

“Virginia Scientists” is the official newsletter of the Virginia Academy of Science (VAS). This publication offers information for VAS members such as upcoming events, past events, scholarships/awards information, accomplishments of VAS members and other timely information.

Editors:

Sujan Henkanaththegedara
Deborah Neely-Fisher

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Virginia Scientists

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Spring 2020

2020 VAS Annual Meeting at JMU Cancelled

Preparations were well underway for the 98th Annual Meeting of the Virginia Academy of Science (VAS) on May 28-30, 2020 as well as the 79th Annual Meeting of the Virginia Junior Academy of Science (VJAS). Unfortunately, the VAS/VJAS Annual Meeting at James Madison University was cancelled due to the COVID-19 pandemic. This decision was based on the recommendations from VAS Council members, conversations with the leadership team at JMU, and the opinion of other major stakeholders.

There were over 600 VJAS and 200 VAS submissions accepted for

presentation at the 2020 Annual Meeting and we would like to congratulate the students and faculty on their research success. The VJAS/VAS is always an exciting showcase for current and emerging scientific talent in the Commonwealth and is a reminder of the strength of STEM research and industrial infrastructure in Virginia.

Please visit <http://vacadsci.org/vas-meetings/annual-springmeeting/> to find more detailed information about the annual meeting. A listing of the oral presentations and poster presentations that were submitted for

this year's Annual Meeting will also be provided on this website at a later date.

We are looking forward to the 99th Annual VAS/VJAS meeting in 2021.

Submitted by **Amorette Barber**

Vice-president and The Program Coordinator for the Annual Meeting, Virginia Academy of Science Associate Professor of Biology, Longwood University

President's Message

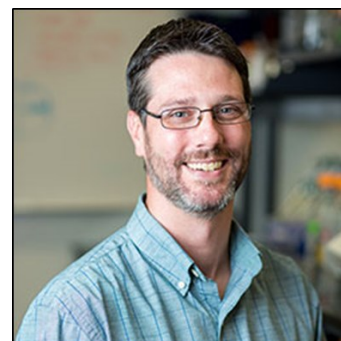
Each year, the Virginia Academy of Science (VAS) and Virginia Junior Academy of Science (VJAS) sponsor events to promote science education, highlight and support student research efforts, and collaborate with local schools and universities throughout the Commonwealth of Virginia. This past November we had our Fall Undergraduate Research Meeting at Christopher Newport University.

Student participants presented posters outlining their research proposals to those in attendance including a panel of judges. This was a great time of discussion, food, encouragement and challenge. Nine Undergraduate Research Grant Awards of \$750 each were given to the top presenters at the end of the meeting to fund their research efforts at their host institutions with an invitation to come back at our annual meeting to present their findings. I want to thank VAS President-Elect Michael Wolyniak at Hampden-Sydney

College who served as the coordinator and Program Chair for the 2019 Fall Undergraduate Research Meeting. I also want to thank Rob Atkinson who is not only a past president of VAS but served as the welcome committee liaison for Christopher Newport University. Without their hard work, the meeting would not have been such an amazing success!

Due to the Covid-19 pandemic, we decided to cancel the annual meeting scheduled for May 28-30th at James Madison University. We felt that the student/faculty participation would be severely limited due to the closure of most schools due to public health recommendations. Although (at the time of this message) JMU is still open for sponsor use, we still have to follow the “no more than 10” policy from the governor which would make the meeting dynamics impossible. Moreover, the academy wants to represent and support sound scientific practices which includes

responsibility following social distancing measures. Thanks to JMU for being such a gracious host during this time of rescheduling. Our current hope is that we might hold our 2021 Annual Meeting at JMU. ... cont'd. P.5



Gary D. Isaacs
President, VAS

VAS Fall Undergraduate Research Meetings

The 2019 Fall Undergraduate Research meeting was held this past November at Christopher Newport University in Newport News. The event featured around 40 poster presentations from undergraduates competing for one of nine \$750 grants in support of their ongoing research efforts. Students came from institutions far and wide, including Emory and Henry College and Virginia Tech in the southwest part of the state, the University of Mary Washington in the north, and nearby Old Dominion University and Virginia Wesleyan University in the Tidewater region. The meeting also featured a keynote address by Dr. Amorette Barber, VAS Vice-President and Associate Professor at Longwood University, on her ongoing nationally-recognized work on cancer immunology.

