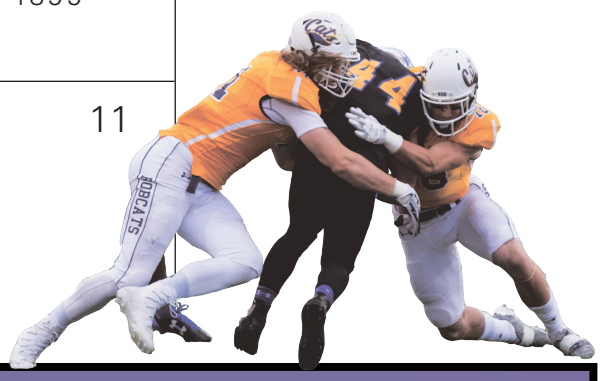
THE MSU
exponent
September 5, 2019
MONTANA STATE'S STUDENT NEWSPAPER SINCE 1895

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YOUR RESEARCH, YOUR WAY



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PAGE TWO

FLASHBULB



Left on Tenth performs at Bozeman Hot Springs on Sunday, Sept. 1 with David Kaltenbach on the saxophone.

PHOTO BY CHRIS FARRER

SIGNIFICANT FIGURES



COMPILED BY QUINCY BALIUS • DESIGN BY AUDREY MOSS

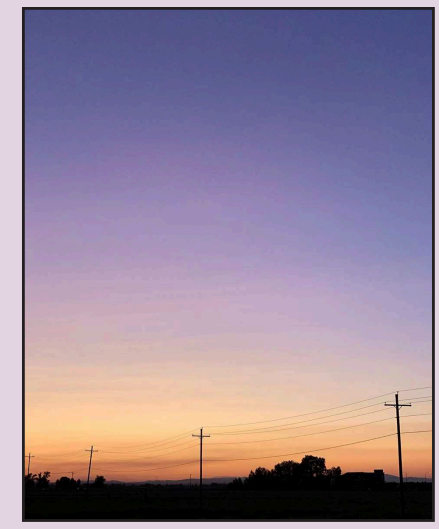
HEARD ON THE WEB



From @_noahmiller_17:

"The slack game is no joke here in Bozeman... that being said, be sure to give @bkvisualmedia a follow for more insanely rad content of this up and coming season 🔥 #bigthingstocome"

INSTAGRAM OF THE WEEK



From @clarkdehart:

"#nofilter #Montana #bigskycountry #sunset"

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Comment on our site *MSUExponent.com*
Comment on our Instagram *@MSUExpo*

THE MSU **exponent**

Volume 114, Issue 2

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For corrections, letters to the editor or any other inquiry you have, contact the Editor-in-Chief or stop by the office.

COVER DESIGN BY IAN MCKAY

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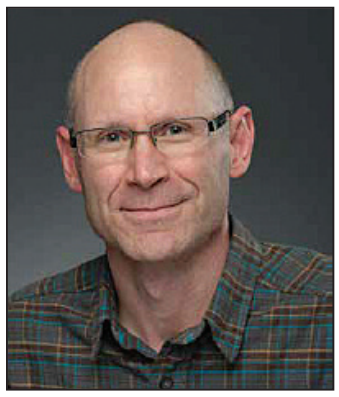
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PROFESSOR PROFILE

Meet Stephen Sofie, Ph.D.



BY SHELBY MORRIS

PROFESSOR: Stephen Sofie, Ph.D.
AREA OF EXPERTISE: Materials Science and Engineering
RESEARCH SPOTLIGHT: Multi-functional Ceramics

You probably know that MSU is a big research school, but have you ever wondered what's actually being researched? Dr. Stephen Sofie sat down with the Exponent to talk about his exciting research on multi-functional ceramics. The goal of his exploration is to integrate mechanical and functional properties into materials for energy conversion processes. He has pioneered a freeze tape casting technology that makes thin membranes out of porous materials from an ice-templating technique. This technology provides a way to create engineered porous materials out of ceramics, metals, or polymers that can serve as supporting layers while also providing functionality into electro-catalytic and catalytic conversion devices. Two main research projects are taking place under this umbrella: all solid state lithium batteries and membranes that can directly convert CO2 into Formic Acid. These lithium batteries would be completely inflammable, fixing the dangerous problem of batteries catching fire while offering the potential to dramatically increase both capacity and charge/discharge rate. For example the Samsung Galaxy Note 7 smartphone that exploded. As for the membrane research, he is working on porous gas diffusion membranes that can support nano-catalysts for converting CO2 waste into a usable product that is formic acid, a potentially carbon negative process, which is an important intermediate in chemical synthesis. What makes these research directions perhaps more exciting is their commercial potential and endless applications.

WHERE IS YOUR RESEARCH TAKING PLACE?
Barnard Hall 248 and ICAL (Image and Chemical Analysis Laboratory, 3rd Floor Barnard)

DO YOU HAVE STUDENTS HELPING WITH THIS?
Yes. Ph.D., Masters, and Undergraduate researchers are all a part of the process.

THIS IS THE YEAR OF UNDERGRADUATE RESEARCH (YOUR), ARE YOU EXCITED FOR THIS? HOW ARE YOU TAKING PART?
Absolutely, I've had a strong commitment to undergraduate research since coming to MSU in 2005.

"Undergraduates are a vital component to what we do and I'm excited to see this become a bigger focus."

Undergraduates are a vital component to what we do and I'm excited to see this become a bigger focus in the last decade. I love to see what well mentored and properly supported undergraduates are capable of. The undergraduates are not treated like grunts, they take on independent projects, work directly with Ph.D.'s, and even help out with the manuscript and publication process.

