

Maroon

FALL 2020



THE SUSTAINABILITY QUEST

From transportation to classroom content, sustainability guides progress at Texas A&M University.

POINTED DELIVERERS OF THE WAR HYMN. WE WERE PART OF SOMETHING MADE OF NOTHING BUT PEOPLE NOW GO
V THERE, TO WHOM WE PASSED IT, BUT WE CAN GO BACK AND SEE IT AND HEAR IT. WE'RE STILL THERE. WHEN W

★ THE FIGHTIN' TEXAS AGGIE BAND

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OF AGGIELAND ★ WILDCAT ★ THE STARS AND STRIPES FOREVER ★ THE BALLAD OF THE GREEN BERETS ★ THE



BEST DAMN OUTLET
ON THE CAMPUS



ELEPHANT WALK c. 1925
STARTED BY BAND SENIORS
FEATURING THE HEARSE SONG

FROM THE LAST CORPS TRIP



IT'S JUST ANOTHER CORPS TRIP, BOYS, WE'LL MA

MCADDET BAND JOSEPH HOLICK, BANDMASTER
S.P., 2,139 CHARACTERS



HALFTIMES...

RECALL, STEP OFF ON HUI

NOW FORMING AT THE NORTH END OF KYLE FIELD
THE NATIONALLY FAMOUS FIGHTIN' TEXAS AGGIE BAND!

RELIEF SCULPTURE INSPIRED BY RODNEY & SUE HILL - DANKE MEINE LIEBEN FREUNDE

2018-2019
2019: 125th ANNIVERSARY
FIGHTIN' TEXAS AGGIE BAND
RECORDED, 1961
FIGHTIN' TEXAS AGGIE BAND
RECORDED BY M.J. POWELL
CAN CHANGE THE WORLD

THE PULSE OF THE
SPIRIT OF AGGIELAND



...PARADES...

...AND FINAL REVIEW

THERE'S A SAIL
ON THE BENTOLD

NE NEVER BEEN LICKED 1942

NEWAY
GOING

SEND IN THE BAND
Mikeual Perritt '69, a College of Architec-
ture graduate and former band member,
spent thousands of hours carving this
4'x3' walnut and mahogany wood relief
panel to honor the 125th anniversary of
the Fightin' Texas Aggie Band. The artwork
is now proudly and prominently displayed
in the new John D. White '70 - Robert L.
Walker '58 Music Activities Center.



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No matter where you go, you'll find endless stories of Aggies and their immeasurable impact. Maroon brings those stories to you, highlighting the many ways Texas A&M University students, former students and faculty are selflessly serving, impacting their local, national and global communities, and uniquely contributing to Aggieland. Maroon is published biannually by the Texas A&M Foundation, which builds a brighter future for Texas A&M, one relationship at a time. Please direct inquiries to the Marketing Office, Texas A&M Foundation, 401 George Bush Drive, College Station, TX 77840-2811, call (800) 392-3310 or (979) 845-8161, or email info@txamfoundation.com. Information in this magazine is for educational purposes only and should be examined by independent legal counsel due to possible differences in local laws and individual needs.

From vaccine development and medical supply production to a children's book and U.S. Air Force flyovers, here are a few ways Aggies have responded to the COVID-19 pandemic during the last few months.

Printing a Solution

Armed with 3D printers, students and faculty across Texas A&M have contributed to the fight against COVID-19 by manufacturing medical equipment for front-line workers. This spring, the College of Engineering produced more than 400 spacers



for metered dose inhalers for Houston Methodist Hospital and created 550 comfort straps to help medical workers avoid strain on their ears while wearing masks. Texas A&M engineers also collaborated with doctors to design isolation chambers for patients. In addition, in April and May, the colleges of architecture and engineering produced more than 8,000 face shields for health care professionals. "3D printing is a quick way to prototype a project," said Dawn Jourdan, executive associate dean for the College of Architecture. "It's the perfect engine to accelerate invention and production."



U.S. Air Force Thunderbird, Maj. Trevor Aldridge '08, was part of several flyovers of major cities in April and May to show support for health care professionals and other essential workers amidst the COVID-19 pandemic.

HOPE FROM ABOVE

When COVID-19 began spreading through the U.S., Maj. Trevor Aldridge '08 took to the skies to bring encouragement during the pandemic. As the No. 2 pilot for the U.S. Air Force's Thunderbirds, Aldridge was part of the Department of Defense's America Strong mission, which coordinated flyovers of major cities in April and May to show support for health care professionals and other essential workers. "We're going through challenging times, and it was nice to provide hope to people," Aldridge said.

The idea began with a desire to thank front-line workers in Las Vegas, the Thunderbirds' hometown. After a positive response, they traveled to the East Coast and joined the Navy's Blue Angels to fly over New York City, Baltimore, Washington, D.C., Atlanta, Philadelphia, and Trenton, New Jersey. The Thunderbirds then traveled west, visiting locations including Austin, San Antonio, Denver, Los Angeles and San Diego.

Although their flights over Manhattan and the Washington Monument were particularly memorable to Aldridge, the flyovers that meant the most were in his home state. "As an Aggie and a Texan, I was proud to fly over Austin and San Antonio," he said. "Those cities have undergone a lot, and there are many Aggies there, so showing them that we're in this together and we'll get through this meant a lot to me."

While the flyovers inspired people across the nation, Aldridge was equally inspired by the response of health care workers and their commitment to the Aggie value of selfless service. "Selflessness is something I love about Texas A&M University, and I have seen it in so many people, whether they work in a hospital or stay home and wear a mask when they go out," he said. "It's awesome to see that quality across the country and particularly in Aggies."

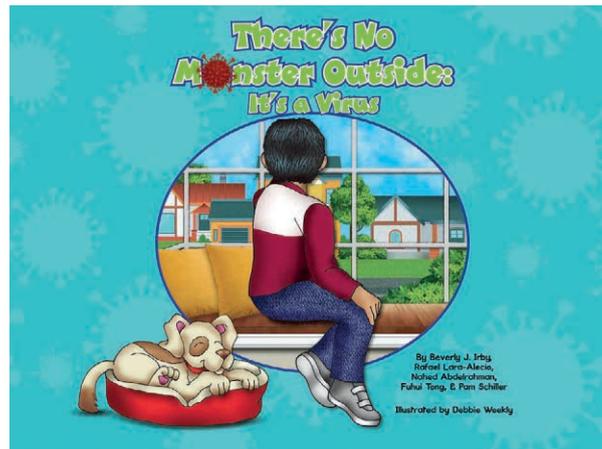
Producing a Vaccine

The Texas A&M University System is playing an important role in federal efforts to quickly produce COVID-19 vaccines. In July, the government tasked Texas A&M's Center for Innovation in Advanced Development and Manufacturing and its subcontractor, FUJIFILM Diosynth Biotechnologies (FDB), to mass-produce doses of a vaccine candidate for Novavax, Inc. The center is set to begin manufacturing the vaccine for clinical trials by the end of 2020 and will commence bulk production in 2021 for any vaccine approved by the FDA. "The Texas A&M System is ready to save lives and help protect the country," said System Chancellor John Sharp '72. "This whole project is a triple win: It's a win for the Texas A&M System, a win for FDB and a win for the nation."

