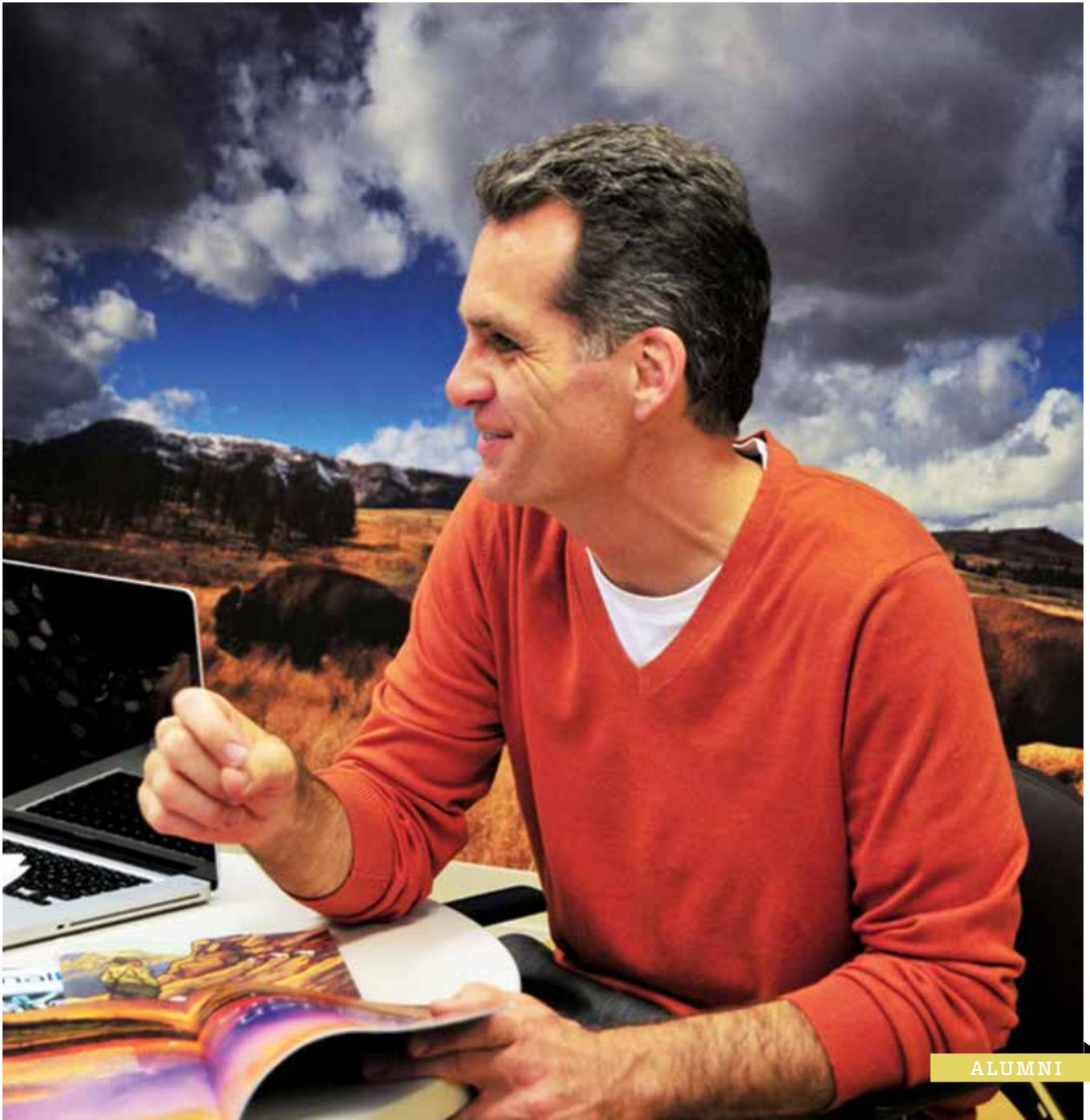
Oscar-winner Morgan Freeman served for three years in the Air Force. Despite having waited years for the opportunity to train as a pilot, Freeman decided against that career path, feeling, he says, like he was "sitting in the nose of a bomb."

Bob Ross

In addition to painting happy little trees and clouds, *The Joy of Painting* host, Bob Ross, also served in the U.S. Air Force, attaining the rank of master sergeant.

Julia Child

America's most famous chef and author of *Mastering the Art of French Cooking*, Julia Child worked with the U.S. government's Office of Strategic Services, a predecessor to the CIA, throughout World War II.



ALUMNI

Parks and Reputation

One alumnus ups the profile of the nation's national parks not through petitions or letter-writing campaigns, but with great design and powerful storytelling.