WHAT DO YOU THINK SETS MONTANA STATE RESEARCH APART FROM OTHER UNIVERSITY RESEARCH?
Inter-collaboration across different departments on campus. For example, we work seamlessly with many faculty and students in chemistry, physics, and other engineering disciplines. These collaborations inside of MSU help it function, from a research perspective, like a bigger university without being a bigger university. This is what originally drew me to MSU from where I worked prior at NASA's Glenn Research Center. Most importantly, both faculty and students really want to be in the region and enjoy the balance of outdoor activities we have outside of the university.

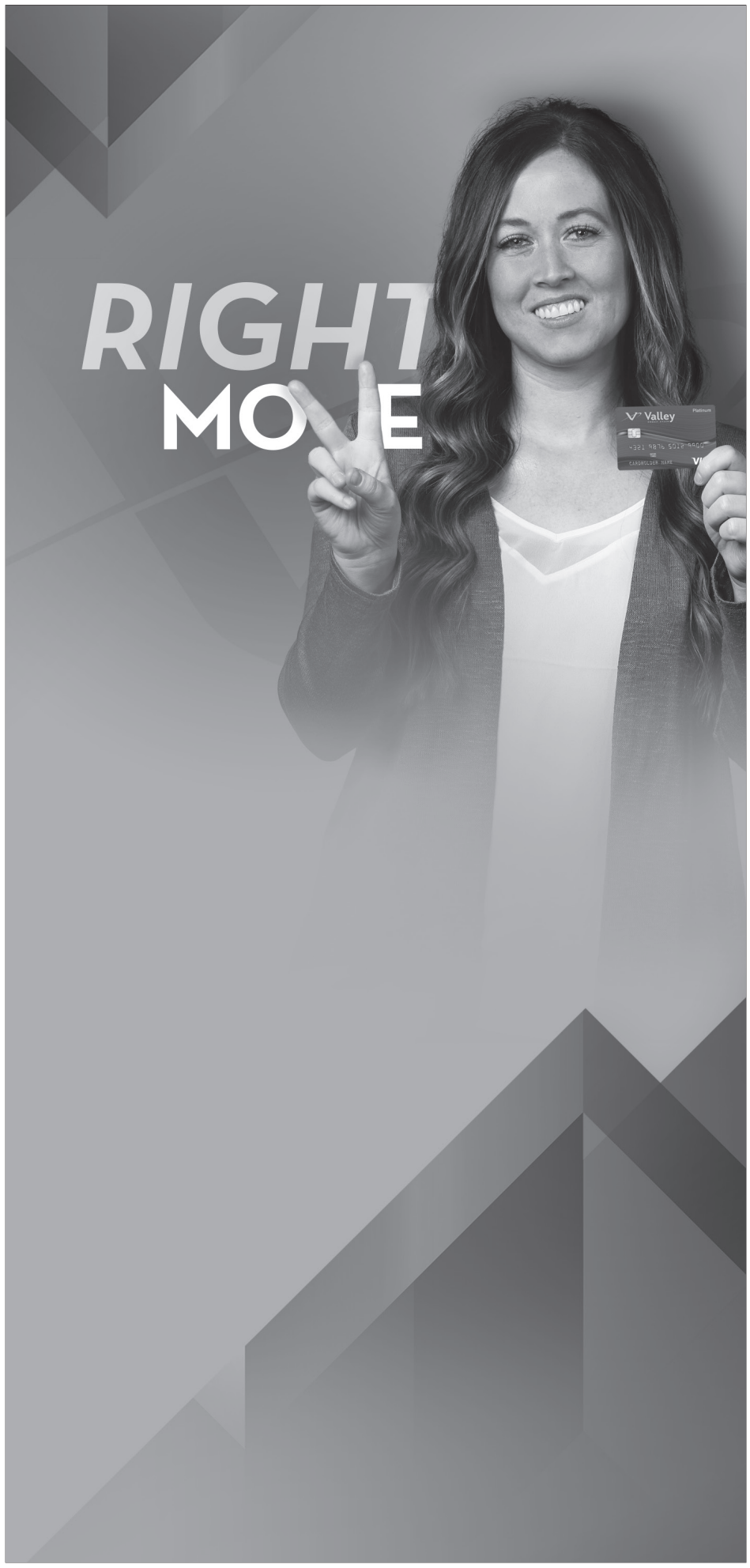
WHAT DO YOU WANT STUDENTS AND THE MSU CAMPUS TO KNOW ABOUT THE WORK YOU ARE DOING?
We are doing work that makes a difference in our world. This research is advancing environmental and energy sustainability.

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A word from Tara Westover

BY SHELBY MORRIS

Tara Westover, bestselling author of the autobiography, "Educated," was this year's Freshman Convocation speaker. Her story is one of perseverance — escaping the clutches of a family who kept her from receiving public education and finding a way to educate herself. She attended Brigham Young University and was presented the Gates Cambridge Scholarship.

In her address to the freshman and others attending the convocation in the Brick Breeden Field House at 7:30 on Thursday, Aug. 22, she shared a story from the heart. The way she spoke was humble and relatable, intriguing the audience. One of her greatest realizations was that women can have ambition. Her message was centered around the reality of life without education, and what a privilege school is. She prompted the audience by asking what holds us back, highlighting Isaiah Berlin's ideas of negative liberty (freedom from physical limitations and barriers) and positive liberty (freedom from mental and emotional obstacles). Westover's advice is to spend your life focussed on learning.