NETWORK CONNECTIONS

"The whole goal was to make people smile and show the Aggie Network in action. It was cool to give back to the university that has given me so much and bring people together during quarantine."

- **TINA NGUYEN '18** On April 15, Tina Nguyen '18 organized a Zoom call that demonstrated the strength of the Aggie Network by bringing together more than 60 Aggies. Nguyen started the call with three other former students with the requirement that each newcomer to the call invite another Aggie. The meeting quickly grew to include Aggies with class years spanning six decades, including coaches and athletes, current and former Yell Leaders, and Reveille. A video of the call went viral on social media.



In collaboration with world-renowned early childhood educator Pam Schiller, four Texas A&M faculty created a free book to help parents ease their children's fears about COVID-19.

STORYTIME

To help parents ease their children's fears about COVID-19, faculty members in the Texas A&M College of Education and Human Development created a children's e-book about the virus. Titled, "There's No Monster Outside: It's a Virus," the story features a young boy who asks his parents about the virus and learns how to stay safe.

The e-book is a collaboration between Pam Schiller, a world-renowned early childhood educator, and faculty members Beverly Irby, Rafael Lara-Alecio, Nahed Abdelrahman '18 and Fuhui Tong '06. "We hope this book will be a comfort for children and will give them a sense of security in these uncertain times," they said in the book's afterword. The free story is available online in numerous languages. Access it at give.am/COVIDBook.



MAKE A DONATION Are you passionate about helping future Aggies make a difference in the field of recreation, parks and tourism sciences? You can support the department by giving to its excellence fund at give.am/RPTSExcellence or by contacting Allyson Tjoelker '02 at atjoelker@txamfoundation.com or (979) 458-7929.

AGGIE INFLUENCER

OUT OF THE WOODS

Former National Park Service Deputy Director David Vela '82 reflects on the trip that inspired him to become a park ranger and Texas A&M's influence on his life and career. **BY BAILEY PAYNE '19**

From Yellowstone's iridescent caldera and the Grand Canyon's sculpted valleys to Big Bend's wild magenta sunsets, America's national parks have wowed generations of visitors. As the National Park Service (NPS) navigates phased reopenings after temporarily closing parks in the spring, recently retired Deputy Director David Vela '82 reflects on the path that led him to the NPS and his deep-rooted ties to Texas A&M.

Describe your duties as deputy director, exercising the authority of the director, of the National Park Service.

My duties were the same as they would be had I been confirmed by the U.S. Senate as the 19th director. I administered the day-to-day affairs of the NPS, which included managing a budget of nearly \$3 billion with 20,000 employees and 419 units across every state and territory to preserve the nation's most special places and the stories they contain.

What inspired you to pursue a career in conservation?

Back in the late '60s or early '70s, during my late teens, my family took a trip to Yellowstone National Park. As a Latino family living in rural Wharton, Texas, we had never even heard of national parks.

On the way to Yellowstone, we stopped at Grand Teton National Park. Not only was it my first time seeing a national park, with its amazing landscape and moose and grizzlies, but it was also the first time I saw a national park ranger wearing that iconic uniform and Stetson hat. I knew that one day, I would proudly wear that uniform and protect these special places. Many decades later, I served as superintendent of the very first park that changed my life.

During my confirmation hearing to be director, I asked my parents why we made that life-changing trip. My dad said he had heard his coworkers talking about their trips to Yellowstone and wanted to share that same ex-

perience with his kids. That trip both inspired and resulted in a 30-year career serving and protecting our nation's most special places.

What brought you to Texas A&M University?

My high school sweetheart, Melissa '82, attended Texas A&M to pursue an accounting degree. After I graduated from Wharton County Junior College with an associate degree, we got married and I transferred to Texas A&M to be with her.

It was only when I arrived on campus that I learned how special and renowned the Recreation, Parks and Tourism Sciences (RPTS) program was. I made friends with my professors, many of whom are still teaching the next generation and continued to support me throughout my career.

How has Texas A&M influenced your life and career?

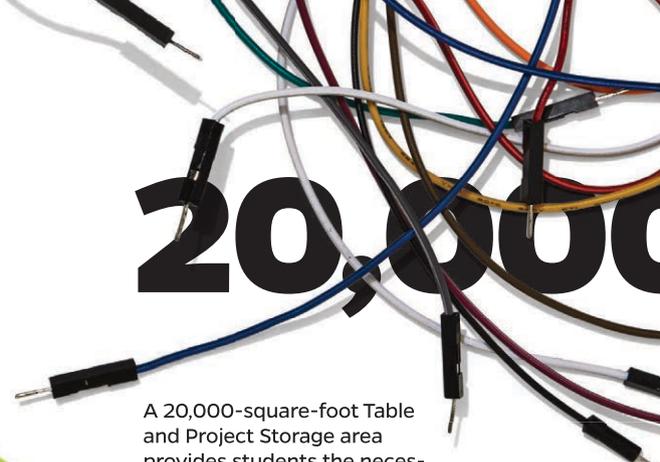
Texas A&M continues to play an important role in my life, both personally and professionally. Aggie values and traditions are important to me and my family. Our daughter, Christina '06, and son, Anthony '10, both graduated from Texas A&M with degrees in sport management. Anthony walked on the football team as a fullback and was a three-year letterman earning a scholarship his senior year. He is now following in my footsteps as a chief law enforcement park ranger. My wife, Melissa, recently retired from the airline industry, while Christina works in the education field in College Station.

As for how Texas A&M has influenced my professional life, I can't tell you how many Aggies I've hired during my career, but it's a lot. When I see an Aggie applicant, I know what I'm getting: a disciplined, respectful and professional candidate. In fact, the NPS has a program called ProRanger, established to recruit and train seasonal law enforcement park rangers, headquartered at Texas A&M. So, I've been able to maintain a direct connection with Aggieland in helping to build the next generation of park rangers and leaders not only for the NPS, but also for the global park community. **M**

David Vela '82 retired from his position as deputy director, exercising the authority of the director, of the National Park Service in August 2020. Before his tenure as deputy director, Vela was superintendent of Grand Teton National Park and the John D. Rockefeller, Jr. Memorial Parkway; NPS director for workforce, relevancy and inclusion in its Washington headquarters; director of the agency's southeast region; and superintendent at three NPS parks. In addition to his conservation work, Vela has worked in a variety of public service posts outside the NPS at the state and federal level.

