

INSTITUTE REPORT

Volume 53, Number 4, December 2024

Faculty Member Appointed Poet Laureate

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Cyber Captains Train in Security Drill

By Marianne Hause

Nine cadets, along with a staff member of VMI's cyber defense laboratory (CYDEF), recently traveled to the Virginia Army National Guard's 91st Cyber Brigade Readiness Center at Fort Belvoir in Fairfax County, to participate in Cyber Drill Weekend, immersing them to cybersecurity in real life scenarios.

According to Amish Parikh, IT specialist and systems engineer for CYDEF, the nine



VMI Cadets gather after completing the 91st Cyber Brigade Cyber Drill Weekend.—*Photo courtesy of Jacob Klein.*

are members of VMI's cyber captain program, of which Parikh is the head coach. "Members of the 91st taught our cadets a wealth of information. They had opportunities to work with printed circuit boards and acquired knowledge in open source intelligence successful weekend of learning, having fun, and experiencing realworld job skills."

VMI cyber captains will participate in another Cyber Drill Weekend next semester. *****



Trick-or-Treat in Barracks

Cadets welcomed children of faculty and staff to barracks on Halloween. Cadets, many dressed in costumes, handed out candy to the trick-or-treaters.-VMI Photos by Jake Falcone '27.





and counter intel operations. They were also exposed to cyber skilled jobs available in the Department of Defense."

Raj Singh '25, a computer science major from Honolulu, Hawaii, reported that the lessons learned during the event gave him more information about the cyber world in a real-world perspective. "It was a

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On the cover: Gary Sinise addresses the Corps of Cadets during the Founders Day parade Nov. 8.–VMI Photo by Kelly Nye.

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VMI Celebrates 185th Anniversary Rolls Out New Strategic Plan

By Marianne Hause

VMI presented a new strategic plan, "Forging 21st Century Leaders," as it celebrated the 185th anniversary of its founding. It was Nov. 11, 1839, when 23 young Virginians were mustered into the service of the state and, in falling snow, the first cadet sentry—John B. Strange of Scottsville took his post.

The strategic plan, approved by the VMI Board of Visitors in November 2023, builds on the success of "Vision 2039," the strategic plan presented to key stakeholders first in 2004, during the time Gen. J.H. Binford Peay III '62 was superintendent, and was written to ensure VMI remains a state and national treasure in the 21st century, and well beyond the Institute's bicentennial in 2039.

"Forging 21st Century Leaders" was officially rolled out to employees at a launch party Oct. 24 in Marshall Hall. In the Hall of Valor, faculty and staff enjoyed networking with colleagues, viewing architectural renderings of renovations of current post buildings as well as new buildings to be constructed, eating hors d'oeuvres, and receiving mementos commemorating the launch. Maj. Gen. Cedric T. Wins '85, superintendent, shared with them that "Vision 2039" vastly improved VMI's infrastructure, providing much needed capacity for the growing Corps as well as modern facilities conducive to learning and training, and set the Institute on a path of thinking strategically about the future. "The new plan is a culmination of two years of collaboration among cadets, faculty, staff, board members, and alumni, and is a call to action built on five critical initiatives, each designed to push us further, raise our standards higher, and ensure we continue to be a premier institution of higher education known for the character of the graduates we produce."

The five initiatives include: 1. Preparing Exceptional Leaders: producing educated and honorable citizen-leaders; 2. Strengthening Academic Excellence: equipping cadets with the intellectual tools to navigate and shape the future; 3. Fostering Esprit de Corps: unity, pride, and mutual respect that binds; 4. Recruiting Top Cadets and Boosting Success: sharpening



Gary Sinise takes review of the Founders Day parade with Maj. Gen. Cedric T. Wins '85.–VMI Photo by Kelly Nye.

recruitment strategies and attracting top talent from across the world; and 5. Delivering 21st Century Infrastructure: investing in modern classrooms, labs, technology, and physical fitness facilities.

With the implementation of this plan, Wins sees VMI 10 years from now firmly secured in its place as the premier small college in the nation, unequaled in producing educated, honorable, and adaptable citizen-soldiers and leaders. "A VMI with a global reputation for academic excellence, a renowned model for leadership training, and a shining example of what it means to lead with honor, courage, and selfless service."

Following his remarks, he recognized several members of the faculty and staff who, in addition to their usual responsibilities, worked diligently developing and designing the strategic plan and leading the execution of the plan



Members of the Cadet Battery fire one of the howitzers, John II, during the Founders Day parade.-VMI Photo by H. Lockwood McLaughlin.

thus far, including Col. Jeff Kendrick, Col. Stacey Vargas, Lt. Col. Michelle Ellwood, Cmdr. Julie Shank, Olivia Fowler, and Robbin Youngblood.

The plan was introduced to the public during Founders Day commemoration, Nov. 8. People attending the parade were given the opportunity to see the architectural renderings in Preston Library, view banners hanging from post light poles, and receive pocket guides of the plan, along with other commemorative mementos.