Hilleman Scholars Program awarded $1 million endowment

BY BROOKE SPIVAK

MSU graduate and vaccinologist, Maurice Hilleman celebrates his 100th birthday as of one of Montana State University's most notable alumni. The Hilleman Scholars Program will also be celebrating four years of providing student scholarships. The program will be sustained for future years thanks to a recent $1 million endowment.

The endowment has been funded by Lorraine Hilleman, Maurice's widow, as well as individual donors and Merck & Co., the pharmaceutical company where Hilleman spent the majority of his career.

The Hilleman Scholars Program is open to incoming freshmen who are graduates of Montana high schools and are eligible for Pell Grants from the university. To be considered as an applicant, students must complete a thorough application with an essay and letters of recommendation. Students are additionally assessed based on grades and financial need. Most importantly, the applicants are evaluated based on evidence of academic potential, leadership, and career ambitions. Recipients of the scholarship are awarded up to a total of $20,000 in tuition stipends.

Born in August of 1919, Hilleman was raised in a humble farming family near Miles City, Montana. Hilleman expected to pursue a career in the small farming town, but ultimately decided to attend MSU after receiving a scholarship. He graduated at the top of his class in 1941 with a dual degree in chemistry and microbiology. After his studies at MSU, he continued an academic career at the University of Chicago.

Hilleman is widely recognized as one of the fathers of modern medicine. During his graduate work at the University of Chicago, Hilleman discovered the cure for chlamydia. His most notable work, however, was developing vaccinations for more than 40 diseases. These include measles, mumps, hepatitis A, hepatitis B, meningitis, and pneumonia. He also pioneered research with flu shots and discovered the differences between strains.

Hilleman is credited with discovering 8 of the 14 vaccinations given to children at birth. Due to his successful endeavours in the field of vaccinology, Hilleman's work has saved the lives of hundreds of millions of people.

MSU and the Hilleman Scholars Program is fortunate to receive funding to continue this program for exceptional young learners.

Pigskin Prophecies: Gold Rush preview

BY PARKER ELLIOTT

Montana State football is officially back! This year's team has high expectations and is currently ranked 13th in the STATS FCS Top-25 national poll. Their first shot to play in front of the home fans is Saturday, Sept. 7, marking the 13th annual Gold Rush game. The 6 p.m. kickoff offers fans the first opportunity this year to tailgate and enjoy football under the lights in front of a raucous crowd.

Montana State comes off a 45-10 loss to Texas Tech. While it was a challenging matchup for the Cats, it saw some positives, including a $500,000 payment to play the game as well as valuable experience only learned from playing on a bigger stage.

"I think it prepares us (MSU) for a good run down the stretch," said Montana State Head Coach Jeff Choate. He expanded on this point saying, "it stretches them, which is how you learn and grow is by playing better competition and shows them where they need to go and what they need to do to improve."

This week's opponent leaves little time for improvement. Southeast Missouri State, also known as SEMO, has high expectations for the season. They currently rank 12th in the STATS FCS football polls. The Redhawks return several starters from last year's team that ranked 12th in the FCS in points per game, at 37.1. Leading the charge on offense will be redshirt senior quarterback Daniel Santacaterina. The First-Team All-Ohio Valley Conference selection from 2018 will be looking to cap off his college career with another playoff run. On defense, they return senior linebacker Zach Hall, who proved to be the most valuable defensive player in the country last year after receiving the Buch Buchanan award. On top of that, SEMO led the country at any college level in turnover margin last season, racking up an astounding 36 which they managed to turn into 144 total points.

This is a huge game early in the season for Montana State that has potential playoff implications. "Having an early season opportunity to get on the radar of voters and committee members that are making selections is a huge part in taking the next step in building a program," Choate pointed out at his pre-game press conference on Monday. The Bobcat offense showed flashes of what they could do in the opener against Texas Tech, but avoiding turnovers against this SEMO defense and having an overall more consistent showing, especially on third downs, will be needed for a victory on Saturday. Expect a high scoring game with lots of action in front of an energetic crowd for this Top-15 matchup.

PREDICTION:

(13) MONTANA STATE - 38

(12) SEMO - 31

Cats fall in season-opener

BY CALEB RUX

The Bobcat Football Team competed in their first game of the season on Saturday, Aug. 31 against FBS P5 opponent Texas Tech in Lubbock, Texas. After the first quarter it seemed Tech's quick-pace air raid attack would be too much for the Cats, as the Red Raiders held a 14-0 lead. In the second quarter redshirt freshman quarterback Casey Bauman was able to complete a 31-yard strike to Coy Steel for each player's first touchdown as a Bobcat. Later in the second the Cats had an opportunity to even the score but an overthrown deep ball to junior Troy Andersen forced the Cats to punt. Texas Tech quickly picked up from where they had left off, eventually beating MSU 45-10. While the Bobcats struggled competing against an FBS opponent, Head Coach Jeff Choate said on Monday he thought they stayed poised. In a hostile road environment the Cats won the turnover battle and only had two penalty calls. Despite their loss, the Bobcats moved up one spot in the FCS STATS Top-25 poll, putting them at 13th in the nation ahead of Gold Rush.

[YOUR WORDS HERE]

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If you are interested in applying to be a writer or designer, please email Caleb Rux at *ExponentEditor@montana.edu* or apply online at *www.msuexponent.com/apply* with a resume and cover letter.

Year of Undergraduate Research

BY CALEB RUX

Walking on campus it is nearly impossible to miss the YOUR signs plastered to any building or space available. While the YOUR logo seems to be covering campus, many do not know what it is for and how it came to be. To uncover YOUR, I caught up with one of the main people behind it: Colin Shaw, Ph.D., Director of the Undergraduate Scholars Program and professor in the Department of Earth Sciences.