MARC BURCKHARDT





20,000

A 20,000-square-foot Table and Project Storage area provides students the necessary space to work on their respective projects.



Aggies Invent, Formula SAE, Women in Engineering and the Sounding Rocketry Team have made the FEDC their home for designing, manufacturing and building their latest projects.



3

30 desktop 3D printers that can manufacture project components to customized specifications are located in the 2,100-square-foot Prototyping Shop.

500

More than 500 student-led projects are produced in the FEDC each year, all varying in design and discipline.

>61K

More than 61,000 square feet of the Zachry Engineering Education Complex is dedicated to the FEDC.

6

Six tables with electronic bench equipment and soldering are located in the 17,200-square-foot Project Build Space for specialty projects.





LEARN MORE Interested in how you can support hands-on learning and transformational educational experiences for students through the Fischer Engineering Design Center? Contact Jay Roberts '05 at jroberts@txamfoundation.com or (979) 845-5113.

400

Students can access more than 400 tools, all available for checkout if needed.

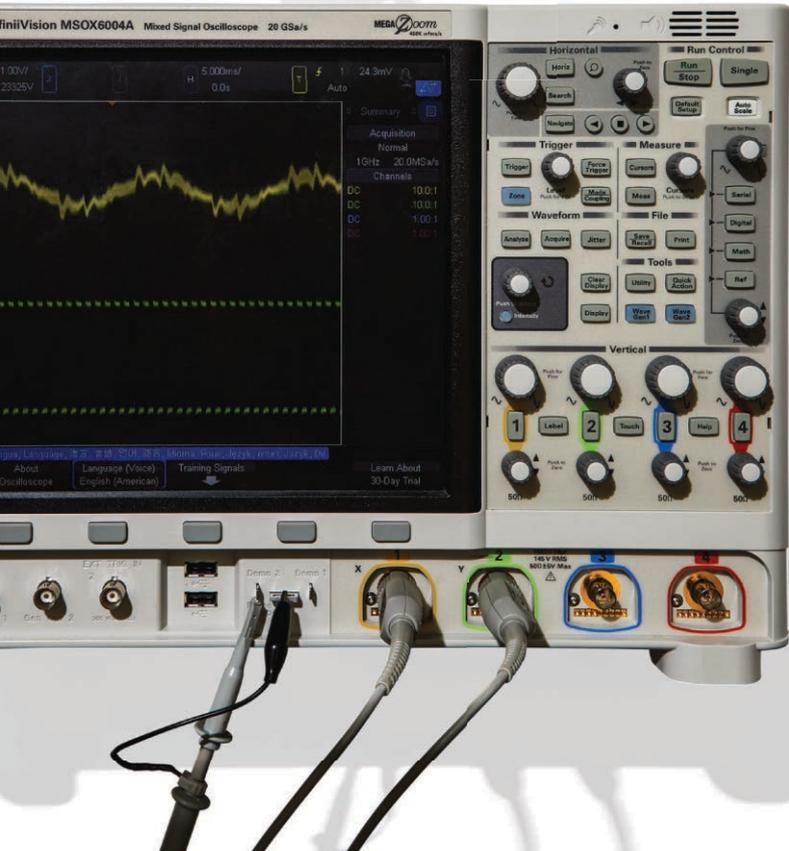
GALLERY

Innovation by Design

6,000

The FEDC opened in 2018 thanks to support from SuSu and Mark Fischer '72 and serves approximately 6,000 students per semester.

The SuSu and Mark A. Fischer '72 Engineering Design Center equips students with unique hands-on opportunities and experiences to prepare them for a future in the industry. **BY ALYSSA JOHNSON '20**



The SuSu and Mark A. Fischer '72 Engineering Design Center (FEDC), located inside Texas A&M University's Zachry Engineering Education Complex, is a state-of-the-art facility centered on three principles: learn, design and build. It houses various centers focused on project design, fabrication, prototyping, artisan design and long-term projects, all available to provide students in the College of Engineering the necessary resources to apply in practice what they learn in the classroom. Additionally, a fully equipped machine shop, 3D printing lab and pop-up classes expose students to advanced technology, software and equipment they may not otherwise experience before graduating.

Stuart Potter '20, a mechanical engineering student and member of Texas A&M's Formula SAE team, has spent countless hours alongside his team members researching, prototyping and building models and believes the FEDC has given them the tools to be successful. "We learn theoretically why things work in the classroom, but few students enter the industry with technical knowledge," Potter said. "Understanding and communicating with the manufacturing side of engineering is crucial to excel in the industry, and the design center gives us that opportunity."

Rodney Boehm '78, director of engineering entrepreneurship, further testified to the center's value. "The FEDC allows us to help students turn their dreams into reality," he added. "Theory is critical to understanding, but building requires a different space and skills. Nothing is more rewarding than to see our students transform their knowledge into something tangible and unique." **M**

DESIGNING COMMUNITY

Dr. Chris Mulder '80, director and founder of CMAI Architects, has designed and developed environmentally sustainable communities in South Africa for more than 30 years.

BY LYDIA HILL '21

For Dr. Chris Mulder '80, community is central to everything he does. An eighth-generation South African, Mulder not only feels a deep connection to the Aggie community where he received his doctorate in environmental design, but also promotes community in South Africa through his business, CMAI Architects. The firm, which offers architecture, urban design, landscape architecture, environmental planning and property development services, focuses on harmonizing the human world with nature.

"My passion is creating livable places in the style of old-fashioned, rural villages but in a contemporary way that is sensitive to the environment," Mulder said.

This philosophy, known as New Ruralism, has its roots in Mulder's early experiences as a farmer. "I learned to read the land, an ability I think a lot of people have lost," Mulder explained. "Africa has an abundance of open land that can be developed sustainably and responsibly, but we must accommodate the large rural population."

Mulder's latest project under this vision is Crossways Farm Village, South Africa's first New Rural village. Located on a 1,285-acre dairy farm, the village is based on a design model in which neighborhoods radiate from a village center of shops, restaurants and support services.

The village encourages sustainable living and allows its residents to experience tight-knit community values. "It's about revisiting traditionally agrarian values where society prioritizes hard work and helping their neighbors," explained Robert Fox '16, development project manager for Crossways. "I think those values and the lure of living close to the land is why Crossways and New Ruralism in general will be successful and lead to an international movement, especially post COVID-19."

The project began in 2010, but with a planned capacity of 700 homes, it is a long-term endeavor. "It's a huge project with such diversity," Mulder said.

