FROM THE DEAN'S DESK - May 10, 2019

THE RADFORD UNIVERSITY ARTIS COLLEGE OF SCIENCE AND TECHNOLOGY NEWSLETTER



"HACK HOUSES" used as a part of the RUSECURE Capture The Flag Championship on April the 27th at Radford University

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ARTIS COLLEGE OF SCIENCE AND TECHNOLOGY HONORS DEAN'S SCHOLARS

Nine outstanding Artis College of Science and Technology students were honored on April 13th at the Dean's Scholars Ceremony. Faculty, students, family and friends joined Artis College Dean Orion Rogers in the Center for the Sciences to highlight and celebrate the academic excellence of students in each of the college's nine departments.



Dean's Scholar Plaques and Stoles

Stories of success, community service, career aspirations and tireless dedication were shared by department chairs and professors of each deserving student.

A Dean's Scholar is a graduating senior nominated by Artis College faculty representing each of the college's nine programs. Dean's Scholars have demonstrated success in the classroom, laboratory and other activities related to their chosen disciplines. The 2019 Artis College Dean Scholars were presented a plaque and crimson stole to be worn with their caps and gowns at Radford's Commencement ceremonies May 11.

The 2019 Class of CSAT Dean's Scholars are:



Department of Anthropological Sciences - **Jessica Wollmann** – introduced by Dr. Cassady Urista







 $\label{lem:condition} \mbox{Department of Chemistry - } \mbox{\bf Matthew Van Shufflin} - \mbox{introduced by Dr. Tim Fuhrer}$

Department of Geology - **Michaela May** – introduced by Dr. Parvinder Sethi





Department of Geospatial Science - **Jordan Edmond** – introduced by Dr. Andrew Foy

Department of Information Technology

Computer Science Dean's Scholar - **Jonathan Charnock** – introduced by Dr. Art Carter

Information Science Dean's Scholar - **Christopher Rand** – introduced by Dr. Art Carter





Department of Mathematics and Statistics - **John Saad** – introduced by Dr. Eric Choate

Department of Physics - Michael Hess – introduced by Dr. Rhett Herman

Jonathan Charnock and Michael Hess were unable to participate in the Award Ceremony due to other commitments, however they received their plaques and stoles from their presenters at a later date.

The program also featured the announcement of Artis Outstanding Student Award by Mrs. Nancy Artis '73. The recipient, Jessica Wollmann, was described by Mrs. Artis as "a multifaceted scholar who has achieved success in research and represented Radford University at the highest level of leadership as well as beyond campus." Ms. Wollmann is a *summa cum laude* graduate as of May 11th and she received the Radford University Outstanding Student Award in 2016-17.

In addition to her outstanding academic work, she was also named the Big South Scholar-Athlete of the Year in 2018, and in 2019 she received the Virginia Collegiate Honors Council Scholar of the Year award. Her achievements include being a member of the Radford University Women's Soccer Team from August 2015 until November 2019, and she served as the student representative to the Radford University Board of Visitors in 2017-18. In addition to serving as the Chief of



Staff of the Student Government Association in spring 2018 until the present, she has served as president of the Anthropology Club from fall 2017 until the present.

DR. SARAH KENNEDY NAMED 2019 ARTIS OUTSTANDING AWARD RECIPIENT DURING DECADE CELEBRATION

On Thursday April 7th, the triumphs and accomplishments of Artis College of Science and Technology faculty were recalled and appreciated during a dinner program arranged by Mrs. Nancy Artis '73.

Mrs. Artis, along with her husband Pat, has been an incredibly generous benefactor and the namesake for the Artis College of Science and Technology. Her support for this college began in earnest in 2009 when the Artis Award for Outstanding Faculty Scholarship and Service was developed to recognize teaching excellence and accomplishment.



Artis Outstanding Faculty Scholarship and Service Award Recipient from the past 10 years.