PLASTIC WAS STREWN ACROSS CALIFORNIA'S POINT REYES

National Seashore. Birds were pecking at it. Fish were swallowing it. And in 2012, *National Parks Magazine*, the quarterly publication of the National Parks Conservation Association (NPCA), featured it. On the cover.

If that sounds like a new approach to highlighting some of the issues facing national parks, it is. While writing letters or contacting elected officials might be the tried-and-true means of drawing attention to the parks' reduced funding, pollution, and development threats (to name a few of the parks' challenges), Scott Kirkwood ('90), editor-in-chief of *National Parks Magazine*, is trying to raise awareness through quality design and engaging storytelling.

"I think that people assume that the national parks publications are only going to show landscapes and animals, but we're also trying to convey complex issues," Kirkwood says. "The goal is to make it more likely that people will get hooked into a story, and care about what we're presenting to them."

That means covering not just the sights to see and the trails to hike, but nuanced topics such as the changes in ecology since reintroducing wolves into Yellowstone, or the intersection of road construction and animal deaths in the parks. "I'm always drawn to stories where there's some kind of conflict, and some kind of layer to it, versus just 'here's this horrible thing and the NPCA is fighting it.'"

The new approach has involved a visual and editorial overhaul of the magazine more than once, and on a shoestring to boot. The small staff of three produces much of its own content, with Kirkwood himself acting as a writer, editor, and self-taught photographer. They've also expanded to digital storytelling through short videos and infographics featured prominently on social media.

The efforts have won Kirkwood and his team a slew of awards

from *FOLIO Magazine*, a vanguard publication in the industry, and Kirkwood has been invited to speak about his insights at the "How" design conference, among others. What's more, overall subscription rates have increased by more than 30,000 and letters to the editor are on the uptick too, many of them largely positive about the new approach. "We're a nonprofit, so the goal is to get more members and support," Kirkwood says.

A psychology major and *Michigan Daily* writer, Kirkwood's first job after graduation was editing coupon books. A move to the Washington, D.C., area in 1994 landed him employment with the Humane Society of the United States and then the Child Welfare League of America. He joined the NPCA staff in 2004. "I always wanted to do something that would make the world a better place," he says.

Recently, an NPCA funding report, which reflected the same editorial and design care as *National Parks Magazine*, "ended up on Capitol Hill and the White House, and the White House had a really good response to it. Apparently, our government affairs office got calls from about a dozen congressional offices saying they wanted to learn more about funding challenges facing the parks."

It's welcome news for Kirkwood, since the parks' budgets have been reduced by around 15 percent in the past 10 years.

"I think it's so worthwhile to spend a little more time and a little more effort producing [these materials]," he says. "White space and beautiful type and stunning photographs almost force people to read a few lines, and then the words take over. Even if it can't be measured with a ruler, I think you can measure it by people's actions." ■

Additional reporting by Elizabeth Wason contributed to this piece.



The National Parks System was established by President Teddy Roosevelt, who, during his presidency, spent time in the Grand Canyon and Yosemite Valley. The National Parks System started with only five parks, but now comprises 401 different sites covering a whopping 84 million acres of parkland.



ALUMNI

Hammer Time!

Thor: The Dark World screenwriter Chris Yost talks about the transition from TV and comic books to the big screen, giving us a **firsthand account of the *Thor* set** (Natalie Portman, you guys!) and reflecting on his path to becoming a successful writer.

THE X-MEN. BATMAN AND THE AVENGERS. Spider-Man. These are the biggest names in the superhero business. And alumnus Chris Yost ('95) has worked with them all.

A veteran screenwriter of superhero cartoons, Yost has written for shows such as *X-Men: Evolution* and *The Avengers: Earth's Mightiest Heroes*. Recently, he made the transition from Saturday morning to the cineplex, writing the screenplay for Marvel's live-action blockbuster, *Thor: The Dark World*, which has grossed more than \$644 million worldwide — \$190 million more than the first *Thor* movie.

Such massive and diverse successes peg Yost as a natural writer, but the truth is that it took some time for his career to take shape. For example, he entered LSA as a computer science major, but he quickly found it wasn't a good fit. Stuck for ideas, he started flipping through the course catalog.

"I found some film courses. I was like, hey, I like movies. I started taking classes in film and video [in the Department of Screen Arts and Cultures]."

Yost enjoyed his coursework, but growing up in a middle-class family made chasing an artistic career seem irresponsible or impossible or both.

"I wrote one screenplay that I was really happy with, but I never really considered being a writer a potential profession. Wanting to be a writer was like wanting to be an astronaut."

After graduation, Yost worked in advertising in Detroit, producing TV and radio commercials, but it wasn't until he moved to California and enrolled in a film business program that he discovered his passion for writing.