Mulder has previously received numerous awards for his Thesen Islands project, a coastal town of 19 man-made islands and canals located in the Knysna estuary of South Africa. A 15-year enterprise, the project has been recognized for protecting the sensitive ecosystem and facilitating marine diversity.



DR. CHRIS MULDER

As founder and director of CMAI Architects, Dr. Mulder has led numerous property development projects in South Africa and lectured throughout the world on sustainable property development. In 2009, South Africa's Institute for Landscape Architecture named him an icon of the profession in recognition of his efforts to improve the quality of life and environment in his country. Texas A&M's College of Architecture honored him as an Outstanding Alumnus in 2002, while The Association of Former Students awarded him the Outstanding International Alumnus Award in 2011.



Improving the locals' quality of life is as important for Mulder as benefiting the environment. Motivated by South Africa's 30% unemployment rate, he employs labor-intensive development that creates jobs for local laborers and artisans. "That's an impact Chris has had on the world that most people don't recognize, but it's hugely impactful to the South Africans he's worked with," Fox said.

Supporting Aggies is another valuable cause for Mulder, who said Texas A&M University has been extremely influential for him, his wife, Patricia '80, and their four children. "It was a life-changing experience for us," he recalled. "I enjoyed everything about it, especially the people. We made friends that we still visit today."

Inspired by his experiences, Mulder has hired many Aggies like Fox and has also helped five South African students attend Texas A&M, an opportunity that allowed them to open their own businesses. "Giving these students the ability to open their own professional firms brings me great satisfaction," he said. Mulder and his team also regularly lend their expertise to the College of Architecture, expanding the college's multidisciplinary expertise and enhancing the future of Texas' built environment.

For Fox, Mulder is not just an employer but a role model. "He's the most genuine person I've ever met," he added. "Everything he does is because he cares. He's a visionary who knows that his projects can change the world—and they are." ■



LEARN MORE Interested in helping future community builders like Dr. Mulder? Support undergraduate and graduate students in the College of Architecture by giving to its scholarship fund at give.am/ARCHScholarships or by contacting Larry Zuber at lzuber@txamfoundation.com or (979) 845-0939.



Crossways Farm Village is based on a design model in which neighborhoods radiate from a village center of shops, restaurants and support services.

FACULTY FINDINGS

Unearthing the Past

Paleoanthropologist Dr. Darryl de Ruiter, the department head of anthropology at Texas A&M University, has contributed to scientists' understanding of human ancestry for 27 years.

BY LYDIA HILL '21

When scientists discovered the famous hominin fossil Lucy in the 1970s, they also unearthed a career for Dr. Darryl de Ruiter. A 10-year-old at the time, de Ruiter, now a professor and the head of Texas A&M University's Department of Anthropology, said the discovery fascinated him and ignited his interest in the field of paleoanthropology. It wasn't until he was pursuing his master's degree in anthropology, however, that he decided to study fossils for a career.

"That's when it struck me that I could do this for a living," de Ruiter explained. "All those childhood memories returned, and the notion that I could live that dream was compelling."

In 1993, he turned his dream into reality by writing to field researchers in Africa. One leading paleoanthropologist, Phillip Tobias, responded with an invitation to join his team, and his career officially began.

As someone who specializes in craniodental remains such as skulls, jaws and teeth, de Ruiter focuses on the ecology and evolution of early hominins—now-extinct human predecessors—in Africa. In 2010, he and his team greatly contributed to this topic when they announced the discovery of a new species, *Australopithecus sediba*, an ape-like human ancestor that walked on two legs. "That one was a spectacular find in every regard," said de Ruiter.

As the first major discovery of his career, the finding was an especially impactful one for de Ruiter and resulted in more than a dozen papers published in the professional journals Science and Nature. "It's difficult to gauge just how important that is for a junior scholar like myself at the time," de Ruiter said. "Even one Science or Nature paper is a career high."

Five years later, de Ruiter and his team made history again with the discovery of another new species, *Homo naledi*, a hominin with body proportions similar to modern small-bodied humans but with a brain only half the size of present-day *Homo sapiens*. The find was recognized by numerous publications, including ranking second in Discover magazine's "Top 100 Stories of 2015." He believes that the fossils' location in a difficult-to-access chamber points to evidence that *Homo naledi* deliberately disposed of their dead, a finding that has far-reaching consequences for the paleoanthropology world.

"That is a very human behavior, and yet it is exhibited in something that is clearly not human," de Ruiter explained.



"That's causing our field to really think about what it means to be human. How we look at ourselves has changed forever as a result of these discoveries."

In the future, de Ruiter and his team hope to continue exploring their current research site for more fossils to further illuminate the early evolution of human ancestors. They are also interested in examining the probability that modern human qualities originated from many different ancestral sources rather than descending directly from one original human. "The likelihood of additional discoveries is very strong, and you never know where a new fossil will take you," he said. **M**