What is YOUR?

YOUR is an acronym that stands for Year of Undergraduate Research. Every year MSU picks a theme, the last being the university's 125th anniversary and a few years earlier it was the Year of Engaged Leadership.

It began when MSU put in a bid in 2016 to host the 34th Annual National Conference on Undergraduate Research in March of 2020. MSU ended up winning the bid, and as a result, President Waded Cruzado wanted to dedicate the academic year leading up to the conference to a Year of Undergraduate Research. "The president really likes these year-long celebrations. It's a really good way to bring the campus together." Shaw elaborated, "Essentially what it consists of is monthly events and monthly focuses highlighting the different aspects of undergraduate research leading up to NCUR." Each month has its own theme, ranging from Undergraduate Research in the Arts, Humanities and Interdisciplinary Studies in October to Research at the University of the Yellowstone™ in February. A full schedule of these events can be found at *www.montana.edu/your*.

What is NCUR?

NCUR is the National Conference of Undergraduate Research. It started at the University of North Carolina at Asheville in 1987 and has continued to grow ever since. "NCUR creates a unique environment for the celebration and promotion of undergraduate student achievement; provides models of exemplary research, scholarship, and creative activity; and helps to improve the state of undergraduate education," as described by their website, *www.cur.org*. The annual conference now pulls in 3,500 to 4,000 students each year from a variety of disciplines to showcase participants' research through "posters, oral presentations, visual arts and performances."

MSU will host the conference over a three-day span starting March 26 and ending on March 28. During this time, classes will be canceled at MSU, but students are encouraged to participate in the conference or attend conference events. Shaw voiced, "We would like to have 400 MSU students present at NCUR. We will cover the cost of registration, and we want all undergraduate students [doing research] here to submit an abstract." They are also seeking hundreds of student volunteers to help with planning, organizing and putting on NCUR.

Undergraduate Research at MSU

Undergraduate Research is a relatively new concept in academia. Shaw estimated that it started in the early 1980's and that MSU was one of the first universities to get behind it by creating a program dedicated to undergraduate research in 1984, the Undergraduate Scholars Program or USP. Shaw explained, "USP is a program to fund, facilitate and help students carry out research projects with a faculty mentor. I kind of think of it as a mini National Science Foundation. Students write proposals to the USP and we review those proposals. We have a panel of experts so those reading the proposals are knowledgeable in the area the student is proposing to work in. Then we select the most worthy proposals. We fund and provide students to carry out the research. So it is a great way for students to get involved in the full arc of research from proposing or thinking up an idea, writing a proposal to sell your idea to a funding agency and carrying out the research." Another great aspect of the USP is that it provides funding to students interested in doing research, which allows for students to use the money as either a stipend or a way to offset research costs. Each year it is estimated that about 1 million dollars goes directly towards undergraduate research at MSU, and the USP is estimated to account for 20 percent of that by funding approximately 200 MSU students.

DESIGN BY IAN MCKAY

While the USP does a great deal for funding undergraduate research at MSU, most of the funding for undergraduates comes from individual faculty member's grants. Just like at every other research institution, faculty members at MSU write and apply for grants through large national agencies such as the National Science Foundation or the National Institute of Health. Faculty members that write these grants, also known as principal investigators (PI's), often ask for funding for undergraduates to be involved in their lab. This allows for PI's to hire undergraduates to get involved in their research.

Shaw spoke to MSU's involvement in undergraduate research, saying, "It's the unique intersection in the type of institution we are. We are a research intensive institution in that we have developed a national reputation for doing leading research, 130 million dollars of federal funding for research, and that intersects with a primarily undergraduate institution. We are an institution that has a high proportion of undergraduates. For us it makes sense to combine those two things, excellence in research and undergraduates." As a result, MSU is routinely classified as a very highly active research university.

How to get involved

For students looking to get involved in undergraduate research, Shaw first recommends they contact USP. "We are the largest and the most diverse in terms of the fields we cover. We can help you find other programs very easily, so it is a great place to come get some information," Shaw said. Another tip he mentioned was to make connections with faculty whose research you may be interested in. After all, much of the research funding comes from individual faculty members. If a student is looking to get involved with NCUR as either a research participant or a volunteer there is a student link on the YOUR site mentioned earlier with an NCUR student link coming soon.

DEAR Expie... WORDS of ADVICE

Breaking Down New Student Blues

"Dear Expie" is a semi-weekly, anonymous column answering student questions on relationship troubles, family woes and more. This week, Expie answers questions about homesickness, loneliness, and roommate troubles. If you've got a question for Expie, email *ExponentOpinion@montana.edu*. All submissions remain anonymous.

Dear Expie,

College has been really hard for me. I miss my family, friends, and dog back home more than anything. Bozeman is so different from where I grew up, and it's tough to acclimate to a new place so quickly. Everyone else seems to be doing great in college, but I just wish I was back in my hometown. What do I do?

– Homesick in Hannon

Dear Homesick in Hannon,

First, I promise you that everyone in college feels homesick at one point or another. We've all called our parents in a flood of tears, stared sadly at photographs of family and friends in our residence halls, or traveled for hours just to see the people we left behind. Thankfully, we live in the year 2019, and there are plenty of options to alleviate your homesickness. Try setting up a time to FaceTime, Skype, or call your family or friends each week. That way, you'll keep up with all the news back home, and you'll feel a lot less lonely.