Students received the opportunity to hear a panel of scientists representing academic, industry, and government careers talk about how they arrived in their respective positions. After lunch, students were able to tour some of Christopher Newport's science facilities and take part in a new feature at this year's meeting, the "lightning talk". A student representative from each participating institution did an oral presentation to the meeting on either their own research or a research initiative at their institution but only received 5 minutes to speak. The result was a fun session that tested each speaker's ability to get their points across quickly and efficiently. While the nine winners were slated to present the results of the research supported by their research grant at the Academy's Annual Meeting in May of 2020, the COVID-19 pandemic made this impossible this year.

The 2020 Fall Undergraduate Research meeting has been scheduled for November 7, 2020 at Hampden-Sydney College. The organizers are already planning for a variety of formats for this meeting depending on the state of the COVID-19 pandemic in the fall. Regardless, the meeting stands to once again provide the Commonwealth's undergraduates with an outstanding way to gain professional presentation experience, learn more about prospective STEM careers, and gain financial support for their research efforts.



Dr. Amorette Barber presents the keynote address on her cancer immunology research at Longwood University. (left), and Ryan Tomlin, a senior at Hampden-Sydney College, presents his research proposal on nanoparticles in tissue engineering to judges as well as fellow students (right).

Submitted by **Mike Wolyniak**
 VAS President 2020/21
 Program Chair for the 2019 Fall Undergraduate Research Meeting

Virginia Academy of Science Executive Officers, 2020-2021

Congratulations to our new Executive Committee Officers, the Academy applauds you for donating your time and talents to serve this organization. If you would like to nominate a member to join the Executive Committee rotation for 2021-2022, please contact Robert Atkinson, Chair, Nominations Committee, 2020-2021 at atkinson@cnu.edu. Nominee's should have some experience participating on a standing committee, ad hoc committee or may have served as an officer in a section. For more information concerning membership on the Executive Committee please see Article X, Election of Academy and Section Officers, in the Constitution, and Article II, Duties of Officers, in the By-laws at <https://vacadsci.org/about-vas/constitution-bylaws/>.

President- **Michael Wolyniak**, Hampden-Sydney College; President-elect- **Amorette Barber**, Longwood University; Vice-president- **Joseph D'Silva**, Norfolk State University; Secretary, **Christopher Osgood**, Old Dominion University; Treasurer- **Sujan Henkanathgedara**, Longwood University.

Virginia Scientist in the Spotlight

“Virginia Scientist in the Spot-light” series introduces scientists in Virginia covering various scientific disciplines. Our guest scientist for this issue is:

Rupak Dua

Affiliation: I am an Assistant Professor in the Department of Chemical Engineering in the School of Engineering & Technology at Hampton University. Before joining Hampton University in 2018, I was working as a Visiting Assistant Professor in the Department of Chemistry at Hampden-Sydney College.

Education: In 2007, I received bachelor's in Biomedical Engineering (BME) from Satyabama Institute of Science & Technology located in India. In 2009, I earned an MS in BME and, in 2014, a doctoral degree (Ph.D.) in BME with a specialization in tissue engineering and biomaterials from Florida International University located in Miami, FL. Then, I worked for two years as a postdoctoral fellow at the Institute of Orthopedics and Education housed in Texas Medical Center (World's largest Medical Center), located in Houston, TX.

Your teaching/classes?

I have been teaching full time from the last four years, two years in the Department of Chemical Engineering at Hampton University, and another two years at Hampden-Sydney College in the Department of Chemistry. I have taught courses to students at all levels, freshmen to seniors. I take a different approach to teach students at each level as they have different needs and understanding. Having taught both basic science and core engineering courses and laboratories gave me a broader perspective to look at things from different angles. Overall, my goal is to make students learn the subject matter that fosters critical thinking and reasoning. Currently, I am teaching chemical engineering core courses, including material balance, energy balance, and

transport phenomenon. I am also fortunate enough to teach unit labs to the seniors where they are exposed to real-world chemical processes through the use of laboratory scaled industrial equipment. They get hands-on activity, which gives them a better understanding of the chemical engineering fundamentals that they learned in their sophomore and junior years.

Your research? Past and current projects?

My current research focuses on improving or finding solutions for the musculoskeletal system disorders that still exist clinically by employing biomimetics, chemical, and tissue engineering approaches. Developing tools to study tissues, including fabrication of ex-vivo bioreactors or conducting surface modification on metallic and polymeric implants for orthopedic and dental applications are some of the projects that I am currently working on. Recently I was awarded a Research Initiation Award for \$300,000 by the National Science Foundation (NSF). The award will allow me to develop a biomimetic surface at the nanoscale on a customized polyether ether ketone (PEEK) structure to provide inherent antibacterial properties. The results of this research can have a wide-ranging impact in the biomedical, chemical, and food industries where bacterial contamination is of concern.