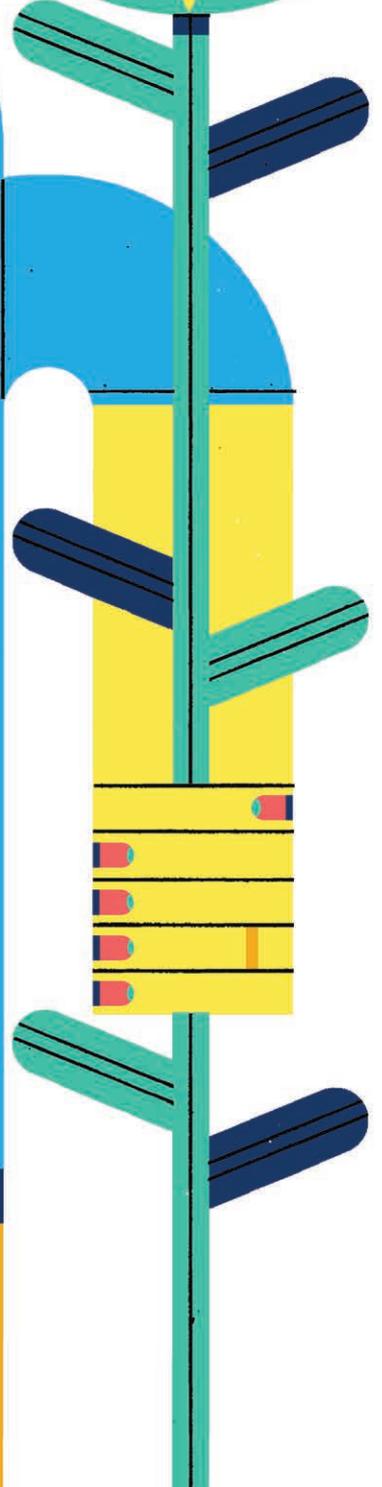
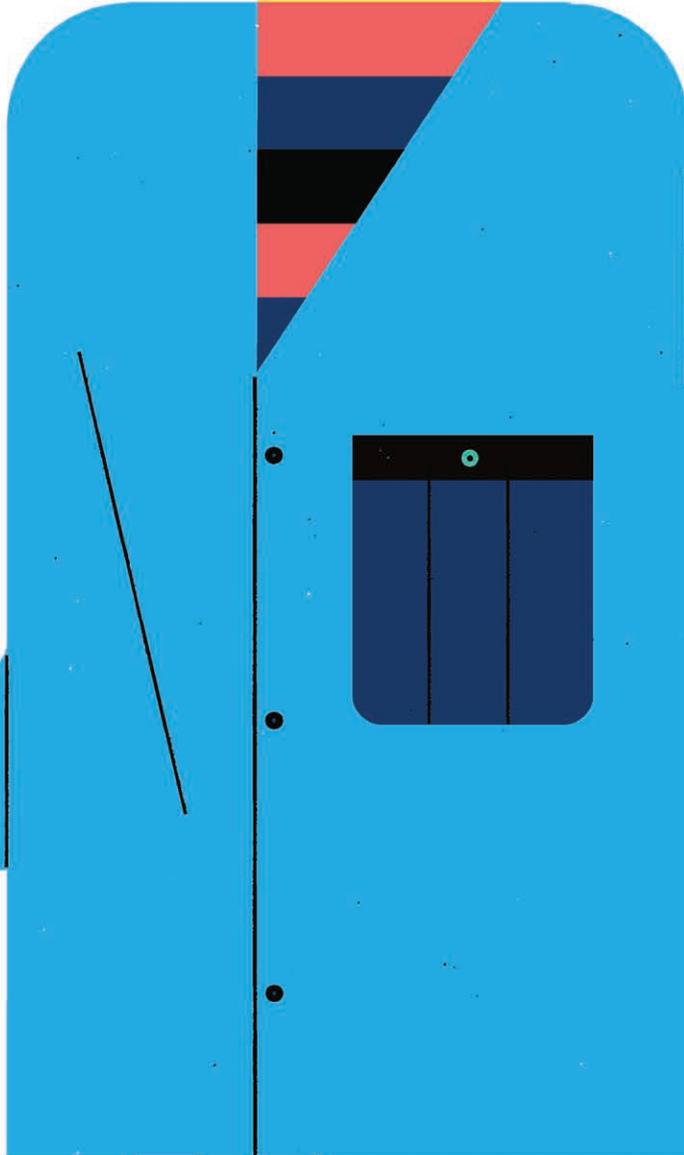
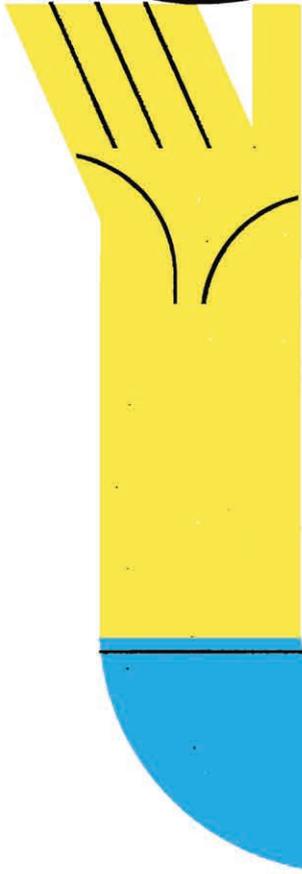
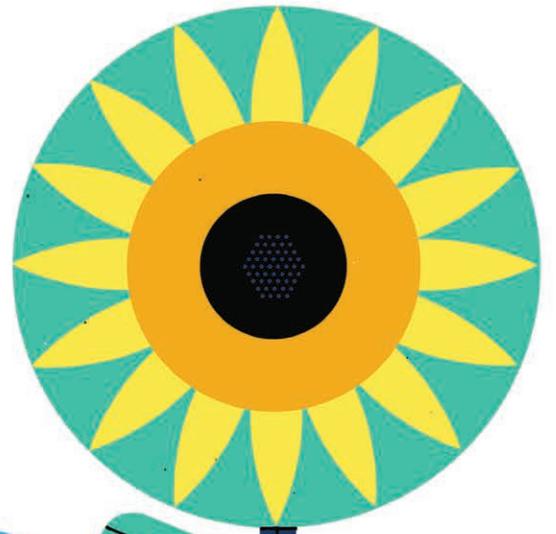
ROBERT CLARK



LEARN MORE Interested in learning how you can support researchers like Dr. Darryl de Ruiter through faculty fellowships? **Contact Andrew Millar '14** at amillar@txamfoundation.com or (979) 845-5192.



DR. DARRYL DE RUITER During his time at Texas A&M, de Ruiter has been appointed to two fellowships. The first, the Ray A. Rothrock '77 Fellowship, was especially invaluable to his research by giving him greater flexibility to travel during his time as a newly tenured faculty member. "That kind of freedom is incomparable," he explained. Fellowships support work like de Ruiter's and can be established through the Texas A&M Foundation with a gift of \$25,000 payable over five years.



The Sustainability Quest

From transportation to classroom content, sustainability guides progress at Texas A&M University.

WRITTEN BY **KARA BOUNDS SOCOL** ILLUSTRATIONS BY **RAYMOND BIESINGER**

WHEN THE OFFICE OF SUSTAINABILITY opened its doors at Texas A&M University in 2008, it received an enthusiastic welcome from students. But as Kelly Wellman '95, Texas A&M's director of sustainability, recalls, students reflexively equated "sustainability" with familiar environmental efforts such as recycling. ¶ Twelve years later, Wellman notes that as student support for the office and its many campus partners has escalated, so has awareness of the plethora of areas that fall under the wide umbrella of sustainability. ¶ "The students' breadth of understanding of sustainability has grown immensely," she said. "Yes, recycling is a sustainable practice. But sustainability also has to do with climate interruption, water resources and even social equity." ¶ Grasping a concept as vast as sustainability can be a formidable task. Sustainability at Texas A&M involves using an earth-friendly lens when making decisions that impact the campus, teaching and researching sustainable practices across academic disciplines, and developing graduates who will be good stewards of the earth long after they leave the university. ¶ The success of some of these broad goals are easier to measure than others. The Association for Advancement of Sustainability in Higher Education uses a Sustainability Tracking, Assessment and Rating System (STARS) to score institutions. Categories considered include academics, engagement, operations, planning and administration, and innovation and leadership. ¶ In the 2019 STARS report, Texas A&M not only earned its fourth Gold rating, but also ranked first in the SEC and sixth among 15 peer Vision 2020 institutions in overall findings. ¶ "At an institution where we're teaching students to go out and solve global challenges," Wellman said, "we've got to practice what we preach." ¶ Wellman is the first to say that along with campus initiatives, it's the Office of Sustainability's "amazing student partners" who make sustainability work at Texas A&M. Following are but a few of Texas A&M's sustainability contributors: → → →



MAKE A DONATION To provide trees and materials for Aggie Replant, you can give to the Replant Excellence Fund at give.am/AggieReplant. To support other Texas A&M sustainability efforts, please consider a gift of any amount by visiting give.am/TAMUSustainability.