Next, get involved in Bozeman! The people who deal best with homesickness are those who work to make their college feel like their new home. If you like volunteering, MSU hosts Service Saturdays where you can give back to the community. If you prefer social events, join Residence Hall Council and make a difference in your hall. You could even join one of the dozens of service clubs at MSU and work with others to help out the Bozeman area.

Lastly, connect with some people in your residence hall. Be genuine and admit that you're struggling with homesickness. The people around you are dealing with the same thing, and they might have even more tips and tricks for you. Even if they don't, you'll make some new friends, and those connections will help MSU feel more like home.

Dear Expie,

How do I make friends in college? No one seems to spend time in my residence hall, and I don't know how to join clubs or where to meet new people on campus. Everyone already knows someone else, and they've all joined friend groups. How can I stop being the odd one out?

– Lonely in Langford

Dear Lonely in Langford,

The best advice I've ever received about loneliness is simply to go up to someone and say hello. While this may sound overly simplistic, it is an effective way to start meeting new people. You can talk to the person sitting beside you in your biology lecture, reach out to your roommate, or chat with one of the friend groups that have already formed in your residence hall. Even if people seem like they already have a close-knit group, there's usually room for one more. There are also many, many student organizations on campus to meet new people. From French Club to Smith's Metals Guild, there's something for everyone. Check out the full list of student organizations here: *www.montana.edu/engagement/organizations/explore.html* and pick something that you're passionate about. Finally, reach out to your resident advisor and ask them for help. Chances are that there are plenty of hall events coming up where you can meet lots of new people.

I'm also going to give you a difficult answer to your question. Sometimes you won't make friends for a while. You might not even grow close to people in college until your second year. In the meantime, work on yourself. Spend time doing the things that you like, even if you're doing them alone. Learn to be comfortable by yourself, and you won't feel nearly as lonely.

Dear Expie,

I hate my roommate. She throws late-night parties in our room, makes a ton of noise during quiet hours, and steals my food and drinks. I've tried dropping hints to her that she needs to clean up her act, but she just ignores me. How do I deal with her?

– Unhappy in Hedges

Dear Unhappy in Hedges,

In situations like these, sometimes you have to be blunt. Stop dropping hints and get straight to the point. Tell her that she is treating you poorly and not following roommate rules. Outline exactly how she needs to change her behavior. Don't be rude, but use firm language and tell her that you're not budging on these problems.

If she's still crossing the line, get your resident advisor involved. Tell them what's going on and ask for a meeting. They are trained to confront situations like this, and they will have the appropriate tools to help you with your roommate situation. If your roommate still isn't responding, your RA will know how to take the issue to a higher authority and get the problem resolved.

Thanks, guys! See you soon. This is Expie, signing off.



HEAD TO HEAD

WE'LL LET YOU DECIDE

Check out this article at *MSUExponent.com* to vote

Books, Bye: Level Two Upgrade

BY SHELBY MORRIS

Day two of classes rolled around, and I headed to the place where more hours of my life have been lost than any other: the library. On my way to the third floor, I stopped at the second floor. Why is it so quiet? Is no one in there? Low and behold, the second tier of the library was filled with students, shiny new tables, groovy swirling chairs, and space. They removed the books. My first thought wasn't where did the books go, but instead where is my new spot going to be. Finally, the library created more study space for groups. As a business student, group work is a part of life whether you like it or not. No matter how hard my team "plans" to get projects done early, it's pretty much a given that we'll be clicking submit at 11:58 P.M. from the second floor.

The second story used to be plagued with problems. You could never find a table on nights when projects were due, the regulars always took the good spots, and it was a dog-eat-dog world to secure an outlet. Another problem was finding the SmartyCats tutoring area. I can't be the only student who had a Narnia experience when I saw the drop-in tutoring sign at the end of a dark and dusty row of bookshelves. I'll never forget the time my accounting grade was falling harder than the snowflakes outside, and I scheduled an emergency tutor session the night before the exam. By the time I found the SmartyCats area, only 10 minutes remained in my session. Sometimes the smell of coffee from downstairs was nice because it reminded you to take a study break, but once you stepped in line and looked up at your groups' laptops sitting on those clunky, ugly, wooden tables and thought about that mysterious stain on your chair just awaiting your return, both the niceness and your motivation were gone.

This fall 2019, I believe groups will be able to cram more comfortably. Students will be inspired to climb those stairs and complete work ahead of time. Curiosity will lead them to the SmartyCats tutoring area, now visible to the naked eye. Coffee downstairs will once again pump life into MSU students, and the semester will go on a little less painfully. It was time for an upgrade.

I Hate the New 2nd Floor of the Library

BY DYLAN VOGEL

The library was once a hub where students could work together without fear of disturbing others. It was a carefree zone that allowed people to work in a fun and inclusive environment. Now, it is a wide open space that has fewer group work stations and promotes an environment where students can't talk to each other. As you can tell, I am a little frustrated with new changes. I talked to a few other students, and they said the same thing. Senior engineering student, Parker Elliott, is upset about the changes because "more individual work spaces means less talking and the best part of the second floor was the fact that you could talk to people around you."

I also looked into why MSU and Renne Library made these changes. They claimed that they wanted to create more space because the library was getting too crowded during finals week. This is true, but the library put in more single-person workstations. If there are more single-person workstations, there are less chairs, which makes the library more difficult to access. They also wanted to create more power stations, which the second floor did lack. While this was a great idea, I have yet to find more than five power stations that work. Every other one says "power coming soon." Was there never a time during the entire 18-month process to install power to all the work stations?