Notable work/publications?

My work has so far resulted in 9 peer-reviewed scientific articles, 4 conference proceedings and 3 book chapters. I am very grateful for having such a fantastic team of mentors, students, and collaborators that have made this possible. One of my notable works is on the treatment of osteoarthritis, "Augmentation of engineered cartilage to bone integration using hydroxyapatite," that was published in the Journal of Biomedical Materials Research Part B: Applied Biomaterials. In this particular study, we specifically used osteoinductive methods to examine the use of injectable photopolymerizable hydrogel for engi-



-neered cartilage applications. We also encapsulated hydroxyapatite (HA) nanoparticles and human bone-marrow-derived mesenchymal stem cells (HBMSCs) in this hydrogel. We studied the integration of engineered cartilage with native tissue using a cartilage-bone model. We found that HA substantially promotes the integration of engineered cartilage with a bone matrix, which benefits the anchorage of tissue-engineered cartilage within a defect space. This study was further translated into an animal model where we found that the HA nanoparticles provide increased stability of the engineered cartilage by enhancing the cellularity of the de novo tissues. This work was published in PLOS ONE with the title as, "Integration of stem cell to chondrocyte-derived cartilage matrix in healthy and osteoarthritic states in the presence of hydroxyapatite nanoparticles."

Hobbies?

Well, I like to travel and explore new places with my family, which has now become a difficult thing to do during these extraordinary times of COVID-19. So I have changed my focus on gardening, and that seems to have become my new hobby.

Advise for students?

Give your best whatever you do. Don't be disheartened when you get your rejection may be from a graduate school or the job you liked. Learn from your mistakes and take the dismissals as an opportunity to improve yourself.

... cont'd. P.5

“Give your best whatever you do. Don't be disheartened when you get a rejection. Learn from your mistakes and take the dismissals as an opportunity to improve yourself.

-Rupak Dua

Communicating Science Through the Arts



Often driven by very specific curiosities, scientists have a keen eye for observations and a desire to record what they see. When this ability is deeply rooted in passions for teaching, research, and the arts and humanities, it can lead to fruitful, colorful, diverse, and unexpected and impactful outcomes.

Dr. Eugene Maurakis, a University of Richmond research scientist, is formally trained in evolutionary biology, biogeography, ichthyology, and environmental sciences, but that is just one tiny part of his genetic makeup. He has no formal training in art — with the exception of one art class in college — but has been painting ever since his teenage years. As a researcher, professor, and science communicator, Maurakis has held a constant lifetime focus to inspire an appreciation of the natural world, which can compel a change in attitude and a desire to protect the planet as if it is one's own body. He challenges you to not just gaze at the natural world, but to also really see it for all its beauty and complexity. And beyond that, take steps in your daily life to promote its protection.

Realizing his scientific publications are limited in their reach to elicit a change in behavior in the general public, Maurakis uses the arts and humanities to ignite a call to action. Unfortunately, much of the biodiversity he has

spent a lifetime studying is succumbing to the human hand — what he calls the CHIPPO factors (climate change, habitat alteration, introduction of exotic species, pollution, population growth, and overconsumption).

When asked, What makes your work so unique? Dr. Maurakis says that using a holistic approach in applying science, the processes of science, art, music, dance, poetry, literature, and sculpture to understand and communicate what the diversity of life is all about is paramount during these times. Where science is based in objectivity, the arts and humanities on the other hand explore how we feel and think about things, the emotional side of our being. We know from neuroscience research that emotional inputs have been documented to make learning experiences more memorable and exciting, as the brain reasons such information more important and enhances memory of events. Presenting science alone is less likely to result in long-term changes in feelings and behaviors about the natural world.

He also feels that art, music, dance, and other artistic expressions are multiple entry points into a topic. They allow comfortable, non-threatening, and familiar entry points to get people to think and ask questions. As scientists, we collaborate with other

scientists to ask and answer questions through objectivity. According to a recent Harvard publication, scientists are not good communicators with the general public. Artists, on the other hand, are quite good communicators. Encouraging scientists to collaborate with artists just as they do with scientists is a way to help communicate the importance of their research to the general public.