L to R: Dr. Jean Mistele, Dr. Sarah Kennedy, Dr. Agida Manizade, Dr. Jason Davis, Dr. Justin Anderson, Mrs. Nancy Artis '73,
Dr. Prem Uppuluri, Dr. Tara Phelps-Durr, Dr. Sarah O'Brien, and Dr. Laura Jacobsen. Dr. Stockton Maxwell is also a
recipient of this award but was unable to attend due to traveling with students to a conference at this time.

The program began with the recognition of the 2019 recipient, Dr. Sarah Kennedy, Assistant Professor of Chemistry. She was described by Mrs. Artis as a faculty member who is dedicated to excellence in student-centered scholarship and service and who takes full advantage of leadership opportunities.

"Her scholarship is impressive" stated Mrs. Artis. "She has co-authored a book chapter published by the American Chemical Society, and she has recently published a paper in Journal of Chemical Education as well as a research article in Biochemistry. She made a presentation at the Biennial Conference on Chemical Education in 2018 and two research presentations at national American Chemical Society meetings in April 2017. She was also awarded a REALISE kickbox mini-grant as well as funding from High Impact Practices. "

Mrs. Artis continued to recall Dr. Kennedy's accomplishments by stating "Her service contributions demonstrate her dedication to student success, pedagogical innovations and inclusive excellence. She is a Core Leadership Team member of Radford University's Howard Hughes Medical Institute (HHMI) Inclusive Excellence grant program, entitled REALISE, that is now in its second of five years of funding. She led the effort within the Chemistry Department to redesign the introductory chemistry laboratory curriculum in the summer of 2018. She was the coordinator of the STEMed book club in the Artis College that met during the fall 2018 semester to discuss the book Breakthrough Strategies by Kathleen Ross, and she is leading the spring 2019 STEMed book club discussion of Teach Students How to Learn by Saundra McGuire. In December of 2018, she was selected as one of three finalists to be interviewed for the inaugural Presidential Fellows program here at Radford University."

In addition to these many accolades, Dr. Kennedy was also noted for her leadership through assembling a team of five faculty members from the Artis College to attend the Council on Undergraduate Research (CUR) Broadening Participation Institute during March 22-24, 2019. Attending the CUR Broadening Participation Institute required submission of an action plan to broaden participation of underrepresented groups through inclusive excellence, and she has demonstrated that inclusive excellence is one of her professional passions.

On March 16, Dr. Kennedy also learned that she has been accepted as a participant in the 2019 PKAL STEM Leadership Institute II, to be held July 16-21, 2019, at the Claggett Center in Adamstown, Maryland. This STEM Leadership Institute is uniquely designed to provide a distinctive opportunity to develop leadership capacity in acting as an agent of change in transformation of STEM higher education within a faculty member's department, institution and the nation. She will be joining other accomplished STEM faculty from a diverse array of institutions where she will be exposed to a carefully

coordinated blend of theory and practice related to issues of critical national importance.

Her department service includes membership on the General Chemistry Steering Committee, Library Liaison and as a member of the Search Committee for the REALISE Chemistry postdoc. She also advises twelve chemistry majors, assists with the Blue Ridge Highlands Regional Science Fair and taught in the Summer Bridge Program of 2018.



The 2019 Recipient of the Artis Award for Outstanding Faculty Scholarship and Service, Dr. Sarah Kennedy and Mrs. Nancy Artis '73.

Following the recognition of Dr. Kennedy, Mrs. Artis presented a look at the award recipients since the inception of the honor.

2010- Dr. Laura Jacobsen -

- In addition to numerous professional roles at Radford University, Dr. Jacobsen has served as president of the Faculty Senate (2012-2014); helped to explore and establish the Radford Child Development Center, where she still serves as a board member; helped develop models to review faculty salaries; worked with the Virginia Mathematics Teacher Journal; and provided hundreds of hours of dedicated time to help advance the institution.
- Dr. Jacobsen has co-authored dozens of presentations, books and peer-reviewed publications advancing mathematics education, pedagogy and literacy across the nation.
- From 2014 until 2019, Dr. Jacobsen provided service to the College of Graduate Studies and Research, first as interim associate dean, then associate dean and most recently interim dean in 2017 and 2018.