And where did the books go? I know that all of the books are digitized now, but did they at least get donated or sold? Nope. The books are in Nopper 910, that weird building in front of the Hedges. Just sitting there, collecting dust. Students can still check those books out, but someone from the library has to walk to the storage facility and retrieve the desired book. Instead of checking out a book in a matter of minutes, students now have to wait days to receive their books. It seems that in the library's effort to make things more efficient, they have made checking out a book more difficult. I will remind you that this is the main reason for having a library.

While I appreciate MSU's commitment to helping students, I think that the second floor renovation could have been done better. The only way that I could even start to warm up to the new changes is if the library adds more group work stations. I just want to be able to talk on the second floor again. Is that too much to ask?



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CALENDAR September 5 –11

Want your event featured here? Email information to *ExponentEntertainment@montana.edu*, preferably two weeks in advance.

CAMPUS

EARTH SCIENCES SEMINAR
Thursday, Sept. 5, 12:15 p.m.
Lewis Hall 304
Nathan Sayre, P.h.D., a Geography professor at the University of California, Berkeley, will present "Collaborative Rangeland Conservation in the U: What Can the Past Tell Us Now?" during this week's Earth Sciences seminar. Refreshments will be served at 12:15 p.m., and Sayre's presentation will begin at 12:20 p.m. This seminar is free and open to the public.

ECOLOGY SEMINAR: STATUS OF GLOBAL FISHERIES
Thursday, Sept. 5, 3:30 p.m.
Lewis Hall 304
Ray Hilborn, Ph.d., is a fisheries scientist and professor in the School of Aquatic and Fishery Sciences at the University of Washington. His talk is titled "Status of Global Fisheries: What is Working and What is Not". This seminar is free and open to the public.

COMEDY NIGHT
Thursday, Sept. 5, 8:00 p.m.
SUB Ballroom A
MSU fan favorite, Becky Robinson, returns to the stage! Enjoy an ice cream bar with fun toppings and other snacks. Free, no tickets necessary. Doors open at 7pm. Get a couple of friends and be prepared to laugh.

ROMNEY HALL REPURPOSING KICK OFF
Friday, Sept. 6, 3:00 p.m.
Romney Oval
The Romney Hall Repurposing Kick-off will take place at the Romney Oval Friday afternoon. Speakers at the event will include President Cruzado, Montana Lt. Gov. Mike Cooney and many more. Event is open to the public and students through courtesy of an RSVP.

STUDENT EMPLOYMENT JOB FAIR
Tuesday, Sept. 10, 11:30 a.m.
Strand Union Building, Ballrooms BCD
Students — need a part time job or internship? This is a student employment fair hosted by Career, Internship & Student Employment Services. Employers are seeking to hire students who are looking for part-time jobs and internships.

THE ARTS

2019 MUSIC IN THE MOUNTAINS - PINKY AND THE FLOYD
Thursday, September 5, 6 p.m.
Towne Center Park - Big Sky
Join Big Sky as they close out the 2019 Music in the Mountains concert series in style with the regions hottest tribute bands, Pinky and the Floyd. The concert takes place at Towne Center Park - Big Sky, MT. Free admission, no dogs or glass containers.

RANDOM ACTS OF IMPROV
Friday, Sept. 6, 8 p.m.
Verge Theater
Shifting back to the often sunless and fun-lite routines, Verge Theater is giving Bozemanites the reprieve they will surely be looking for with some fantastic stage performances. This improv routine will be sure to make you laugh.

IndepenDANCE: PARALLELS
Saturday, Sept. 7, 2 p.m.
The Ellen Theater
IndepenDANCE Community Dance Project is proud to present IndepenDANCE: Parallels, the culmination of the groups 11th season. With over 20 local choreographers and 100 dancers, each piece of the annual production is a reflection of the individuality of the individuality of its participants.

PECHA KUCHA 32
Wednesday, Sept. 11, 6:20 p.m.
The Ellen Theater
PechaKucha offers anyone with a passion or a vision—designers, artists, inventors, architects, adventurers, entrepreneurs—to share their ideas during a fast-paced, friendly social get together.

ART ON THE ROCKS
Thursday, Sept. 5, 6:30 p.m.
Emerson Center for the Arts and Culture
If you are creative but need the direction and don't want the commitment of a multi-week course, this class is for you. Grab your friends and enjoy a creative evening filled with step-by-step art instruction, and yes, cocktails.

COMMUNITY

CONVOCATION SERVICE SATURDAY
Saturday, Sept. 7, 9 a.m.
Strand Union Building, Bus loop
On Sept. 7, your fellow Bobcats are going out in the Bozeman Community to lend a hand in the spirit of Convocation. Service Saturdays are local service projects, allowing students to create relationships while working on enhancing Bozeman. Join in to get to know your peers and the Bozeman community through service.

MOR TwoFly FAMILY DAY
Saturday, Sept. 7, 10 a.m.
Museum of the Rockies, Bair Lobby
You are invited to join the Museum of the Rockies for a couple of hours of fun, fishing, and education. Children will have a blast while learning how to cast a fly-rod, tie flies, and identify fish species.

WALKING TOUR - MURDERS, MADAMS, AND MEDIUMS
Friday, Sept. 6, 7 p.m.
Downtown Bozeman - The Extreme History Project, 234 E Mendenhall St.
From horrific murders to notorious madams and mediums communicating with the spirit world, Bozeman's darker history comes to light in a walking tour designed to send a shiver up your spine.

ATHLETICS

MOR TwoFly GOLF SCRAMBLE
Friday, Sept. 6, 1 p.m.
Riverside Country Club
Join the Museum of The Rockies for a fly-fishing themed 18-hole golf scramble at Riverside Country Club. By participating, you will be supporting one of Montana's premier cultural and educational institutions. $150/ a person plus dinner, drinks and fun after the tournament.