Special guest at the parade was actor Gary Sinise, founder and chairman of the board of directors of the Gary Sinise Foundation, a charitable organization that honors veterans, first responders and their families, and others in need. Sinise is best known for his role as Lt. Dan Taylor in the major motion picture, "Forrest Gump." His portrayal of that character formed an enduring connection with the military community.



Members of the Institute Society gather in Marshall Hall to celebrate the 50th anniversary of the philanthropic group.—*Photo courtesy of Joe Czekner, VMI Alumni Agencies.*

During his speech at the parade, Sinise expressed his admiration for the Corps of



Cadet leadership march in the Founders Day parade Nov. 8.–VMI Photo by Kelly Nye.

Cadets for all the hard work and discipline to get into and succeed at VMI. He shared that unlike them, he was never a good student. "But in fourth grade, my parents bought me a guitar and music would be the only thing I was interested in," he shared. He played guitar and bass throughout elementary, middle, and high school and was a member of many bands. A love for acting was introduced to him when he was cast in his high school's production of "West Side Story." He continued to perform in many plays in high school, but after graduating, there was no theater in which to perform, so he and a couple friends started their own theater company called Steppenwolf Theatre Company. "What was

started by teenagers with no money is now a Chicago institution with a massive multimillion-dollar theater complex. It is still going strong, and we are celebrating our 50th anniversary this year. I speak about this as an American dream story; start with nothing but a passionate idea, work hard, and in the United States of America, you can achieve great things. Our freedom certainly allows us the opportunity to do that. And this is how it all began for me," he stated with pride.

As time went on, Sinise's career grew and evolved into a successful film and television acting career including roles in "Of Mice and Men," "Apollo 13," "Ransom," and "The Green Mile." "And in 1994, 30 years ago, I played Lieutenant Dan Taylor in 'Forrest Gump.' I'll share a little bit of the unknown back story for that character, although it is never mentioned in the film. You know, you create a back story for your character going in. And so, I decided that Lieutenant Dan had been a graduate of VMI," he quipped to the cheer of the crowd.

In closing, Sinise tenderly asked the assembly to never forget from where their freedom comes, and to always remember those who have fallen to defend that freedom. He described the Corps of Cadets as a glorious asset in peace and a tower of strength in war. Directing his last words to the cadets he said, "You will carry that model with you for the rest of your lives,

Class of 2026 Revels Milestone Enters the Brotherhood of the Ring

By Marianne Hause

The bracing air and tease of snow did not distinguish the blaze of excitement and exuberant mood for the Class of 2026 Nov. 21 and 22. It was during those two days that the class celebrated Ring Figure, one of the most anticipated events for cadets. The two-day observance consisted of multiple events in various venues including the presentation of combat rings and class supper Thursday evening, followed by a family brunch, class ring presentation, ring blessing, and Ring Figure ball on Friday.



Capt. Phillip Haly accepts the title of honorary brother rat from the Class of 2026 during the class supper in Crozet Hall Nov. 21.–VMI Photo by H. Lockwood McLaughlin.

The first ring was

designed by members of the Class of 1848 and was presented to graduates during finals celebrations. The design was simple—the word "Mizpah" was cut in the stone and on the inside of the band was engraved, "1 of 24, July 1848." Mizpah, from the Hebrew, is established in 1907, and the addition of the Ring Figure dance started in 1927 with the Class of 1928.

The traditional presentation of the combat rings was held in Memorial Hall followed by the class supper in Crozet Hall Thursday



Devin Auzenne '26 accepts the Douglas Carter France III '71 Memorial Award from Warren J. "Buddy" Bryan '71 in Crozet Hall.–VMI Photo by H. Lockwood McLaughlin.

evening. The Douglas Carter France III '71 Memorial Award for "excellent character, selflessness, graciousness, and enthusiasm" was presented by Warren J. "Buddy" Bryan '71 to Devin C. Auzenne '26. Auzenne won the honor through an election by his peers.

translated as "the

Lord watch between

another." The term

of the Class of 1848.

Modern rings have

larger and more

still found.

become increasingly

elaborate in design, but

the tradition of the class

designing their one-

of-a-kind ring remains

the same and the word "Mizpah" is often

The custom of 2nd

Class cadets receiving

the class ring was

me and thee, when we are absent one from

signified brotherhood,

the enduring connection

among the 24 graduates

The class nominated Capt. Phillip S. Haly, Marine officer instructor for VMI's Naval ROTC unit, to be their honorary brother rat. Colin Russell '26, vice president of the class, presented Haly with a signet dinner ring.

After Haly thanked the class for the extraordinary honor, he confessed that he was completely unfamiliar with VMI prior to his arrival in 2023. "When my family and I first drove onto post, it took our breath away. From the highly groomed Parade Ground to the esthetics of the architecture, we were blown away. I knew I would love to be here training the next generation of VMI cadets." Haly told the class several things he has learned about them. "Number one, you all care more than any of your peers I've met nationwide. Your dedication to your studies is admirable and it sets you apart. Number two, your traditions are a part of you. You should never compromise them for comfort. Society may change and people may formulate opinions about what you do within these walls, but none of that should matter. The one thing that strengthens the group did to raucous cheers, and immediately proceeded to test the rings' resonance qualities by energetically banging their hands on the dining hall's tables and chairs.