2011 - Dr. Prem Uppuluri -

- Dr. Uppuluri has been a panelist for multiple topics during the National K-12 Cybersecurity Conference sponsored by the National Institute of Standards and Technology, as well as a featured speaker at the First Annual Virginia Cybersecurity Education Conference.
- In addition to his role as professor of information technology, Dr. Uppuluri serves as director of the Information Security Center for the department and co-director of the RUSecure Capture the Flag programming competition, which attracts participants from around the nation.
- His research is funded by multiple external grants totaling over \$1.5 million from the National Security Agency and the National Science Foundation. He has served as the principal investigator on a series of innovative grants funded by the National Science Foundation, designed to support and develop student leadership in science, technology, engineering and mathematics at the collegiate level.

2012 - Dr. Justin Anderson -

- Dr. Anderson serves as an associate professor of biology as well as chair of the Department of Biology in Radford University's Artis College of Science and Technology. He also directs the Radford Arbovirus and Medical Entomology Lab.
- He is a former president of the American Society for Microbiology Virginia Branch and helped host the group's 2018 annual meeting at Radford University.
- Dr. Anderson is the primary faculty contact for Radford University's participation in the Science Education Alliance-Phage Hunters Advancing Genomics and Evolutionary Science (SEA-PHAGES) program sponsored by the Howard Hughes Medical Institute (HHMI). This program has helped foster new opportunities for faculty and students at Radford University.

2013- Dr. Agida Manizde -

- Dr. Manizade has been awarded more than \$2.2 million in external funding since 2010 and has helped others with her skill as a research and grants adviser, helping novice faculty who aspired to enhance their research programs. She assisted them with external grant proposal applications, and proposal submissions by first-time grant writers increased by 117 percent.
- In 2019, Manizade was recognized by the State Council for Higher Education in Virginia as a recipient of the Outstanding Faculty Award, the Commonwealth's highest honor for faculty at Virginia's public and private colleges and universities.
- She also serves as editor-in-chief of the Virginia Mathematics Teacher Journal, is the founding director/co-director of the Secondary Mathematics Professional Development Center and is board president of Radford Child Development Inc.

2014 - Dr. Jason Davis -

- Dr. Davis is the founder of RARE, the Radford Amazonian Research Expedition, and serves as associate director of the Radford University Honors College in addition to his work as an associate professor in biology with an active research lab.
- He has helped develop multiple innovative research and teaching projects:

PASSER (Programmable Automated System for Songbird Ecobehavioral Research) is a computerized interactive bird feeder/bird box that can interact with wild and captive birds both by recording data over long periods of time and by presenting stimuli directly to the birds without direct human control.

The Roach Roadshow is a traveling infotainment program that brings real science to the public in a fun and accessible format.

The Automating Ethology Dance Project, a collaboration with Professor Amy Van Kirk, explores how modern dance can integrate and build on computer augmented data collection.

2015 - Dr. Sara O'Brien -

- In addition to her role as an associate professor of biology, Dr. O'Brien has been a champion of the ScholarCitizen Initiative at Radford University through her work with students engaged in projects through the program and as director for the 2017-2018 academic year.
- She has created engaging study-abroad programs for students, including a trip to Kenya to study house sparrows.
- Dr. O'Brien is a recipient of the Council on Undergraduate Research (CUR) Division of Biology Early Career Mentoring Award. The national award highlighted her long-term efforts in supervising undergraduate research students. She has mentored 34 students and supported student presentations at the local, regional and national levels.

2016- Dr. Jean Mistele -

- For the past several years, she has served as the student advisor for the ELITES program. ELITES, Emerging Leaders in Technology, Science and Mathematics (STEM), is a unique opportunity for students to develop and enhance key leadership skills that are not generally associated with STEM areas of study.
- In addition to her role as an associate professor of mathematics and statistics, Dr. Mistele has served as an editor for the Virginia Mathematics Teacher Journal, is a faculty senator, has participated as a faculty leader for the Radford Amazonian Research Expedition and served as an instructor for a program that helped students gain a global perspective on teaching and service in the African nation of Malawi.