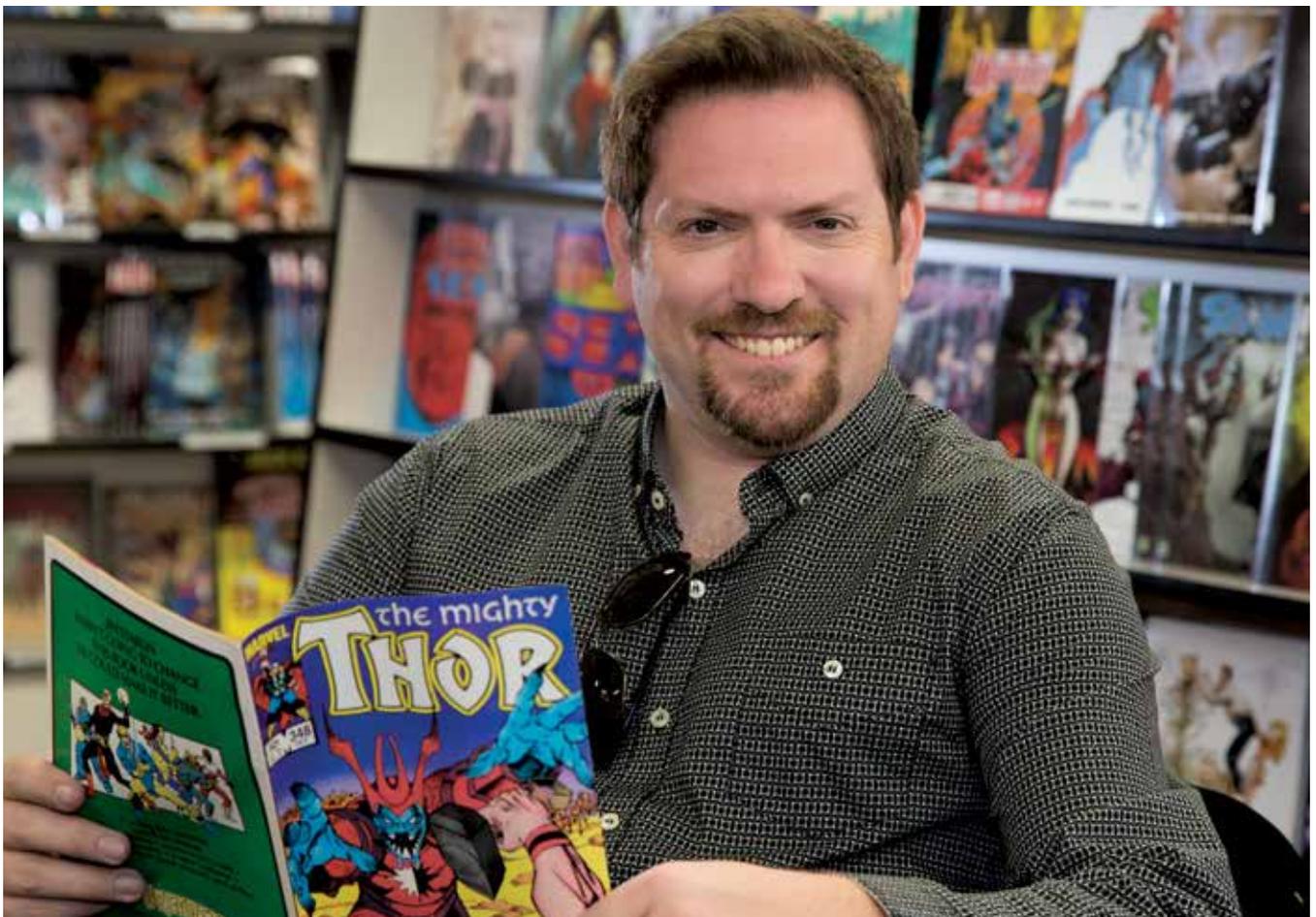
"There was this one class there on how to deal with writers. We had to write five pages of a screenplay — to see how

writers felt while they were working — and I wound up writing two whole screenplays. That's when I figured out that I really enjoyed it."

Around this time, Yost contacted the Los Angeles office of Marvel Comics. He interned with them, and then wrote TV scripts as a freelancer. Eventually, they brought him in to work on developing the company's properties into movies.

By the early 2000s, Marvel had licensed many of its most popular superhero properties to movie studios — including the X-Men to Fox and Spider-Man to Sony — but it also had a bullpen of popular heroes with major name recognition. The company decided to make its own movies as Marvel Studios, and with *Iron Man*, *The Incredible Hulk*, *Thor*, *Captain America*, and *Marvel's The Avengers*, they created a sprawling, shared movie universe.

Yost says that working in such a massive



“It’s such a rare thing to have your writing produced, and I was really very conscious of how special it was to have some of the best actors working today — Anthony Hopkins, Chris Hemsworth, Natalie Portman, Tom Hiddleston — performing my lines. Whatever you write, they’re going to bring so much more to it.”

and popular world doesn’t intimidate him, and it doesn’t negate the challenges that he faces as a writer.