On Friday, Nov. 22, a family brunch in Crozet Hall was followed by the formal ring presentation ceremony where 2nd Class cadets received their individualized rings in Cameron Hall. Maj. Gen. Cedric T. Wins '85, superintendent, opened the ceremony by reminding the class that each one of them charted a unique path that brought them to VMI, and in their pursuit of personal growth, chose to push themselves beyond what they thought possible. "You chose late nights of study and spartan living conditions. You chose

is remembering why you have traditions and never compromising your traditions for anyone. The bond that is forged during your tenure here will be a bond that never leaves your side. Number three, your adherence to standards gives your class credibility that transcends the Institute. This place is designed to forge citizen-soldiers or commissioned officers who are superior to their peers across the nation." Haly closed by encouraging the cadets to value every second they spend at VMI, because those seconds will impact them for the rest of their lives. "I'm extremely humbled to be your honorary brother rat. I do not take this honor lightly and I promise to never take it for granted. This is one of the highlights of my professional career."



Haly enlisted in the U.S. Marine Corps in 2006 and began his career

as an avionics countermeasures technician. In 2015, Haly was selected as a participant of the Marine Enlisted Commissioning Education Program, and attended school at Cal State San Marcos within the University of San Diego NROTC consortium, and commissioned in 2019. Throughout his officer career, he has served as Regimental Targeting and Collections officer, Scout Sniper Platoon commander, assistant intelligence officer, and battalion intelligence officer. He has been recognized as a Distinguished Graduate for the Marine Corps Martial Arts Instructor course, the Marine Corps Instructor of Water Survival course, Drill Instructor School, and The Basic School. He also received recognition as the Battalion Honor Graduate for Officer Candidate School 2-19, where he received the Phil Yeckel and the MCA Honor Graduate Award. Haly's operational experience includes deployments in support of Operation Iraqi Freedom, and Operation Enduring Freedom. His personal awards include the Navy and Marine Corps Commendation Medal, the Navy and Marine Corps Achievement Medal in lieu of two gold stars, the Good Conduct Medal in lieu of three bronze stars, 9th Award Expert Rifle Badge, and 6th Award Expert Pistol Badge.

Photo by H. Lockwood McLaughlin

Following Haly's speech, Maximus Ankrah '26, class president, invited his brother rats to put on their combat rings, which they

honor, leadership, courage, self-discipline, and resilience. You have earned the right to wear the symbol of your efforts, the VMI ring. You've entered the brotherhood of the ring. With this ring comes high expectations with great responsibility. You're joining a community where leadership is not just an option, it's expected. Wear the ring with honor and wear it with a sense of pride as you continue to forge your legacy. We are all very proud of you and excited to witness your future contributions and achievements to our great nation and to this Institute," Wins said.

Alumnus guest speaker, Lt. Gen. John "Dan" Caine '90, addressed the class after Wins. Caine shared with the cadets that the small details of his own class ring have blurred with the passage of time, but their meanings and the symbolic unbreakable bond between those who came before and those who follow remain. "Within this metal is not just gold. It's courage, justice, wisdom and temperance. Today you earned a ring through the blood, sweat, and tears of the Rat Line, the challenges of the academic classroom, and the athletic battlefield." He advised them though, the work continues. "Throughout history, VMI graduates have answered the call to serve all over the world. VMI ring wearers who went before you focused on the deed and not the glory. It's in this continuous thread of selfless service, the gift of a great example, that you now come aboard in the brotherhood of the ring. The honor and privilege of wearing this ring does not come without sacrifices. Since the Institute's founding, we've lost people in every war. It is each of these heroes and their families that we owe a debt of gratitude and responsibility to carry forward and keep that charge by wearing this ring. VMI ring wearers are currently deployed around the world, taking their rings off, sliding them into a uniform pocket, and going out to do our nation's business." Caine also included professionals in the government and private sector who work hard to uphold the responsibility of wearing the ring. In closing he served in a wide range of operational, staff and joint assignments, primarily as an F-16 fighter pilot, weapons officer, member of the White House staff and special operations officer. He has a Master of Arts in Air Warfare from the American Military University. He has completed a range of national security and leadership courses, including Harvard Kennedy School's course for Senior Executives in National and International Security, and the Syracuse University Maxwell School's Program on National Security. As a command pilot, he has logged more than 2,800 hours in the F-16, including more than 150 combat hours. From 2009 to 2016, Caine was a parttime member of the National Guard and a serial entrepreneur and investor. Among his many personal awards include the Defense



Cadets and their dates celebrate on the dance floor during the Ring Figure ball in Cocke Hall.-VMI Photo by Kelly Nye.

Superior Service Medal, the Distinguished Flying Cross, the Bronze Star Medal with bronze oak leaf cluster, the Defense Meritorious Service Medal, and the Meritorious Service Medal.