2017 - Dr. Stockton Maxwell -

- Dr. Maxwell's research includes forest ecology, dendrochronology, paleoclimatology, vegetation dynamics and ecological modeling with applications to resource management. His work uncovers the history of a forest through the exploration of carbon sequestration and other ecological and biogeographic phenomena. He directs the Radford University Tree Ring Laboratory and has conducted research from Virginia to Maine and in California, Nevada and Mongolia.
- In addition to his role as an associate professor of geospatial science, Dr. Maxwell provides leadership service to the University community as the vice president of the Radford University Faculty Senate; has participated as a faculty leader for the Radford Amazonian Research Expedition; and has served as a faculty advisor for the ECO Learning Community.

2018 - Dr. Tara Phelps- Durr -

- In service to Radford University, Dr. Phelps-Durr is leading a team of faculty to help discover pathways for improving STEM education through the REALISE program. REALISE: REALising Inclusive Science Excellence in Biology, Chemistry and Physics at Radford University is a five-year program supported by a \$1 million grant from the Howard Hughes Medical Institute (HHMI) the largest private, nonprofit supporter of science education in the United States.
- Prior to her work as the program manager for REALISE, Dr. Phelps-Durr led a movement within Radford University's Department of Biology to improve the approach to educating undergraduate students through PULSE (Partnership for Undergraduate Life Sciences Education), an organization that promotes the implementation of a nationally recognized call to action for improving the quality of undergraduate biology education known as Vision and Change (V&C).
- Dr. Phelps-Durr conducts research that focuses on several genes required for normal plant development. Specifically, the three-dimensional structures of the proteins encoded by these genes are analyzed to determine how they interact with other proteins and/or regulatory regions of DNA.



Mrs. Nancy Artis '73

Mrs. Artis concluded the evening by stating "When I look at your continued accomplished after your initial recognition, YOU are truly the epitome of the Radford University Brand –

- RESPONSIVE to meeting the needs of students by implementing innovative education methods and responsive to changes in your fields of expertise
- RESILIENT in adapting to the fast moving changes in technology while incorporating them into your curriculum as well as bouncing back from resistance from students if that occurs
- REAL You are the "REAL DEAL" that your administrators, colleagues and of course your students see every day. I've had numerous conversations with students in the college and it is nice to hear them speak of many of you as their favorite."

Mrs. Artis also added an additional "R" to the statement: "REFLECTION" she said "By definition, reflections are usually caused by shiny things, such as mirrors, that show a reversed image of whatever is placed in front of them." She added "To me, the images your students see are the reflections of what you impart to them. Then they reflect back to you what you may be to them."

RUSECURE CAPTURE THE FLAG CONTEST CROWNS 2019 CHAMPIONS

On Saturday April 27th, dozens of high school and community college students competed to solve problems both virtual and in the physical world in their quest to win the 2019 RUSecure Capture the flag competition sponsored by the Department of Information Technology at Radford University.

The championship round consisted of fifteen teams striving to be recognized as the best among their peers after an educational round in the fall that attracted more than 1800 participants and a qualifying round in March that included dozens of teams from across the nation and more than 450 students

according to Dr. Joe Chase, co-director of the competition.

A team from Montgomery Blair High School in Silver Spring Maryland names "Less is more" took home the trophy and the award of a \$2000 scholarship for each student should they choose to attend Radford University in the future.

One twist for the 2019 contest was that the championship was streamed live on Amazon's Twitch.tv platform on a new channel created by the Artis College of Science and Technology. Hosted by Tracy Peterson, a producer and event personality who regularly works with twitch, the program was the first in what is planned to be a series of educational and entertaining videos that

Mrs. Nancy Artis '73 presented the Championship Trophy to the team "Less is More." Photo by David Hungate from the Roanoke Times coverage of the event.

https://www.roanoke.com/news/education/higher_education/radford/st udents-battle-it-out-seeking-weak-links-incybersecurity/article_e62cdd21-8c7f-566b-b552-040631b0e455.html

will include information about cyber security, Radford University Information Technology classes, and activities of the Cyber Defense Club at RU.