“No matter what the medium is, you’ve got to know what your character wants; you’ve got to have compelling scenes. At the end of the day, the real, human issues are always the same.”

FROM WORDS TO REALITY

Thor: The Dark World was fun and challenging to work on, Yost says, but his favorite part by far was seeing the world of the movie being built. The movie is set partly in Asgard, a mythological realm where the Norse gods live, a city exploding with brightly colored buildings and gleaming towers. The outfits that the Asgardians wear are half *Lord of the Rings* and half *Flash Gordon* — layered like medieval armor and shiny as a ray gun. Seeing his words come to life was an experience Yost won’t forget.

(OPPOSITE PAGE) **As a kid, Chris Yost loved comics**, especially *Secret Wars* and *Spider-Man*. Now, in addition to writing *Thor: The Dark World*, Yost has written a number of comic series for Marvel including *Uncanny X-Force*, *Scarlet Spider*, and *New Warriors*.

Yost and longtime collaborator Craig Kyle have also been tapped to write the third *Thor* movie, which could be in theaters as early as 2016.

“Being on location in London, and seeing the sets being built and the costumes being made, all based on what was on the page — that is a whole different thing.

“It’s such a rare thing to have your writing produced, and I was really very conscious of how special it was to have some of the best actors working today — Anthony Hopkins, Chris Hemsworth, Natalie Portman, Tom Hiddleston — performing my lines. Whatever you write, they’re going to bring so much more to it.”

Yost is grateful for the classes and the community that he had in LSA, a place that he credits with setting him “on the path” to becoming a writer.

“It was definitely liberating, being surrounded as I was with people who were just incredibly creative in different ways. It really opened me up to the potential of art, and I’m so grateful that, even back then, they had that kind of Screen Arts program available.”

Now, Yost is hard at work on the script for another action movie, *Max Steel*, based on the popular toy and cartoon series about a boy and his alien friend. Meanwhile, Thor will return in *The Avengers: Age of Ultron* in May 2015. After that, Yost will co-write *Thor 3* with long-time collaborator Craig Kyle. ■



WRITERS’ BLOCK M

Wolverines behind the scripts in Hollywood and beyond

LSA graduates have a long history of success in Hollywood. Famous alumni screenwriters include *Superman’s* **David Newman** (’58), *The Empire Strikes Back’s* **Lawrence Kasdan** (’70), *Love and Honor’s* **Jim Burnstein** (’72), and *American Pie’s* **Adam Herz** (’96).

But there are also plenty of LSA alumni writing for smaller screens on TV and online.

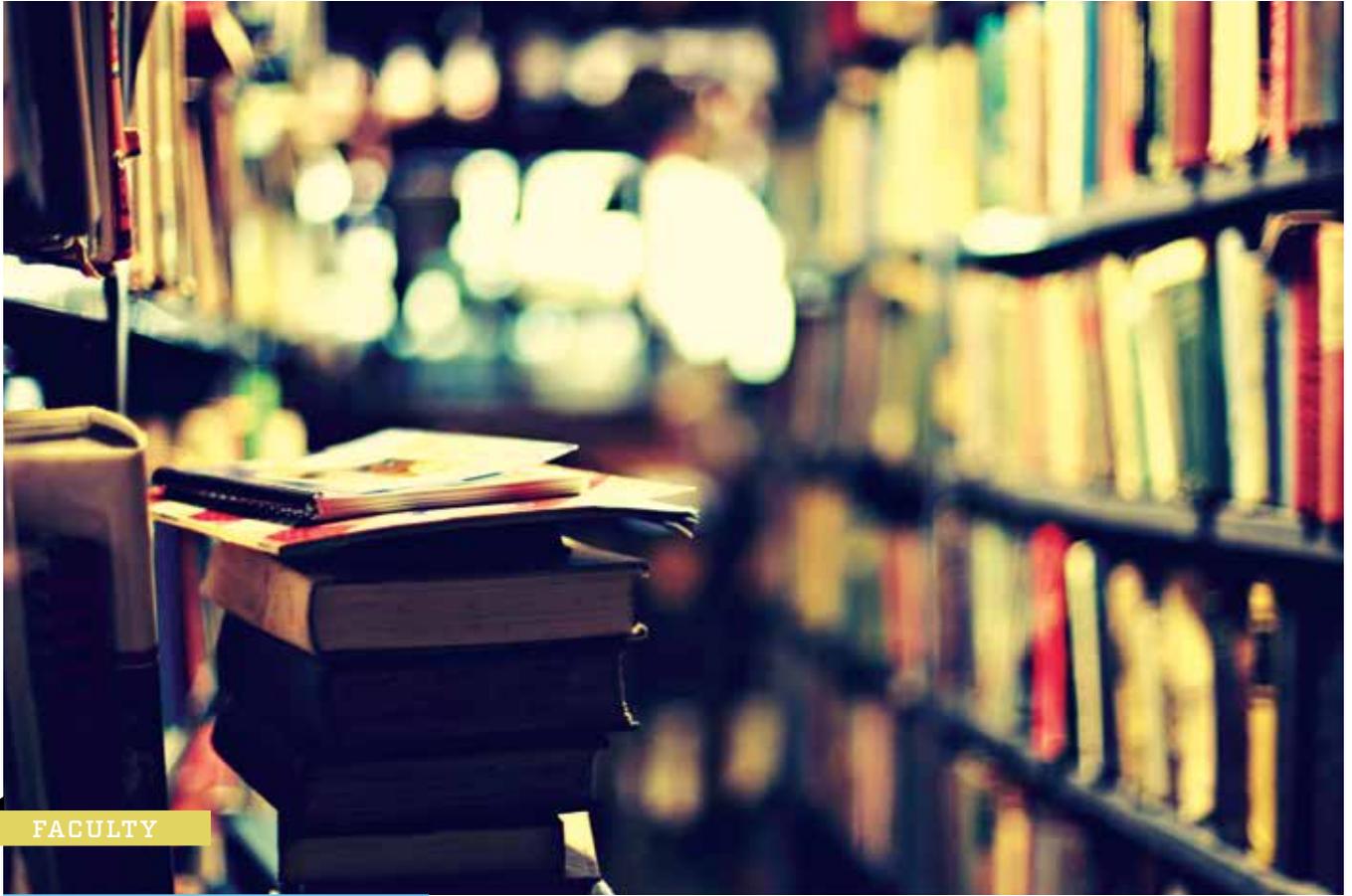
Megan Ganz (’06, pictured above) has written for NBC’s *Community* and the multiple-E Emmy-winning show *Modern Family*.