CAMPUS INITIATIVES



Sustainable Design

In overseeing the development of buildings and other campus areas, Texas A&M university architect Lilia Gonzales '94 encourages the incorporation of sustainable features that minimize both environmental impact and operational energy use. These features might include locally resourced and recycled materials, native plants, cisterns for rainwater harvesting, or low-emitting finishes, to name a few. Such sustainable design practices are highlighted in Texas A&M's 2017 Campus Master Plan, of which Gonzales served as co-chair.

Gonzales explained that strategic use of sustainable design elements combines function with pleasing aesthetics. Texas A&M's new Innovative Learning Classroom Building (ILCB), which opened this fall, is a prime example. The dot pattern featured on the building's fritted glass windows brings an interesting visual effect to the ILCB's exterior but doesn't interfere with the view from inside. Along with an eye-catching design, the fritted glass helps to reduce glare, cuts cooling costs and decreases the chances of birds hitting the glass. Terra cotta sunshades on the ILCB likewise provide visual appeal while reducing heat gain.

Beyond mere functionality, however, Gonzales stresses that on a university campus, sustainable architecture should serve as a learning tool for students. She points to the 2014 Francis Hall renovation, where construction science students take classes in a building where exposed mechanical, electrical and structural systems are incorporated into the design.

"When you're a student, you're taught to look at architecture in a holistic way," she explained. "The same concept should apply to the design of campus buildings. Yes, we need to consider everything from energy efficiency to air quality. But we also need to think of the building as a living, learning environment for future architects, engineers, and construction and project managers."

Transportation

Moving people from one place to another using as few fuel-dependent vehicles as possible is one of the world's most pressing sustainability challenges. Texas A&M's Transportation Services takes this challenge to heart, providing a wide range of alternatives to single-rider cars.

"We offer a variety of mobility choices that support all Aggies in being sustainable, including providing options for sharing rides—from riding on buses to car share, ride share and bike share," said Peter Lange, Texas A&M associate vice president of transportation. "We also educate members of the campus community about ways to get around without owning a personal vehicle." While the 1,200 Veoride bikes on campus are the most noticeable bicycle effort, bicycle maintenance stations, borrow and lease programs, and repair specialists also play a key role in this alternative transportation effort. Transportation Services even offers a bicycle concierge service to assist with off-campus routes.

Similarly, rideshare programs now go far beyond the familiar sight of out-of-town ride requests posted on a Memorial Student Center bulletin board. Today's car options range from the on-demand Zipcar service



to the Zimride ridesharing social network. A park-and-ride stop on the campus bus route and electric vehicle charging stations further support transportation sustainability.

As of 2019, some 58% of Texas A&M students utilized one or more sustainable transportation options. Through steps like installing energy-efficient garage lighting and purchasing newer, more fuel-efficient shuttle buses, Transportation Services is continually finding ways to make the campus more sustainable.

STUDENT INITIATIVES



Aggie Replant

What started in 1991 as an initiative by the late Scott Hantman '92 and 40 volunteers to replace trees cut down for the Aggie Bonfire has evolved into one of the largest student-run environmental service projects in the nation. Each fall, Replant Day sends more than 500 Texas A&M students into the Bryan-College Station community to plant trees at parks, schools, nonprofit organizations and homes.

In recent years, Replant volunteers have extended their reach beyond Bryan-College Station borders. From 2013-17, student volunteers planted 45,000 pine seedlings in Bastrop State Park to help replace trees destroyed in a 2011 forest fire. Other Replant efforts have involved the replacement of trees along the Blanco River and Lake Somerville.

"Today, Aggie Replant's tree-planting efforts extend far beyond compensating for Aggie Bonfire cuts," said Mia McCallum '21, Replant sponsorship executive. "Our efforts allow the university to give back to the community through environmental service."

\$270M

From 2002 to 2019, the university reduced energy consumption per gross square foot by 49%, resulting in a cumulative purchased energy cost avoidance of \$270 million.

90%

Some 90% of rain runoff is retained on-site using low-impact development practices and green infrastructure.

Aggie Green Fund

For those passionate about creating a more environment-friendly campus, a lack of funding can easily deflate a great idea. That's where the student-run Aggie Green Fund comes in.

"The Aggie Green Fund provides grants to implement sustainable project ideas on campus," explained doctoral student Sarayu Sankar '17, its 2019-20 student chair. "If a student, faculty or staff member has an idea to make Texas A&M more sustainable and doesn't know where to start, the Aggie Green Fund is the right place."

Thus far, the fund has supported more than 90 sustainability projects to the tune of \$2.1 million. Examples of these projects include water bottle-filling stations to discourage single-use plastic water bottles, installation of high-efficiency LED lighting and water-efficient showerheads in campus buildings, and a vertical aeroponic (off-the-ground) food-growing system to provide produce for Texas A&M's food pantry.

78%

Some 78% of Texas A&M's academic departments offer at least one course related to sustainability.

1/2

Even though full-time equivalent students, faculty and staff increased by almost 41% and gross floor area of building space increased 131%, Texas A&M has reduced total water use on campus by 50% since 1991.



Residence Life U-Challenge

In 2017, a four-member student team claimed first place in the Texas A&M Department of Residence Life's inaugural U-Challenge. While the team researched the ins and outs of the Davis-Gary Hall utility infrastructure to develop ways to increase its efficiency, competing teams pored over the utility systems of other residence halls.

"The U-Challenge is about both increasing energy efficiencies and educating students," explained Kristianna Bowles '19, graduate assistant sustainability coordinator for residence life. "The challenge is a hands-on research experience that equips students with the knowledge to provide recommendations for infrastructure improvements and methods to engage their peers in sustainable behaviors, from turning out the lights to taking shorter showers."

Along with the potential for course credit and job and internship opportunities, the U-Challenge gives participants the opportunity to become intimately acquainted with utility equipment and data, energy audits and careers in the field.