Although his subjects vary significantly, Maurakis' primary intent is to capture a moment in time, whether the evolutionary relationships and behaviors of fishes in freshwater environments in North American and Europe, and in marine environments of Chesapeake Bay, North Atlantic Ocean, Mediterranean Sea, and around the Caribbean archipelago, or the impacts of climate change and plastics on the aquatic environment and cancers plaguing the human population to the complexity and beauty of the cosmos. You can see artwork by Dr. Maurakis at, www.eugenemaurakis.com.

You can also learn more about how he pairs art and science in this video (scan the following QR code).



Submitted by **Eugene Maurakis**



DEATH DIET© - Oil on canvas (30x40") - Plastic fragments account for up to 74% of the diet of sea turtles. Juvenile green sea turtles (*Chelonia mydas*) ingesting one piece of marine debris plastic experience a 22% chance of death; ingesting 14 pieces increases their chance of death to 50%.



PLASTICIZED© - Oil on canvas (30x40") - *Morone saxatilis* (Striped bass) has been reported to eat plastic fibers, film, and foam. Plastics in the oceans come from toxic plastic microfibers in clothing and microbeads in cosmetics, body and facial washes, baby wipes, toothpaste, abrasives, and other products.

Virginia Scientist in the Spotlight *Cont'd from P 3.*

Don't just give up on your first try. Another advice to students, be open to change and be flexible. Keep your options open, and never let any opportunity go by unattended.

Advise for peers?

Learning never ends. I would encourage all my peers to engage themselves actively in professional development activities, organizations, and be open for collaboration to promote continual learning. Be the best advisor and mentor to the students that will not only hone their skills but also help them prepare to become leaders in the disciplines and in society. We, as in academicians, are busy and are under tremendous pressure but don't let that disturb your work-life balance. Take some me-time for yourself and do whatever you enjoy the most.

When did you join VAS?

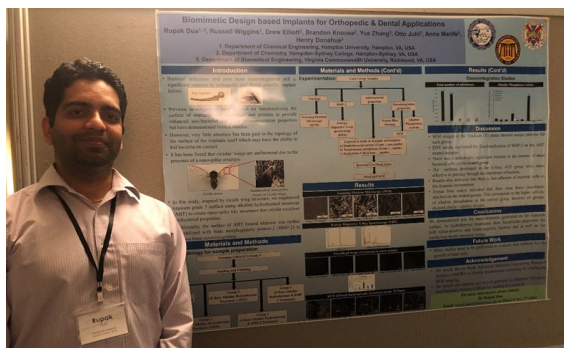
I joined VAS in 2017 when my students participated in the Virginia Academy of Science, Fall Undergraduate Research Meeting held at Hampden-Sydney, VA.

Your Role in VAS?

I currently serve as a Vice-Chair, in the Biomedical and General Engineering Section at Virginia Academy of Science.

Something "cool" about you?

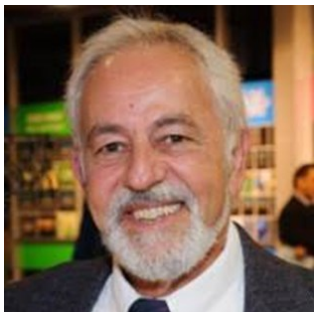
I am not sure if you will consider rotating the notebook on your fingers cool. But yes, I can do that. I also used to do parkour when I was a student, but now I try to teach my 5 year old kid to do that.



Submitted by **Rupak Dua**

Assistant Professor,
Department of Chemical Engineering,
Hampton University

New VAS Honorary Life Membership



Dr. Eugene G. Maurakis has been recognized with VAS Honorary Life Membership to honor him for his long and distinguished service to science. Dr. Maurakis retired from the Science Museum of Virginia at the end of June 2019 after working there for almost 30 years. He was instrumental in providing input into every exhibit, program, and content piece at the Museum throughout his tenure. He guided and mentored more than 100 interns while at the Museum. Active in the Virginia Academy of Science for many years, including serving as the Associate

Director of the VJAS under Don Cottingham, a joint position between the Science Museum of Virginia and VAS, Dr. Maurakis has made many significant contributions to the academy.

Submitted by **D'Arcy Mays**

Associate Professor and Chair
Department of Statistical Sciences and Operations Research, Virginia Commonwealth University
Chair, VAS Awards Committee

President's Message *Cont'd from P 1.*

The circumstances we find ourselves in underscores the importance of STEM education and research support. In order to grow with the times and adapt to current limitations, we are currently adapting our procedures to include more electronic measures for future meetings. Our goal is to be resilient while this pandemic plays out and to use these current hurdles to teach us how we can achieve our mandate more efficiently and effectively over the next year. I would like to thank our VJAS Director, Susan Booth for the efforts she and her team have made over the past few months to review and judge paper submissions from VJAS students. Her team is currently researching a virtual platform that can be used by both VAS and VJAS to support the events we have planned for 2020.