Elwood Reid (’89, M.F.A. ’96) is the executive producer and co-creator of FX’s international serial killer drama *The Bridge*.

Michael Burke (’10) writes for the website *Funny or Die*, which was co-founded by *SNL* alum and *Anchorman* star Will Ferrell.

AMC’s newest drama, *Turn*, takes place during the American Revolution and features two LSA Screen Arts and Cultures graduates on its writing team: **Craig Silverstein** (’97), an executive producer on the show, writes alongside **Mitchell Akselrad** (’09), the youngest member of the writing team.

by Brian Short



FACULTY

The Bookshelf War

An LSA lecturer and author is caught in the crossfire between brick-and-mortar bookstores and Amazon.com.

IT'S NOT NEWS. MANY BOOKSTORES ARE STRUGGLING.

Experts point to two major reasons for the decline of local bookstores. The first is readers' steadily decreasing appetite for printed books. The other is Amazon.com.

Amazon, whose net sales amounted to nearly \$75 billion in 2013, is a global powerhouse. Now the company is publishing its own literary novels and short-story collections through a collaboration between Amazon's Little A imprint and Houghton Mifflin Harcourt's New Harvest imprint. Not surprisingly, many bookstores see Amazon as their main competition and refuse to stock Little A's books. For author and LSA lecturer Kodi Scheer (M.F.A. '08), whose short-story collection *Incendiary Girls* debuted last April from Little A and New Harvest, the news that some independent bookstores in Ann Arbor wouldn't carry the book was disappointing.

"I'll be honest," Scheer says, "there were some tears. But I know it's not personal. It's not about me."

Independent bookstores account for around 10 percent of all book sales; Amazon accounts for 29 percent, according to the American Booksellers Association. The Cold War between the two groups doesn't seem like it will end any time soon, as they each vie for more market share.

Scheer is part of an entire generation (one of the last) of writers who grew up with bookstores and libraries as their primary source for reading material.

"It was such a treat, going to the bookstore. My mother took me once a month, and that's how I discovered new books. On the shelves."

While Scheer's book won't be on as many brick-and-mortar store shelves, she will have the resources and support of the largest bookseller on the planet behind her.

"I hope that Amazon's reach will be able to find me new readers and that that will outweigh the challenges of not having the physical book in many bookstores."

One early bit of good news, though — Prairie Lights in Iowa City, Scheer's childhood bookstore, will carry her collection, where readers can encounter it right there on the shelf, exactly where Scheer had always hoped it would be. ■



FACULTY

In Pursuit of The **Holy Braille**

In this tale, the knights are three professors and a graduate student. Their quest: to find The Holy Braille, a touch-based technology that will increase literacy, education, and access to information for future generations of blind people. And make some cool electronic drums, too.

by Susan Hutton

MCUBED: THREE BRAINS ARE BETTER THAN ONE

The MCubed program aims to foster faculty collaboration and shorten the time between research conception and research results. The program provides seed funding for projects that will have a broad impact and that include three faculty members from at least two different units. Current MCubed projects include imaging fleeting thoughts in the brain, measuring body shape change in children as they grow, and tracking livestock-borne diseases in Kenya. The projects are as varied as the imaginations of the University's professors, with the only link being a cooperative effort to push limits, expand knowledge, and improve lives.