Howdy Farm

Texas A&M's Howdy Farm typically has a long waiting list of students who want to get their hands dirty, while those overseeing the farm want as many Aggies as possible to learn firsthand the merits of organic, sustainable agriculture practices. The hope is that after they leave Texas A&M, volunteers will take the knowledge and skills they acquire at the Howdy Farm into their own communities.

"Learning about the seasonality of produce, the time and effort put into production, and engaging in the finished product helps inform students about food systems," said Michael Legorreta '16, Howdy Farm manager and advisor.

To complete the farming cycle, students sell the produce they've raised at local farmers markets and farm-to-table restaurants. **M**





MAKE A DIFFERENCE Scholarships help Aggies achieve their dreams. You can create a scholarship for aspiring students using a five-year pledge or company matching programs. To learn more, contact Marcy Ullmann '86 at mullmann@txamfoundation.com or (979) 845-6383.

STUDENT STORY

Behind Her Lens

Bailey Coombes '22 received her first camera at age 7. Now a marketing major at Texas A&M University, she is working toward becoming a National Geographic photographer.

BY CLARE FUSSELMAN '21

To Bailey Coombes '22, photography is more than a hobby. It's about seeing the world through different lenses.

Hailing from the small town of Medina, Texas, Coombes credits her ambition and strong desire to learn to the close-knit community that raised her. Her high school's small size allowed her to get involved in many activities, such as serving as its year-book photographer and president of the National Honor Society before graduating as valedictorian. Coombes' list of accomplishments did not stop there. Now a sophomore at Texas A&M University, she is an Endowed Opportunity Award scholar. "This scholarship, along with other opportunities being an Aggie has presented me, proves I made the right choice in attending Texas A&M," Coombes said.

Coombes was gifted her first camera at age 7 and hasn't put it down since. Despite an early and instant love of photography, she always felt there was more to the craft to explore. During a 2015 medical mission trip to Belize, Coombes was exposed to the idea of using photography to tell untold stories.

"After my trip to Belize, I was inspired to use a camera so that people can see the world from a different perspective," she explained. "For me, photography is an outlet to make a difference and bring overlooked issues of our world, such as climate change and poverty, to light in a very real way."

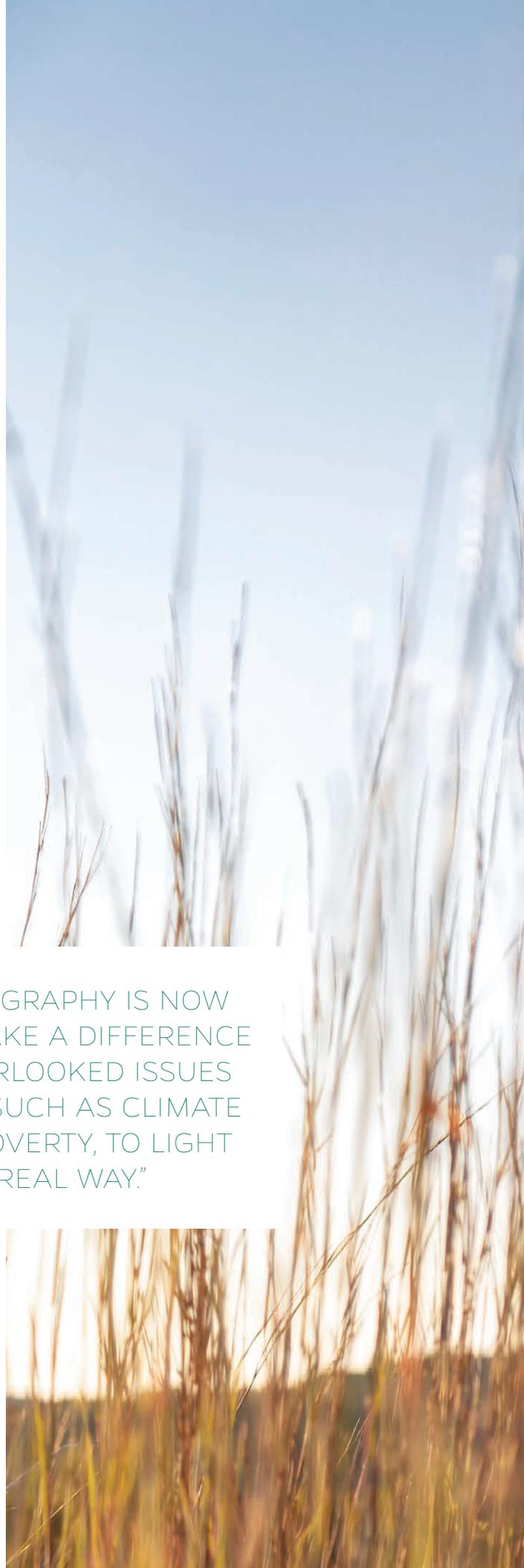
As a marketing major minoring in art, Coombes hopes to apply the skills she learns from her degree to her future as a photographer. In addition to being a dedicated student, she takes every opportunity to enhance her portfolio and make an impact on the campus community. Coombes serves as the public relations executive for Cali, a women's leadership organization, and works as a social media student worker at the George H.W. Bush Presidential Library and Museum.

"Though it can be difficult balancing school, work and organizations, my passion for photography and design make it all worth it," she added.

Upon graduating, Coombes plans to pursue a career that combines her passion for photography with her skills in graphic design to eventually achieve her dream job as a photographer with National Geographic. "My Belize mission trip was a preview of what I was meant to do with my future," Coombes concluded. "I want a future telling impactful stories with my camera." 

"FOR ME, PHOTOGRAPHY IS NOW AN OUTLET TO MAKE A DIFFERENCE AND BRING OVERLOOKED ISSUES OF OUR WORLD, SUCH AS CLIMATE CHANGE AND POVERTY, TO LIGHT IN A VERY REAL WAY."

BILL SALLANS



*Bailey Coombes '22,
a marketing major
who is minoring in
art, hopes to use a
career in photography
to tell untold stories
and bring overlooked
issues to light.*





MAKE A DONATION Ready to order your own commemorative brick and support the next generation of Aggie engineers? Visit give.am/EngineeringBrickCampaign or contact engineeringbricks@tamu.edu. All gifts are tax deductible.



By allowing Aggies to create custom bricks to be laid on campus, the College of Engineering is raising funds to support the future of Texas A&M engineering education.

FIRST HAND

BRICKS BRICK

The College of Engineering's Brick Campaign gives Aggies the opportunity to support engineering education and make a permanent mark on campus.