Later Friday afternoon, the ring blessing service was held in Memorial Hall. Capt. Eli Facemire '19, associate chaplain, gave a brief message followed by five cadets who offered prayers, verses or blessings from their respective faiths of Protestantism, Catholicism, Muslimism, Judaism, and Buddhism.

Ring Figure committee member Hannah Buttner '26,

charged the cadets, "Wear your rings with pride. Live with honor. Be humble, be grateful, and go forth and do the things that you must do to bring this nation to a better place. You have to earn this ring, not just today, but every single day. May the Lord watch between me and thee, when we are absent one from another. May God bless the Virginia Military Institute, may God bless our deployed forces, may God bless our fallen, may God bless the Class of 2026, and the United States of America. Thank you so much and congratulations."

At the conclusion of his speech, the class presented Caine with a hatchet, a symbol of a warrior.

Caine was sworn in as the associate director for military affairs for the CIA in 2021. His most recent assignment was as the director of special programs and the Department of Defense Special Access Program Central Office at the Pentagon, where he served as the principal staff assistant and advisor to the secretary of defense for all programs protected under special access controls. He has shared that Ring Figure is one of the most important events in a cadetship. "My brother rats are the most impressive people I've ever met, and wearing this ring would be to honor them, the Institute, and all that we have endured up to this point."

Colin Nicassio '26, Pipe Band drum major, imparted the importance of remembering those celebrating the milestone with the cadets. "Our parents, grandparents, brothers, sisters, and cousins are all part of who we are, and our success here."

The evening wrapped up with the Ring Figure ball held in Cocke Hall with the traditional dress code of coatees, white ducks or long white skirts for cadets, floor-length white gowns and elbow-length gloves for female civilian dates, and tuxedos with white bow tie for male civilian dates. Couples were able to process through sabers and have their photograph taken in the large replica ring.

Additional photos from the events are found on pages 10 and 11. 🕷

Chief Marshall Receives Prestigious Award

By Marianne Hause

Michael Marshall, chief of police at VMI, recently completed the Professional Executive Leadership School (PELS), an intensive three-week leadership education program, spanned over a period of three months. PELS is conducted by the Virginia Association of Chiefs of Police in cooperation with the University of Richmond and designed for law enforcement officers currently serving in executive level positions in the commonwealth. The objective of the program is to teach best practices in leadership, challenge participants to reflect upon their own leadership competency, and examine ways of achieving both personal and professional growth. Marshall, who was one



Chief Michael Marshall displays his PELS Graduate Leadership Award, along with his certificate of completion of the education program.–VMI Photo by Marianne Hause.

of only 28 who qualified to attend the highly selective program, was awarded the prestigious PELS Graduate Leadership Award at the graduation ceremony. The award recognizes one member of the class who has demonstrated a personal commitment to expand his own leadership abilities, exhibited a sincere desire to learn and improve himself, best represented his organization and profession, and demonstrated a sincere desire to support and encourage others in the class. The winner was chosen by his peers in a blind ballot.

Lt. Nick Lion of the Alexandria Police Department, who also completed PELS, shared that Marshall embodied excellent leadership skills from the start of the program. "He took time to individually meet with classmates, both in the academic setting and during our social hours. His broad scope of knowledge, skills, and abilities brought context and perspective to many of the topics we covered in the class. He asked genuine questions, listened thoughtfully, and his principles are firmly grounded in the selfless values of duty and service. He was an easy choice for this significant award," said Lion.

Marshall stated that while most good leadership skills are universal, there are skills particular to law enforcement. "I use the phrase, 'clarity with power.' In our profession, we don't have a lot of leeway time during certain events, so when we are called on to make that split-second decision,

we're clear about it and understand ramifications that could occur. A good leader must be open minded, able to accept constructive criticism, and understand the importance of teamwork."

Marshall has been invited to return to PELS in February to teach Budgeting for Public Personnel as an adjunct professor. *****

100-Mile Run for Operation Enduring Warrior

River Smith '27 and Mike Wakefield '25 set out on a difficult goal the afternoon of Nov. 16 to complete 100 miles around the Parade Ground to raise funds and awareness for **Operation Enduring Warrior**, a nonprofit dedicated to helping wounded military and law enforcement veterans. They held a steady pace over 24 hours to complete their mission, with fellow cadets joining them on numerous laps, even during the night. More than \$5,800 was raised for the organization.-VMI Photos by Jake Falcone '27.



Ring Figure 2024

Additional photos can be found on the VMI Flickr account.—VMI photos by H. Lockwood McLaughlin, Kelly Nye, and Jake Falcone '27.









































Career Services Grant and Clothes Closet to Assist Cadets

By Marianne Hause

VMI has been awarded a one-year grant in the category of Capacity-Building of up to \$150,000 from the State Council of Higher Education for Virginia (SCHEV). According to Lt. Col. Ammad Sheikh, director of the Office of Career Services (CS), the grant will help VMI enhance program infrastructure, improve institutional tracking mechanisms, strengthen employer partnerships that align with regional and state workforce programs, and hire key personnel or develop a centralized hub focused on internship and work-based learning activities.