IT SOUNDS LIKE A JOKE: What do you get when you put two engineers together in a room and then add a percussionist? At U-M, you get the quest for The Holy Braille, an interdisciplinary collaboration that aims to improve responsive surface technology for digital percussion instruments — think electric drums — and electronic Braille readers. It may seem like an odd and unlikely partnership, until you think about what they have in common: Both projects rely on a nuanced sense of touch.

The key to the partnership may be in haptic feedback. The word haptic, originating in the Greek *baptikos*, means relating to touch or perception. Haptic feedback creates sensations, such as a vibration, that are controlled by software embedded within a device.

“It fascinates me that people without sight who use Braille have developed a highly refined sense of touch,” says Michael Gould, an associate professor of music with joint appointments in LSA's Residential College and U-M's School of Music, Theater and Dance, who is among

those spearheading The Holy Braille project. “As a drummer, I have that kind of sense of touch, too.” And it makes him an ideal ally in finding The Holy Braille along with his collaborators from the School of Engineering, Brent Gillespie and James Barber. Funding for The Holy Braille project has been provided by MCubed, a U-M research initiative that gives funding to teams of faculty from different disciplines (see sidebar).

/ A BETTER USER INTERFACE

Currently, e-Braille readers can only display one line of Braille at a time. It's the equivalent, for sighted people, of watching one line of text plod across a computer screen leisurely followed by another. The alternative — assistive, screen-reading software that translates written text to speech — is widely available, but listening to text is not reading. Listening does not develop literacy skills, and these skills are a significant predictor of academic and professional success in people, both with and without sight.



The MCubed team believes a better Braille reader boils down to its actuators, which are, generally, mechanical devices that convert energy into motion. Existing Braille actuators are bulky and lack the agility to support multiple lines of Braille. Instead, the MCubed team is working to develop microfluid actuators whose lithe, fluid components give the actuators the dexterity to raise a cluster of dots quickly against a single, flat membrane. And these refreshable dots will be legible and responsive to fingertips.

“The programmable surface technology behind both the electronic drum pads and the Braille e-reader is a step toward creating a user interface that uses our bodies and our brains’ capacity to think.”

The same technology would enable drums to be more responsive to the way the drummer plays them. “If you’re playing electronic drums now, you only get one type of response, regardless of how you interact with the drum pad, so it doesn’t influence your playing at all,” says Gould. The final frontier would be one where technology enables both the musician and the drums to respond and adjust.

“Much of the technology we use doesn’t allow us to think and learn through our bodies,” explains Gillespie. “The programmable surface technology behind both the electronic drum pads and the Braille e-reader is a step toward creating a user interface that uses our bodies and our brains’ capacity to think.”

Sile O’Modhrain, an associate professor of performing arts and Gould’s colleague in the School of Music, Theatre, and Dance, is another member of the team. An expert in human-computer interaction, she’s shaping the fit between the microfluidic technology and its application in human-computer interaction through Braille. O’Modhrain is a musician who has known Gillespie since graduate school. She is also blind, giving her a unique perspective on the changes the team faces.

All team members agree that the technology is a long way off, but that collaboration will let them reach it faster.

“The collective will make it work,” says Gould. “Not the individual. It’s hard to wrap your head around — that something you researched your whole career might end up being just a part of something bigger. I find that amazing.” ■

(OPPOSITE PAGE) **The Holly Braille team** (left to right) Michael Gould, Alex Russomanno, Sile O’Modhrain, Jim Barber, and Brent Gillespie. The team is pictured here in Brent Gillespie’s lab, where they worked to develop prototypes for new Braille actuators.



MUSIC AND MELTING ICE

Residential College professor Michael Gould is a voracious collaborator. He uses his training as a percussionist as part of The Holy Braille team. He has also collaborated with material scientists to explore the properties of metal cooled to extreme temperatures, and he has used the principles of rhythm to teach swimmers how to swim faster. Now, he’s entered into a new collaboration to help people think about climate change.

With Henry Pollack, an LSA emeritus professor of geophysics and co-recipient of the Nobel Peace Prize, and U-M musician and composer Stephen Rush, Gould created a multimedia installation in U-M’s Duderstadt Center in March of this year. The installation took its title and inspiration from Pollack’s book, *A World Without Ice*.