Dr. Uppuluri and Radford University students working to determine the scores of the 2019 RUSECURE Capture The Flag competition. Photo by David Hungate from the Roanoke Times coverage of the event.

https://www.roanoke.com/news/education/higher_education/radford/stu dents-battle-it-out-seeking-weak-links-in-cybersecurity/article_e62cdd21-8c7f-566b-b552-040631b0e455.html As with the contest, one of the goals of the new channel is to help raise awareness of both the challenges and opportunities in a modern digital world. Dr. Prem Uppuluri, director of the Radford University Center for Information Security and co-director of the contest stated to the Roanoke Times in their coverage of the competition "Our real goal is to make cybersecurity second nature to them, like reading and writing."

DATA SCIENCE STUDENTS PRESENT PROJECTS ON PATH TO MASTERS DEGREES

The Radford University Data and Information Management Master's Degree program recently held a celebration of the 2019 May graduating class of Data Scientists with a reception and program that highlighted the work these students have completed on their educational expedition at RU.

During the afternoon of May 8th, faculty and guests were enlightened by the work of these "big data" innovators in their graduate level program within the Department of Information Technology. Each student has an intriguing journey and have developed a unique path moving forward.



2019 DAIM Graduating Class: Sajan Rai, Jessie Harden, James Caldwell, and Jasman Shakya

DAIM BUILDS BRIDGES FROM ASSOCIATE'S DEGREE TO PH.D.

Jesse Harden is pioneering a new path as the first DAIM graduate to pursue a Ph.D. following his May graduation from Radford University's Data and Information Management (DAIM) Master's program. This fall, Harden will enter Virginia Tech's doctoral degree program in Computer Science.

The Virginia Beach native began his collegiate journey at Tidewater Community College and transferred to Radford to complete a bachelor's degree in Mathematics.

Although he did not pursue a major in computer science, Harden enrolled and excelled in a few IT classes as an undergraduate, which led him to explore the Data and Information Management (DAIM) Master's program.

Harden benefited greatly from faculty-student interaction, a hallmark of the Radford University experience. DAIM takes this interaction to the next level. "You're not just a face in the crowd at Radford University; you're a Highlander and you matter," said Harden.

"The professors at Radford are amazing mentors who genuinely want you to succeed to the best of your ability," explained Harden. "You can easily form close, professional bonds with professors; bonds that can be a great source of wisdom and opportunity as you go through college and prepare for life afterwards." Harden is grateful that his professors motivated him to continuously improve, guided him through the program, and demonstrated true leadership.

Harden appreciates how the DAIM program prepared him for his future career with hands-on projects that put theory into practice, "My classes helped me apply theory and made it useable and valuable."

DAIM expanded his appreciation for the value of information technology and data management, "DAIM has sharpened my programming skills and prepared me to thoughtfully consider current issues to computer science," reflected Harden.

DAIM PAVES PATH TO NEW FRONTIER

Data science is advancing the leading edge of information technology. Radford University's Data and Information Management (DAIM) Master's program prepares students to conquer this new frontier.

DAIM graduate James Caldwell is eager to work on the cutting edge. "DAIM is breaking into the new and exciting area of big data and touches on aspects of data science, enterprise architecture, and especially data engineering," explained Caldwell. "Radford has prepared me to attain a job in one of those areas and has shown me what I would need to achieve to enter a particular field with confidence. The DAIM program has given me a great feeling for my future and has also been helping me with job prospects."

Though the program covers the theoretical basics of the field, numerous hands-on activities enabled James to apply his knowledge. "I have written many papers and presented on topics at a high level just as a person would if they were presenting to the leadership of a company," he said. "I have also written programs to demonstrate different theories that we were studying and have installed and maintained various big data systems as if we were working for a company and had to develop solutions."

Research and coursework required Caldwell to think critically and apply emerging technology to solve challenging problems. "Sometimes there's failure and we learn from it and know what works or come up with ways to make it work and determine whether or not those ideas are viable," Caldwell said.