Additionally, beginning in April, CS will offer a professional closet for cadets needing clothes for job interviews, networking events, and other career-related events. Cadets will be able to borrow a complete ensemble free of charge each semester, with an option to keep it due to financial hardship. To get the closet established, the following gently used items are needed: Portable steamer, tie tree hangers, wooden clothes hangers, suit storage/travel bags, suits, men's long-sleeved dress shirts, women's blouses, slacks, skirts, ties, and leather belts. No shoes are needed. All clothes should be dry-cleaned prior to donation. To schedule a drop off, contact Maj. Natalie Slone at **slonenb@vmi.edu** or 540-464-7734. *****



Thanksgiving Supper

The Corps of Cadets had their annual Thanksgiving supper in Crozet Hall Nov. 19. Parkhurst Dining provided traditional Thanksgiving dishes. Members of administration were invited to attend.–VMI Photos by Jake Falcone '27.





Pilot Serves as Leader-in-Residence Female Combat Pilot Shares Experiences with Cadets

By Marianne Hause

VMI's 2024-25 Leader-in-Residence (LIR) Amber Smith, former U.S. Army Kiowa helicopter pilot, and author of two books, "Danger Close: My Epic Journey as a Combat Helicopter Pilot in Iraq and Afghanistan," and "Unfit to Fight: How Woke Policies are Destroying Our Military," visited post recently.

Named in honor of VMI's 14th Superintendent Gen. J. H Binford Peay III '62, the LIR program is an important part of the Center for Leadership and Ethics' efforts to educate, engage, and inspire cadets, faculty, and staff to develop as leaders, and brings to post people of stature within their fields whose distinguished careers exemplify



Amber Smith addresses cadets in Gillis Theater during her visit to post.-VMI Photo by Kelly Nye.

the citizen-soldier model. Smith's residency amounts to a twoweek visit over the course of the academic year. She has interacted primarily with cadets in various formal and informal settings, including the classroom, barracks, and during athletic activities such as club sports.

Smith is one of only a few women to have flown the Kiowa warrior helicopter, whose mission is armed reconnaissance, and requires its pilots to stay low, fast, and perilously close to the fire. She deployed to Iraq and Afghanistan as a member of the elite 2-17 Cavalry Regiment, part of the legendary 101st Airborne Division, the Screaming Eagles, where she rose to pilot-in-command and air mission commander. She engaged with terrorists, the Taliban, and al Qaeda. She was shot at, was in firefights, and had some extremely close calls, which have had lasting effects on her life. After leaving the military, she entered graduate school. She has had articles published, which led to analysis and commentary, then the publishing of her books.

Sitting in on a few classes, Smith shared her experiences as a pilot, as well as her views on leadership to both commissioning and non-commissioning cadets. "A leader's job is to be their subordinate's champion," she advised, and stressed the importance

of communication in leadership. "Leaders need to learn how to be better communicators. Too often communication is put on the backburner because of extremely busy schedules, but poor communication can lead to ambiguity and assumptions."

One class Smith attended while on post was a course taught by Col. Nichole Scott, Air Force ROTC commander, who stated that it's critical for the cadets to hear different leadership perspectives. "Smith's message about her journey and what motivated her while she was in the Army reinforces the themes and traits we're trying to instill in our future officers. Among other things she discussed was the importance of decision making and communication. We appreciated her candor and willingness to share her story with us," said Scott.

Laini Morgan '25, an electrical and computer engineering major from Erie, Pennsylvania, and a student in Scott's class, was inspired by Smith's story as a female military helicopter pilot. "The advice she shared was invaluable, and the key takeaway for me was her emphasis on doing your job with excellence. When you're great at what you do, no one can question or criticize you. If you fully invest yourself into your job and embrace the challenges, that's what people will remember and respect. I'm grateful she's now using her wealth of experience to inspire and support others," shared Morgan.

Smith will return to post in the spring when she will be the keynote speaker at the Superintendent's Leadership Dinner. *****

Shakespeare Conference

Gabriel Williams '25, Whitney Tracy '25, and Nathalie Lavender '26, cadets in Col. Emily Miller's spring 2024 Institute Honors seminar on Power and Politics in Shakespeare, presented papers on Shakespeare and early modern culture at the annual conference of the South Atlantic Modern Language Association in Jacksonville, Florida, held mid-November. Their topics include the approach to kingship in "Henry V," patriarchy in "Othello," and Othello's struggles with his multiple identities. Miller observed that all of the cadets had superb presentations. "They answered challenging questions from the audience that further revealed their careful research and the depth of their understanding of both the plays and the culture," she said.—*Photo courtesy of Col. Emily Miller.*















Rat Olympics

Rat Olympics, the culmination of Rat Challenge, the 10-week physical fitness program was held the morning of Nov. 8, primarily in the Corps Physical Training Facility, with challenges also held on North Post obstacles and in Cormack Hall. Events at Rat Olympics included tug-of-war, relays, dodge ball, rope race, rock climbing, and indoor and outdoor obstacle courses. Companies competed for the late Col. Bill Stockwell, and awarded to the company that works the hardest and displays the best attitude. Alpha Company received that honor.--VMI Photos by H. Lockwood McLaughlin and Jake Falcone '27.