In this installation, multimedia artist Marion Traenkle used photographs of the North and South Poles taken by Pollack and his research team to create a film. The film was projected on a giant screen as a backdrop to the installation. Rush wrote an original musical composition to accompany the photographs, with musical patterns derived from 120 years of climate data. Additionally, Gould devised a unique percussion device for the event, a series of 10 ice domes melting onto drums. The sounds were then captured and amplified.

“We wanted to create something that wasn’t exclusively science or wholly music or art,” Gould says. “We wanted to create a space in which people would think about global warming differently, that might spark a new idea or generate a different kind of thought. Climate change is immense, and it’s hard to grasp. We wanted to place it on a human scale.”



WATCH A VIDEO OF THE *WORLD WITHOUT ICE* INSTALLATION
www.lsa.umich.edu

by Brian Short



ALUMNI

Around the World in 80 Buses (and trains and bikes and minibus taxis...)

THEY RODE BUSES IN BEIJING AND DETROIT. They sat in traffic in Manila. They borrowed bikes in India and rented cars in Cape Town. They used every form of public transportation that they could, and they did it across five countries and three continents, searching for a better way to get people from this spot over here to that spot over there.

But their trip started in Ann Arbor. Rebecca Guerriero ('13) and Logan Chadde ('13) pooled support from U-M's Graham Sustainability Scholars Program, Barger Leadership Institute, and SMART at the University of Michigan, which promotes sustainable transportation systems all over the world. Guerriero and Chadde traveled to the Philippines, China, Brazil, South Africa, and India to find out what people were doing to reinvent public transportation.

In many places, the solutions were similar. Hitch-a-ride mobile phone applications and bike-sharing projects were popular. But the problems that entrepreneurs faced were often locally determined. In Cape Town, for example, funding for starting new

businesses was scarce. In China, burdensome government regulations kept new companies from entering the market.

For five busy months, the pair worked: Guerriero conducted interviews and Chadde recorded video. Throughout their grueling, whirlwind world tour, they also helped keep each other sane.

"Sometimes, you just get tired," Guerriero says. "I'd be doing an interview and I'd blank on a question and Logan would jump in. Just having somebody there who can say it's all right when you're ready to give up and go home is really nice."

Now, the pair is working with SMART to sift through their material, pulling out common themes and challenges across the world. They have a photo travel blog — movingminds.in — and they are also working to produce a short documentary for SMART, which they hope to complete this spring and will "speak to the greater mission of public transportation around the world," says Chadde. ■



WATCH A VIDEO OF CHADDE AND GUERRIERO'S TRAVELS
www.lsa.umich.edu



CAMPUS

Riddle Me Schlissel

What do you know about U-M's new president? Take our quiz to find out!

BY NOW YOU MAY HAVE HEARD that U-M has a new president: Mark S. Schlissel assumes the U-M helm in July 2014. Welcome, President-elect Schlissel!

Schlissel is an accomplished researcher with M.D. and Ph.D. degrees from Johns Hopkins University. Serving most recently as the provost of Brown University, Schlissel was also the dean of Biological Science in the College of Letters and Science at U-C Berkeley.

Think you've read the media reports closely enough to know more? *LSA Magazine* delved deep into the president-elect's background to bring you this quiz. Test your Schlissel scholarship (say that 10 times fast) with these questions (answers at the bottom of the page). ■

1. The president-elect received his undergraduate degree in biochemical sciences from which of these Ivy League schools?
 - A Princeton
 - B Yale
 - C Harvard

2. The focus of Schlissel's research is in what area of medicine?
 - A Dermatology
 - B Oncology
 - C Immunology

3. Where was Schlissel born?
 - A Baltimore, MD
 - B Asheville, NC
 - C Brooklyn, NY

ANSWERS: 1. A, 2. C, 3. C

The Path Less Traveled

by Jeff Deikis ('08)



GRADUATING COLLEGE amidst the worst period of economic distress since the Great Depression should have been a downer. Footholds in the job market were crumbling and recent graduates were moving back in with Mom and Dad to make ends meet. But I felt strangely unaffected. My head was loaded with Jack Kerouac novels and grand illusions of travel and adventure. I owned a sleeping bag, a backpack full of rock climbing gear, and a rusty Ford pickup truck, which I loaded down and pointed west. Then I hit the road.

When I graduated from the University of Michigan in 2008, I became a willfully unemployed, vagabond rock climber. I moved from state to state, cliff to cliff, wall to wall, rock to rock. I slept in the bed of my truck and I woke with the rising sun. My mornings consisted of coffee, high-fives and the promise of adventure — climbing in the sandstone uplifts of the Mojave Desert, in the peaks of the Sierra Nevada, in Yosemite Valley. My nights were spent in hobo-climber jungles, crouched around the campfire

with the dirty and exposed, drinking cheap beer and talking excitedly into the night. We slept in the dirt, among the scorpions and sage bushes, lying in the inky purple darkness and staring up at the stars.