GOLD RUSH - FOOTBALL VS. SEMO
Saturday, September 7, 6 p.m.
Bobcat Stadium
Montana State Football kicks off the 2019 season with its 13th annual Gold Rush game on Saturday, Sept. 7. Although tickets have already been claimed, students without preloaded tickets are allowed in after kickoff depending on the available space.

GLOW ZUMBA
Wednesday, Sept 11, 5:30 p.m.
Strand Union Building
Dust off those fanny packs, throw on your sweat bands and dance in your neon gear under the black lights. This fun activity will take place in the SUB and is a great way to keep in shape.

YMCA 5K
September 7, 8:30 a.m.
Downtown Bozeman
The Gallatin Valley YMCA has partnered with the Bozeman Running Company to bring you the Second Annual YMCA 5K. The race kick-starts the well-known Bozeman Marathon Weekend includes the 5K, half marathon and the Boston Qualifying Bozeman Full Marathon.

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The New Knife on the Block

BY DYLAN VOGEL

Knife Bistro is a veteren owned, locally sourced breakfast and lunch establishment located in downtown Bozeman. Knife Bistro takes all the comfort food of home and turns it into elegant, high-quality dining. What stands out about Knife Bistro is the price. The breakfast sandwich is by far the best deal on the menu. For $10, diners can get the egg sandwich, made with scallions, sharp cheddar cheese and a Sriracha aioli, that is to die for. Diners can add their choice of a sausage patty, bacon, ham or turkey. In typical Bozeman fashion, they have a vegan option where you can add avocado, for no extra charge. Included in the price, is a 16oz. drip coffee and a fruit bowl. That would easily cost you $15 at any other high-quality breakfast restaurant in Bozeman. For lunch, there is a wide variety of sandwich options, both hot and cold. Some favorites are the Knife B.L.T, grilled cheese and the caprese sandwich. For those of you who may not know what a Caprese sandwich is, it is an Italian sandwich with a tomato and basil base topped with lettuce and mozzarella cheese. It will soon become your new favorite sandwich.

KNIFE BISTRO
411 E MAIN ST
MON – SAT 8-4
8 / 10

Besides an amazing menu and great ambiance, Knife also has a unique pay it forward system. Customers can go into the bistro and pay for a meal. Knife will put the receipt from that order on a board and other customers can go and see what orders have been paid forward, bring the receipt to the counter then order that food for free. How awesome is that?

Knife Bistro has amazing food and wonderful atmosphere. The staff are great and super nice to anyone that comes in. Next time you want to go out to breakfast or want to pick up food on your way to Bridger, consider Knife Bistro located on Main and Rouse. For more information, you can visit their website at *www.knifebistro.com*.

Knife Bistro offers breakfast items all day. They also serve a wide variety of soup, sandwiches, and salads.

PHOTO BY PARKER CANBY



Not so NORMal Art Show

BY DYLAN VOGEL

MSU is full of extremely talented students and staff and does a great job of providing an environment where this talent can be honed and displayed. On Thursday, Aug. 29, there was an art exhibit showing off the work of MSU art student Holden Roberts in Norm Asbjornson Hall.

Roberts was the winner of a special art competition in 2018, where his prize was a commission to create an art project that would be displayed over three large walls in the heart of Norm Asbjornson Hall. Striving to think out of the box, Roberts wanted "to capture and study an exact point and time and place using a combination of static and kinetic materials." To create his vision, he took videos of sets of static students on campus and painted any student that happened to walk in front of his camera. Accompanying the paintings were two kinetic sculptures. The sculptures were motion activated and ran on a small motor. When viewers walked by, the wheels would rotate, portraying the image that was painted on.

The display took viewers on a journey as they moved from the first to third floor in Norm. The first floor was like a "shrine or a gate a solidified event in time". The second floor showed a video of four main people standing in a line with ten other people walking by. Roberts painted these four main characters and 10 sub-characters with their "essence and energy in mind. A top color and a bottom color." The third floor, the end of the journey, portrayed 120 paintings of "beings" that crossed in front of Robert's camera. As the video progresses, he stopped it and created a "landscape of people".

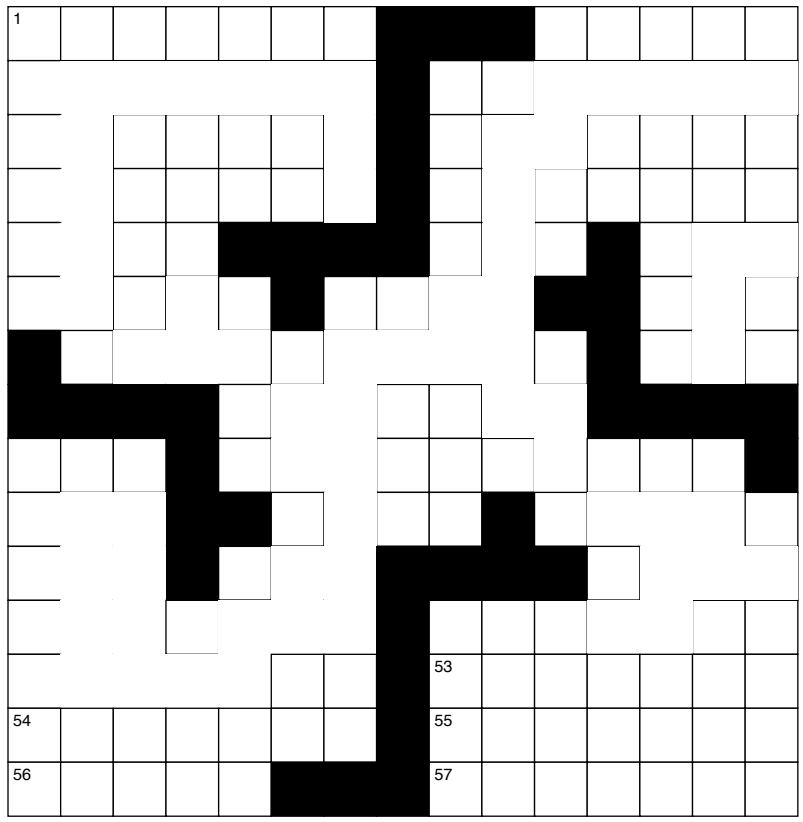
It took a total of ten hours to complete the project and you can see Holden Robert's hard work and passion behind his art. Stop by Norm and take a look at the wonderful and unique display. He is definitely one of the amazingly talented students here at MSU. You can view more of Robert's art on his website at *www.holdenroberts.com*.