Chemistry Professor Assisted in Discovering New Molecule in Space

By Marianne Hause

Maj. Christopher N.

Shingledecker, assistant professor of chemistry, is a member of a research team responsible for discovering three new molecules in space. The team co-authored research articles recently published in Science and Nature Astronomy, two prestigious science journals, describing the observation of the molecules 1-, 2- and 4-cyanopyrene. The project, called GOTHAM, was led by Shingledecker's friend and colleague at the Massachusetts Institute of Technology (MIT) Department of Chemistry, Brett McGuire, Ph.D., and used astronomical data from space obtained by the Robert C. Byrd Green Bank Telescope (GBT), a 100-meter



Maj. Christopher N. Shingledecker

radio telescope in Green Bank, West Virginia.

According to Shingledecker, until about the 1940s scientists did not think molecules could exist in space. "The belief was that there were just atoms floating around and that nothing as fragile as a chemical bond could survive. If a molecule did have the audacity to form, the idea was that ultraviolet light from stars would break it apart. Only in the post-World War II era did astronomers begin to realize the tremendous variety of molecules that exist in space. Amazingly, we now know of over 200," he said.

The GOTHAM team looks especially for so-called "aromatic" molecules in space. "As the name suggests, these molecules

sometimes have strong aromas, but in every case, if you look at the molecular structure, you'll see one or more rings of carbon atoms. These are interesting from both an astronomical and a chemistry point of view. For example, if you look at the molecules which make up living things on Earth, you see these ring-like structures frequently, while in space we believe that up to 10% to 25% of all the carbon in the universe is in these multi-ring molecules which we call polycyclic aromatic hydrocarbons (PAHs). A fascinating implication of the fact that there is so much carbon floating around in space is that, if there's life elsewhere in the universe, then there's a good chance that it's also carbon-based." stated Shingledecker.

Specifically, the GOTHAM team studied the Taurus Molecular Cloud 1 (TMC-1), which lies within the Milky Way galaxy hundreds of light

years from Earth. According to Shingledecker, molecular clouds like TMC-1 are a mixture of stardust and gas, mostly hydrogen, but mixed with many other molecules including PAHs. "Understanding the chemistry of molecular clouds could one day shed light on how life began on Earth. We now know that comets and asteroids contain many of the molecular building blocks of life, such as amino acids and nucleobases. We suspect that these molecules may have initially formed in molecular clouds similar to TMC-1, which can go on to form solar systems like ours. From studying Earth and our own solar system, it is likely that there was a period billions of years ago when comets and asteroids hit the surface much more frequently

> than they do today, and planets around other stars almost certainly experience something very similar. Given what we now know about the presence of the molecular building blocks of life in comets and asteroids, it's not hard to imagine the first organisms forming when some of those molecules encounter the right conditions on a young planet," Shingledecker speculated.

> Shingledecker received his doctorate from the University of Virginia, and has been a faculty member at VMI since August. He and his wife live in Lexington with their two young children. *****



The research article in Nature Astronomy may be viewed here.



The research article in Science may be viewed here.



The Green Bank Telescope is the largest fully-steerable telescope in the world, and the most accurate and versatile large single-dish telescope in use today.—*Photo courtesy of NRAO/AUI/NSF.*

Smith Appointed Poet Laureate by Gov. Youngkin

By Marianne Hause

Mattie Quesenberry Smith, Ph.D., instructor in the Department of English, Rhetoric, and Humanistic Studies, was recently appointed the commonwealth's new poet laureate by Governor Glenn Youngkin.

A lifelong resident of Virginia, Smith grew up in Appalachia in humble surroundings. Though she went without many modern comforts, her childhood provided a rich tapestry of experiences from which to draw for her creative writing. Her father was a carpenter and her mother cared for the family at home. The family spent many hours outdoors fishing, hunting and exploring the wilderness. Smith even acknowledged having relatives who were moonshiners.

The first of her family to go to college, she received her undergraduate degree from Hollins University where she double majored in biology and English literature. She continued her studies at Hollins, earning a master's degree in English literature and creative writing. "My intent was to write poetry because I was really interested in science and poetry. Poets represent different aspects of our worldview, which comes primarily from scientific awareness," said Smith.

Smith often gets inspiration for poetry from nature. She is particularly drawn to metamorphosis, a change of physical form like that of a caterpillar turning into a butterfly, and fractals, geometric shapes with complex, repeating patterns, like seashells. She also collects things that stir her, like rocks. "And then there are things that haunt me that I write around. Once when my husband was outside raking leaves, he uncovered remnants of toys our children had played with when they were young. He brought them in and placed them on a windowsill. Seeing those little leavings

Mattie Quesenberry Smith takes her oath of office administered by Jenna Moon, deputy secretary of the commonwealth, as Smith's daughter, Emma, holds the Bible.-Photo courtesy of Mattie Smith

their own voices, and realize their experiences are important enough to write about. I also want to have readings to benefit the local food pantry." She hopes to have a series of workshops for cadets on post.