Caldwell appreciates the graduate class format that encourages discussion and interaction, "The classroom environment itself reminds me of being at a round table discussion, throwing ideas around or working with a team to develop projects," he stated.

Caldwell wasn't always so confident in the data science arena. In fact, he feared that he might struggle in the program, but with the support of his professors he was able to tackle his tasks every day. "I thought I would be overwhelmed and not make it through the program, but instead I learned a tremendous amount and know where I want to take my career after graduation," said Caldwell.

During his time in DAIM, Caldwell was able to grow from challenges he faced and learn from his experiences. "In the Information Analytics class, we used machine learning, deep learning, and various statistical modeling tools and we had to develop a hypothesis," explained Caldwell. "My main project initially was to perform predictive analytics and it became a demonstration of deep learning and classification based on image; it was very challenging and now I want to explore AI even more!"

Caldwell is interviewing with several major technology companies considering positions as a software engineer, data analyst, Splunk engineer, and data engineer. His dream job is to be a full stack data scientist. "To fulfill my goal, I have to gain experience and expert knowledge in certain areas that we covered in DAIM," stated Caldwell. DAIM built the foundation Caldwell needs to pursue the path to his dream job.

INTERACTIVE AND ENGAGING EXPERIENCES ACCELERATE CAREER READINESS

The Data and Information Management (DAIM) Master's program at Radford University is designed to engage students in hands-on, real-world projects to enhance their career path. This experience was especially valuable to graduating student Jasman Shakya as he transitioned from Nepal to the United States to further his information technology career.

"During my undergraduate program in Nepal, I learned about theories, but DAIM is more practical based and I learned a lot about big data," Jasman recalled.

Hands-on projects and interactions with faculty and IT professionals were essential to Jasman's success. "The professors invited IT professionals to our classes and we were able to collaborate with them on real-life projects throughout the class," he said.

Jasman especially enjoys building data pipelines. "The ETL process is inevitable for data analysis. Over the past two years, ETL was the most important process in all of the projects I have done," explained Jasman.

Eschewing traditional lecture-based models, DAIM's interactive classroom provides students the opportunity to apply and strengthen their skills while overcoming personal challenges.

"I have always been afraid of presenting to crowds," recalls Jasman, "In the DAIM program I had to give a lot of presentations in front of my classmates and guests." While it was challenging, he was able to overcome his fear and grow in a way that will prepare him for a career in professional settings.

Looking forward to commencement in May, Jasman is anticipating his future opportunities. "It's exciting because after two years of hard work, I am finally graduating," he said. Data Engineer is his dream job, "I would like to work with data, create dashboards, and help businesses make better decisions based on data."

INNOVATION AND CREATIVITY PRODUCE PIPELINES TO DATA SCIENCE SUCCESS

As data science evolves to process larger and more complex information, traditional methods become less effective. Solving big data challenges requires innovation and creativity.

"The Data and Information Management Program (DAIM) helped me comprehend some novel methods, algorithms, and processes of conducting data/text mining," explained graduating DAIM student, Sajan Rai. "It also has helped me in information organization and retrieval, and information search behaviors in data-intensive environments such as social media. Analyzing big data sets from Twitter, New York Taxi, US Aviation and other sources while deriving meaningful facts and figures about the data was my favorite aspect of the program."

Using Python and Apache Spark, Sajan developed several data pipelines to ingest, transform, analyze, and visualize data enabling automated systems and business users to take action. "The professors in the DAIM program assisted with the latest big data tools and technologies to develop an ETL process, make an analysis out of it, and visualize that data," said Sajan. "I am really proud to be a part of this program; DAIM has prepared me for my future career."

"With the knowledge and experience I have gained here; I think I am ready to compete in the real world," stated Sajan.

As Sajan transitioned to a new school, a new program, and a new culture, he appreciated the support and hospitality he received from the University community, especially the professors. His experience magnifies the welcoming nature of Radford's campus that enhances students' educational process. "The feeling of being home away from home is what I enjoyed most about the campus," he stated. "I found diversity in the culture, which I believe plays a vital role in luring a lot of international students."