THE MSU exponent PUZZLES

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the BOX



Across

1. December 31st, year-wise
8. "Beavis and Butt-head" cartoon spinoff
13. Madrid home of many Bosch works
14. Sharpshooters
16. Benefited
17. Kidney bean
18. Kind of geeky
19. Soup seasoner
20. Carry along
21. Elementary sch. basics
22. Marquette sch.
23. Warner in "The Jazz Singer"
25. James of R&B
27. Neutral shade
28. Shy ones
31. Audio (abbr.)
32. Birth of _____ (D.W. Griffith)
33. 601, to Caesar
36. Renowned
40. Him, in Hamburg
41. Tussle
42. Reimburser
44. Singer Damone
45. ER pronouncement
46. "____ smile be your umbrella..."
47. Esteemed
49. Cast-iron cooker
52. Say again
53. Dependent
54. Warts and polyps, e.g.
55. Adriatic port
56. Our planet
57. Red-faced

Down

1. Rough house
2. Air sacs in the lungs
3. Lacking luxury and comfort
4. Neptune's fork
5. Focus of an art museum in St. Petersburg, Fla.
6. Lemon or lime drinks
7. 10th Hebrew letter
8. More extreme
9. Eat like ____
10. Takes back
11. Certain triathlon, or a participant in it
12. Amaze
14. Certain cuts of beef
15. One doing a voice-over
24. Wild card?
25. Assesses
26. French heads
29. Thirty days, at times
30. A Rice Krispies sound
33. Branch off
34. Mythological monster
35. Front tooth
37. Adds up
38. Bat an _____
39. Political thaw
43. Told (on)
45. "___ Becomes Her" (Hawn/Streep comedy)
48. Package info
49. Mlle., in Madrid
50. Sheffield sidewalk's edge
51. Skating star Kulik

R	P	R	O	N	G	S	S	T	U	N	A	S	D
S	O	S	O	S	T	B	E	F	I	T	S	N	E
R	L	T	T	S	W	S	X	D	E	K	C	E	D
R	E	A	C	H	O	K	E	D	A	R	I	P	I
D	E	T	N	A	R	E	S	I	U	J	M	A	A
B	E	I	H	G	F	E	L	E	L	D	E	E	N
E	U	C	I	G	O	L	L	K	L	I	L	H	R
C	G	N	E	Y	G	N	I	H	C	A	O	C	U
F	F	D	D	N	A	M	U	P	Z	I	P	O	T
T	U	M	U	L	T	S	Q	A	P	F	S	S	R
I	P	R	Y	L	E	T	A	U	Q	E	D	A	E
M	U	S	I	C	S	E	L	B	B	U	R	R	V
D	V	N	A	E	C	O	W	H	I	D	E	S	O
A	L	L	O	T	S	P	O	R	T	E	R	G	Y

Adequately
Admit
Aided
Allot
Azalea
Beats
Befits
Bundle
Chaos
Cheapens
Choked
Coaching
Cowhides
Cruel
Decent
Decked
Elapse
Factor
Flippers
Furies
Gates
Jades
Leeks
Logic
Musics
Needle
Noted
Ocean
Oiliest
Overturn
Polemics
Porter
Prongs
Quills
Ranted
Reach
Rubbles
Sexes
Shaggy
Sickle
Slang
Sludge
Static
Tumults
Tunas

EASY

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9	6		7		2	4		
			9		4			7
6		2						
		3			1			6
5	3							
		8			7		9	
	7			3		8	1	

CHALLENGING

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7						8		
		1	6	4				
3			9				6	2
						9		
	6		8					4
				9			5	7

People that are cooler than you:

Steve Buscemi

Your mom

Anyone who wears Supreme

Wears pastel collared shirt under a pastel collared shirt

Chicken Joe

Famed astronomer Nicolaus Copernicus

Bee pimps

"One time at band camp"

Wadaddy Cruzaddy

People who still wear shutter shades

Elongated Muskrat

Professor Stephen Sofie

Jorts Wearers

Electric Longboarders

Instagram Influencers

People who ask you to join an MLM

White suburban yoga moms

Hipsters of Bozeman

Donkan Mattingly

Subaru drivers

Youth pastors

People who can drive cars on campus

Instagram Influencers

Gen Z Kids on TikTok

Every Kyle

Pumpkin Spice White Claw fans

Chester Cheetah

Vape Nation

Tall Tales & TIDBITS

Most coyotes are actually illiterate.