Col. Emily Miller, head of Smith's department, is thrilled with this appointment. "Mattie will bring the same dedication to that position that she shows every day in teaching our cadets. With her considerable talents, she will be an excellent proponent of the power and beauty of poetry," stated Miller.

Maj. Gen. Cedric T. Wins '85, superintendent, stated that Smith's recognition is well deserved and a testament to the quality of faculty cadets interact with every day. "Our cadets have benefited

from Dr. Smith's creativity and expertise for many years. Now, the VMI community is proud to share her talents and passion for teaching with the rest of the commonwealth as poet laureate."

Brig. Gen. Robert Moreschi, dean of the faculty and deputy superintendent for academics, agrees.

"Being named the commonwealth's poet laureate is a significant honor that recognizes Mattie's poetic talent. She is dedicated to her craft and to cadets, and all of us who know her are absolutely delighted at her appointment."

Smith's poetry has appeared in many periodicals including Poetry X Hunger, The Timberline Review, and Phi Kappa Phi Forum Magazine. She has written screenplays with her husband and VMI peer, Douglas N. Smith. Their documentary film,

was very emotional to me, and I wrote a collection of poems about them called, "Leaving October."

VMI cadets also inspire Smith. In her writing and rhetoric class, a cadet once challenged her to spontaneously write a haiku, a short, unrhymed Japanese poem of three lines with a five-seven-five syllable pattern. She responded quickly with "The Water Washes." The water washes

stones. Smooth as time's sand-filled hour, everything glass sighs.

Smith keeps a tall stack of notes on her desk. Each note holds a starting line of a poem. "If I don't write it down, there is no poem. As long as it's over there in the stack, I know a poem is in there."

Smith sees her appointment as poet laureate as an honor and a call to service. "I'd like to teach people in the community who are struggling with secure residency or food security how to unveil

"Between Two Fires" garnered a CINE Eagle and Best Documentary of the Show in the New York International Independent Film and Video Festival. The Academy of Motion Picture Arts and Sciences awarded the film an Oscar for excellence in graduate student filmmaking.

Smith is currently working on a book of poetry titled, "Optics and Doubt." The title comes from Christian visual images and spiritual experiences likened to light. "Spiritual words like halos and auras are optical phenomena. That is troubling to me, but delightful at the same time. That's what that collection is about," she shared.

Three days after she took her oath as poet laureate in Richmond, Smith successfully defended her dissertation, and earned her doctorate from Virginia Tech.

Since 1988 the governor has appointed the honorary position of poet laureate of Virginia. Smith will serve a two-year term. *

Three-Legged Stool Recipient Named

By Laura Shapiro

Courtney Novotny '25, team captain of VMI's water polo team, was honored with the prestigious Three-Legged Stool Award Nov. 3 in Marshall Hall. She was excited, humbled, and even a bit surprised to receive the award.

Presented by the Keydet Club Board of Governors, the award is given annually to the top cadet-athlete who excels academically, militarily, and athletically.

"There are so many incredible athletes at VMI who excel in all legs of the stool and were all very deserving of this award," she said.

She remained humble, stating her accomplishments haven't been possible without the people at the Institute who have helped contribute to her success.

"My journey at VMI has been both demanding and fulfilling. It has consisted of countless hours spent in the classroom, the pool, and the weight room. Long days going back and forth between classes and practice. Many miles traveled that

not only helped enhance my athletic ability, but also my academic ability with the research I conducted as a part of the Summer Undergraduate Research Institute program in the summer of 2023,"



Courtney Novotny '25

she said. "I have been able to develop my leadership skills as captain of the water polo team which has allowed me to grow as both an athlete and a person."

She credits her team and coach for helping her develop as a leader and athlete, as well as her professors for challenging and helping her in the classroom.

"She has been a great example of how to achieve in all aspects at VMI. On top of being a leading scorer for us since she was a 3rd Class cadet, she drives her teammates to do well academically and makes sure the team is achieving up on the hill as well," said Danielle Montenegro, VMI water polo coach.

"Water polo is the youngest team at VMI at only 12 years in competition. So as our second ever Three-Legged Stool winner, this is very special to us,"

Montenegro continued. "We look forward to Courtney finishing out her final season with us as a solid example of all we expect of a VMI water polo cadet-athlete." *****

Marine Corps Birthday Ball

VMI's Naval ROTC unit celebrated the 249th U.S. Marine Corps birthday Nov. 1 in Marshall Hall. The event included a ceremonial cake cutting, and recognition of the oldest and youngest Marines in attendance, Sgt. Daniel Villarial and Dimethus Thompson Jr. '25, respectively.–VMI Photos by H. Lockwood McLaughlin.







POST BRIEFS

Squire's Engineering Textbook in Print _

Col. Jim Squire, professor in the Department of Electrical and Computer Engineering, in partnership with Dr. Anthony English, associate professor of biomedical engineering at Western New England University, has another textbook in print, which is available on Amazon and soon Barnes and Noble. "Introduction to Python and Spice for Electrical and Computer Engineers" is for freshman and sophomore engineering students.