In this way, I spent years in joyful, penniless wandering. I learned how to live happily on a few dollars a day and spent my time in places familiar to most people only through the pages of *National Geographic*. If money got tight, I pulled some odd jobs — waited some tables, swung some hammers. Otherwise, I spent my time climbing and skiing, exploring the mountains. I learned self-reliance. I met countless inspiring people from all over the world. I learned things about myself that one could only learn dangling from a rope 600 feet in the air with no one around to hear you scream. Sure, I don't have a mortgage or a 401k or a fancy house in the suburbs with designer furniture, but I think I'm better for it.

Today, I manage western operations for the country's leading climbing and mountaineering nonprofit organization. It's a dream job, and one that would never have been available to me had I not followed my passions. But is this the endgame? I doubt it. Even with a great job, I know I won't be here forever. The open road is calling. Maybe I'll wind up in India or Nepal. Or maybe I'll live in a shack on an island somewhere in Southeast Asia. Who knows where I'll end up.

Here's what I do know. It's okay to follow your heart. It's okay to be poor. It's okay to seek the open road, to need room to breathe. To spend your nights in the bed of your pickup truck, rising with the sun, chasing the open road. Sometimes that's the only way to discover what it is that you truly care about. ■

Jeff Deikis is the western regional manager for the American Alpine Club and currently lives in Bishop, California.



SEE PICTURES FROM DEIKIS' CLIMBING LIFE
www.lsa.umich.edu

“An Uncommon Education for the Common Man”

When U-M President James Burrill Angell spoke those words, little could he have known that his vision for the University of Michigan would spawn alumni who would drive speeding race cars, brave dangerous rapids, open award-winning restaurants, and much more.

Jerry Newport

('70)



Author, savant, and subject of *Mozart and the Whale*, a film about Newport's relationship with his now-wife as a person with Asperger syndrome.



4 out of 10: Number of events in the Mental Calculation World Cup in 2010 in which Newport placed first. He got second and third place in two others.

Jane Scott

('41)



Before her death in 2011, Scott was known as the “world's oldest rock critic” with *The Plain Dealer* in Cleveland, Ohio, and was said to have been on a first-name basis with many stars.



38: Years Scott spent covering everyone from the Beatles' first Cleveland performance, to Jimi Hendrix, to Lou Reed, to Lyle Lovett.

Janet Guthrie

('60)



First woman to qualify and compete in both the Indianapolis 500 and the Daytona 500.



9th place: Highest Indy 500 finish for a woman, a record set by Guthrie in 1978, unbroken until 2005.



6th place: Guthrie's finish in Bristol in 1977, the best finish by a woman in a top-tier NASCAR race.

Stephanie Izard

('98)



Winner of *Top Chef* Season 4 and proprietor of the successful Chicago restaurant *Girl and the Goat*.



\$100,000: Izard's winnings from *Top Chef* (not to mention a whirlwind culinary tour of the French Alps!).

Ron Jeffries

('89):



Founder of the Jolly Pumpkin Artisan Ales microbrewery with three locations across Michigan.



70,000: Number of square feet of Jolly Pumpkin's newly expanded brewing and bottling facility.



5,000: Approximate number of barrels of sour beer sold by Jolly Pumpkin in 2013.

Benjamin Bolger

('94)



A “perpetual student” who claims to hold the second-highest number of postsecondary degrees in modern history.



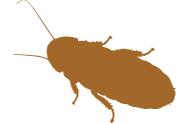
13: Postsecondary degrees attained by Bolger, including a B.A. in sociology from LSA and a Ph.D. in design from Harvard.

Joshua Schwadron

('03, M.Acc. '04):



Winner of *Fear Factor: Las Vegas* (season 4) and current partner at Summon Litigation Ventures.



80 pounds: The amount of Madagascar hissing cockroaches that were poured over Schwadron while he lay shackled in a coffin for one of the show's “stunts.”

Charly Heavenrich

('67, M.B.A. '69)



Oldest full-time river guide in the Grand Canyon at age 71.



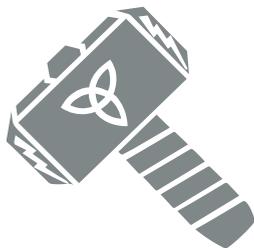
17 million years young: Theorized age of the Grand Canyon.



6000 feet: Depth of the Canyon at its deepest point — that's more than a mile.

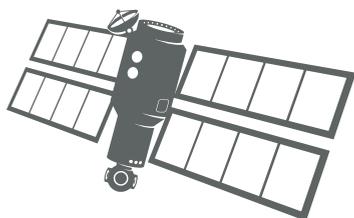
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