BY ALYSSA JOHNSON '20

Hundreds of engraved, commemorative bricks line Texas A&M University's Engineering Walk in front of the new Zachry Engineering Education Complex, each with unique stories and significant meaning to their owners. Together, the bricks support the future of Aggie engineering through the College of Engineering's Brick Campaign. Proceeds from the sale of the bricks benefit the college's excellence fund, which generates funds that allow the dean to respond to the college's immediate needs. From supporting college initiatives and student scholarships to faculty research and facility improvements and maintenance, the excellence fund helps ensure continuous improvement for Texas A&M's next generation of Aggie engineers. For \$500, a brick can be customized with a personal message that pays tribute to a friend or loved one. Here are a few unique stories among some of the existing bricks.

A FAMILY'S LOVE

After engineering student Marc Elizondo '21 passed away in a tragic car accident in 2018, his family honored his memory with a set of commemorative bricks. "We saw the Brick Campaign as an opportunity to make Marc's presence permanently felt at Zachry and on Texas A&M's campus," said his mother, Arleen Elizondo. His father, Louis Elizondo '84, and brother, Jon Paul Elizondo '16, also Aggie engineers, share a brick on each side of Marc's. Louis' brick displays a heart and "Marc Zac #433," symbolic of the family's love and study room No. 433 in the Zachry Complex, which is dedicated in Marc's memory. The inscrip-

tion on Marc's brick, "Engineering 111," honors Marc's Engineering 111 class project group.

THE CHAMBER OF SECRETS

Susan and Keith Lokey '85 honored their son, Chris Lokey '19, and his roommates with a commemorative brick inscribed, "Chamber of Secrets Southgate 2019." As self-proclaimed Harry Potter aficionados, Chris and his friends adorned the front door of their college residence with a "Chamber of Secrets" decal. Their home became a popular gathering place for their Aggie peers, leading it to be nicknamed "the chamber of secrets" among friends. "They exemplified what it means to be Aggies and to give back through involvement," Susan said. "It was important to recognize their hard work and dedication to Texas A&M."

A LESSON IN LEADERSHIP

To the Class of 1966's Squadron 13, the late Louis "Lou" Zaeske Jr. '64 was more than their first sergeant and commanding officer. He was their leader and mentor, teaching them what it meant to be an Aggie and Corps of Cadets member. "Lou was hard on us, but through it all, he taught patriotism, honor and camaraderie," said Wayne Roesler '66, a member of the Squadron 13 freshmen class. "Our group really bonded with Lou, and we maintained our connection with him well after we graduated." So, when Richard Burns '66, a graduate of the College of Engineering and fellow squadron member, heard about the Brick Campaign, he coordinated with the group to purchase a commemorative brick in honor of their beloved friend. ■



NICK CABRERA



LEARN MORE If you are interested in learning how you can support researchers like Dr. Lightfoot or the Sydney & J.L. Huffines Institute for Sports Medicine and Human Performance, contact Jody Ford '99 at jford@txamfoundation.com or (979) 847-8655.

EVERYDAY ADVICE

The Genetics of Exercising

Dr. Timothy Lightfoot, professor of kinesiology at Texas A&M University, knows genetics play an important role in physical activity. Here's his advice to comprehend your genetic makeup and obtain a healthy lifestyle.

BY MICHELE SCHEVIKHOVEN '21

With the Center for Disease Control and Prevention stating that only 53% of Americans are meeting the standard for aerobic physical activity, native Texan Dr. Timothy Lightfoot researches how different genetic makeups affect one's predisposition to be physically active or inactive. Dr. Lightfoot has 31 years of experience as a university faculty member and has spent 11 years at Texas A&M. He currently holds the Debbie and Mike Hilliard '73 Endowed Chair of Kinesiology and directs the Sydney & J.L. Huffines Institute for Sports Medicine and Human Performance, which gives him the resources and opportunities to pursue his passion of creating a healthier world.

HOW DO EXERCISE AND GENETICS GO HAND-IN-HAND?

Exercise is critical to a healthy lifestyle. I research genetics and biological factors to determine if someone can be born a "couch potato" or a "frantic banana." Genetics help determine the motivation to be active through brain neurochemistry and drive the capability to be active through changes in the muscle. This drive is partially controlled by unique environmental factors such as diet and toxicant exposure, so what motivates some individuals to exercise might not motivate others.

WHAT KIND OF DIET DO I NEED TO STAY HEALTHY?

Diet plays a large role in whether someone is physically active or not. Our work shows that diets high in fructose decrease physical activity. Carbohydrates are often the first energy source your body uses, so you should not deprive your body of that critical energy source. You can't change your genetics, but you can change your diet. People sometimes make dieting more complicated than it needs to be, but just a simple reduction in fats and sugars is a great place to start.

IS THERE A TYPE OF EXERCISE THAT IS BEST FOR YOUR HEALTH, OR IS IT JUST ACTIVITY OVERALL THAT COUNTS?

If you're generally inactive, aiming for 150 minutes of activity per week is a good goal. As you become more active, you can delve deeper into what is best for your health. In general, the best type of exercise is the one you'll keep doing. No matter your genetic makeup, being physically active for 30 minutes a day can reduce your morbidity and mortality rate dramatically. You can start with activities such as gardening, housework or walking outside.

IF I AM BORN A "COUCH POTATO," HOW CAN I OVERCOME THIS GENETIC PREDISPOSITION?

Overcoming genetic predisposition is not necessarily difficult; you just have to make up your mind to do it. In general, the genetic predisposition toward activity is only about 50%, so there is another 40 to 50% that you determine. While genes play a role in how active you are, your efforts toward being active also play a large role.



DR. TIMOTHY LIGHTFOOT received his bachelor's and master's degrees from The University of Louisiana at Monroe and his doctorate from The University of Tennessee. In addition to researching the genetics of physical activity and exercise endurance, his lab also has a unique interest in the human physiological response to unique stressors, such as high G-force exposure, automobile racing and playing music. He used to race cars as a hobby and is passionate about playing the bass guitar, which he does in live settings with a variety of bands.



OWEN DAVEY



53%

- Banana
- Soda can
- Cupcake

1. Broom
2. Shovel
3. Footprints

30 mins



ELECTRONIC SERVICE REQUESTED



RACING BY DESIGN

Texas A&M University's BAJA SAE race team is an interdisciplinary engineering design team determined to develop world-class engineers. Each year, its members are tasked with creating a single-seat, off-road vehicle, such as the one pictured and driven by Christopher Larson '21, to compete against hundreds of schools across the globe. The team spends countless hours researching, building and prototyping to produce a champion race car. Through this program, students gain highly valued technical, communication and critical thinking skills that prepare them to succeed in the engineering industry. The current team is working toward its third design iteration and is nearing the start of manufacturing its 2021 race car. "We have an amazing group of engineers on this year's team," explained Randall Schank '21, BAJA SAE team president. "Our out-of-the-box ideas will give us a competitive advantage in the 2021 competition."