"Most Python textbooks are too general; they don't cover the mathematics and graphics required for engineers, and instead focus on data structures that are more applicable to computer science student needs," said Squire. "They also tend to be either too simplistic and aimed at hobbyists, or aimed at junior or senior level university students who have already taken a programming language. An analytics company identified about 50 universities in the country that teach Python to their first-year engineering students, and have sent review copies to them."

Cadets Compete Well in Virtual Competition

Computer and Information Sciences and Cyber Defense Lab cadets participated in an open-source intelligence (OSINT) capture the flag virtual event Dec. 5 hosted by Virginia Tech. The event was open to all

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as you enter a life of service to others and endeavor to lead good lives strengthening our nation as the leaders of tomorrow. Standing here looking out on this Parade Ground and this Corps of Cadets, I want to say thank you for extending me the privilege of speaking with you today. You give us hope for a better future for our country. God bless you and God bless America."

Sinise was guest speaker at the Institute Society Dinner, VMI Foundation's annual celebration of those alumni and friends who are leaders in support of the Institute and the Corps of Cadets, held later that evening. This year was the 50th anniversary of the Institute Society.

senior military colleges, and of the 15 teams that participated, VMI's OSINT team, including Raj Singh '25, Caroline Marini '26, and Sarah Fitzsimmons '27 came in second place. The cyber action team, including Michael Poe '25, Linh Ngo '25, and John Stotler '27 came in sixth. Amish Parikh served as head coach and Lt. Col. Brian Tanwarong provided support for the teams.

Harrison Discusses Army Research Lab Fellowship

Col. Dan Harrison '05, professor in the Department of Chemistry, shared his experience collaborating with the Department of Defense Army Research Lab (ARL) through the Senior Military College Faculty Fellowship, during a brown bag seminar in November. Though he could not disclose details of the research on which he and a cadet who was awarded a paid internship for rising seniors worked, he did share that the work focused on keeping members of the military safe, and increasing combat effectiveness. He emphasized to the cadets and faculty members in attendance that his work with the ARL has been highly collaborative, enjoyable, and extremely important. Harrison encouraged other faculty members to apply for fellowships, as well as assisting interested cadets in applying for internships with the ARL as soon as possible. *****

> Founders Day and strategic plan launch celebrations continued the following day during tailgating prior to and during VMI's home football game against Mercer University.

More about "Forging 21st Century Leaders" may be found at **www.vmi.edu/** forgingleaders. *****



Moe helps celebrate the rollout of the "Forging 21st Century Leaders" strategic plan by tossing footballs with the slogan to VMI fans during the Nov. 9 game against Mercer University.–*VMI Photo by Kelly Nye.*



Gary Sinise addresses the Institute Society in Marshall Hall Nov. 8.–Photo courtesy of Joe Czekner, VMI Alumni Agencies.





Christmas Parades

Regimental Executive Officer Justice Rozic '25 led the Rat Mass and Regimental Band down Lexington's Main Street to spread holiday cheer in the annual Lexington Christmas Parade the evening of Dec. 6. The next day, the Regimental Band participated in the Dominion Energy Christmas Parade in Richmond, Virginia.–VMI Photos by H. Lockwood McLaughlin and Jake Falcone '27.













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Cadets Earn German Badge

Seventy cadets from Army, Navy and Marine Corps, and Air Force ROTC programs competed in a series of challenging tasks attempting to earn a German Armed Forces Proficiency Badge (GAFPB). The challenges took place at VMI Nov. 16 and 17. Events included the Basic Fitness Test, marksmanship, a six-kilometer ruck march, and a 100-meter swim in uniform. Of the initial participants, 57 advanced to the final phase, which is pistol qualification. Ultimately, 43 earned the prestigious GAFPB, which was presented to them Dec. 9 in Memorial Hall. Nathan Franchebois '25 and Emma Cameron '25 received recognition as the top male and female competitors.

Capt. Pauline Johnson, assistant professor of military science, coordinated and planned the logistics for this event, in partnership with Lt. Col. Patricia Hardin, faculty advisor of the program and associate director in the Office of Global Education, and Reese Lassiter '26, the GAFPB cadet in charge. They expressed gratitude for all who offered "steadfast support" through the process, including Leutnant Steffen Große-Katthöfer, international student at The Citadel; Chief Warrant Officer Paul "Gunner" Lahah, VMI combat shooting coach; and Col. Bill Bither, VMI rifle coach.

Hardin sees the importance of this badge, saying, "It gives our cadets a chance to connect with foreign officers and non-commissioned officers. For the military science cadets, earning this badge is a significant achievement for their future careers in the Army. It is also among the few foreign insignia that Army personnel are allowed to wear on their uniforms." "The event concluded successfully, showcasing the grit, resilience, and international camaraderie of all participants," said Johnson.–*VMI Photos by Kelly Nye*.







VMI Institute Report