Sajan is grateful for many experiences at Radford that prepared him to thrive in new positions and adapt to technical and cultural challenges. "I am going to miss Radford and am proud to be a Highlander," he said.

With graduation in sight, Sajan is searching for opportunities in data science. "I am a data enthusiast and I see myself working with huge data sets, cleaning the data all the time, analyzing the data and creating meaningful results," he stated. "I look forward to seeing myself as a Data Engineer or a Data Scientist in the future."

Emily Lewis, Jeff Pittges, and David Horton contributed to this story

THE WILDLIFE SOCIETY HOSTS ANOTHER SUCCESSFUL BIOBLITZ

The student chapter of The Wildlife Society hosted another successful bioblitz at RU's Selu Conservancy. Now in its 10th year, this bioblitz gives students a chance to survey a wide range of critters in a 24-hour span. Friday, April 12 activities included setting small mammal traps and going on a nighttime herpetile (amphibians and reptiles) walk. On the walk, led by Dr. Matt Close, they discovered 5 species, including a toad and 4 frogs. Saturday, the day began with an early morning bird walk, led by Dr. Bob Sheehy and Professor John Kell. Students then checked nearly 300 small mammal traps with Dr. Karen Powers, finding 13 mammals of 5 species. The day concluded with a wildflower and medicinal herb walk with Dr. Christine Small. Despite the ominous weather forecast, decent weather prevailed, and students had a great experience.



Photos below are of some of the events. Photos by Karen Powers, Karissa Ellis, and Angie Holmes.

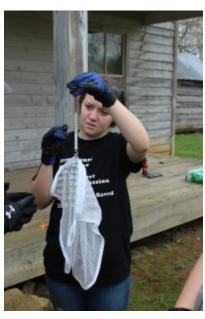
Story by Karen Powers



Raegan Forbes holds a house mouse



Dr. Karen Powers holds a mouse



Logan Vanmeter measures a mouse



Birding on the Little River.



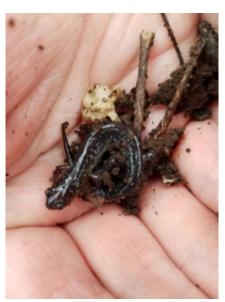
Dr. Christine Small teaching about trees, shrubs, and herbs on the wildflower/medicinal plant walk.



Even the future RU students get to know the critters - safely, of course! (Under the direction of Karissa Ellis)



A morel found on the wildflowerwalk.



Northern slimy salamander.

BIOLOGY STUDENTS WIN LIBRARY RESEARCH AWARDS



Logan Platt – 2019 Winesett Award for Library Research Recipient for his BIOL 232 paper.

"The Winesett Awards for Library Research recognize creative and original library research completed by Radford University undergraduate students. Prizes were given to the students whose papers or projects best illustrate exemplary use of McConnell Library tools and resources, and the development of information-gathering skills."

This year's winners included 3 biology majors:

Logan Platt was a winner in the Lower Division (freshman/sophomores) for his BIOL 232 paper "Animal Diversity Web: *Aspidoscelis uniparens,*" nominated by Dr. Karen Powers. This project on the desert grassland whiptail lizard will also be published in an on-line encyclopedia, the Animal Diversity Web.

Lauren Seedlock was one of 5 finalists across both divisions for her BIOL 232 paper: "Animal Diversity Web: *Lampropeltis calligaster*," nominated by Dr. Karen Powers (photo, left). This project on the prairie kingsnake will also be published in an on-line encyclopedia, the Animal Diversity Web.

Claire Dundon (not pictued) was a winner in the Upper division (juniors/seniors) for her English 203 paper, "Cultural Duality: Finding a Voice in Chinese and American Culture through The Woman Warrior: Memoirs of a Girlhood Among Ghosts", nominated by Professor April Asbury. Although not awarded in a biology class, Claire is a biology major.

Winning essays are published in the Archives of the Winesett Scholars,

http://libguides.radford.edu/WinesettScholars/2019

Story by Karen Powers



Lauren Seedlock (left) pictured with Dr. Karen Powers, was one of five finalists across both divisions for her BIOL 232 paper.