This past year we made some changes to our institutional membership benefits to further strengthen our support of universities and colleges in Virginia. Due to the work of Amorette Barber, chair of the membership standing committee and upcoming president-elect of the academy, these benefits now include the following: organization listing on VAS webpage with a link to the donor's webpage, acknowledgement and one-page Ad in VAS Annual Meeting program, a complimentary subscription to the Virginia Journal of Science, and two complimentary registrations to the Annual Meeting. Our current plan is to add a sliding scale of benefits to encourage financial support of the academy from smaller organizations.

In closing I would like to thank all those who have supported the academy over the year

by their financial donations, their efforts to professionally conduct our administrative duties, and their passion for science in Virginia. We are a team, and as my tenure as president comes to an end I move into another supportive role as our president-elect steps up. Our titles change but our passion does not. I challenge you to look at the ways you support STEM research and education in Virginia and encourage you to 'step up' to serve alongside us!

Submitted by **Gary D. Isaacs**

Professor of Biology, Liberty University
President, Virginia Academy of Science

Researchers at Hollins University in Multi-University Collaborative to Determine Whether COVID-19 is Changing People & Their Pets' Time Outside and Therefore Risk of Tick-borne Diseases

Is COVID-19 changing the way you spend time outdoors? Does that increase the risk of exposure to ticks or tick-borne diseases? Elizabeth Gleim, Assistant Professor of Biology and Environmental Studies, and Meg Du Bray, incoming Assistant Professor of Environmental Studies, both at Hollins University, have joined a research collaborative lead by Michael Yabsley at the University of Georgia to investigate just this.

Specifically, the purpose of the study is to determine if COVID-19 stay-at-home restrictions have had an effect on the time that

their pets (if they have any) spend outdoors and if this change is associated with an increased risk of exposure to ticks or tick-borne diseases. Any person who is 18 or older and a resident of the United States or Canada is eligible to participate. To participate, you simply take a short, online survey that should only take about 10-15 minutes (or less if you do not have children and/or dogs).

The deadline to complete the survey is May 31, 2020. To learn more and to take the survey, please click the following link in to your browser.

<https://ugaticks.weebly.com/>

Alternatively, you can scan this QR Code to locate the survey.



The researchers would also very much appreciate you helping by sharing the survey with anybody (in Virginia and beyond) that you think would be willing to complete the survey.

Submitted by **Elizabeth Gleim**
Assistant Professor of Biology and Environmental Studies,
Hollins University



Member Achievements

Richard Groover, Assistant Dean, J. Sargeant Reynolds Community College, has concluded a year of research on the presence of Coyotes in Hanover County Virginia. Seventeen sites resulted in repeated images of resident Coyotes. The study will be continued for the next year. Read more about this research at Groover, R.S. 2020. Coyotes, a menace or otherwise? Appalachian Woodlands, April issue, pp 10.

Rupak Dua, Vice-Chair, Biomedical and General Engineering Section at Virginia Academy of Science and an Assistant Professor in the Department of Chemical Engineering in the School of Engineering & Technology at Hampton University, was recently awarded a Research Initiation Award for \$300,000 by the National Science Foundation (NSF). The award will allow Dr. Dua to develop a biomimetic antibacterial surface on polyether ether ketone (PEEK) structure. The results of this research will have a wide-ranging impact in the biomedical, chemical, and food industries where bacterial contamination is of concern.

Updated Institutional Membership Guidelines

The Virginia Academy of Science recently passed new guidelines for Institutional Membership. These new guidelines are intended to encourage more institutions to support the Virginia Academy of Science through institutional membership and also to provide more benefits to institutional members. These changes to the by-laws were approved at the Spring 2020 Council meeting. Institutional and Business Membership is available to colleges/universities, businesses, and industrial organizations.

Benefits included with institutional membership include:

- Listing on VAS webpage page as an Institutional Member (name, logo, and live link to webpage for Institutional Members)
- Acknowledgement (name/logo of Institutional Members listed) and one-page Ad in Virginia Academy of Science Program (Annual Meeting program) and in the VJAS Blue Book
- A complimentary subscription to the Virginia Journal of Science

- Two complimentary registrations to the Annual Meeting

Please encourage your college/university, business, or industrial organization to join the Virginia Academy of Science as an Institutional Member.

Submitted by **Amorette Barber**
Vice-president, Virginia Academy of Science

COMMEMORATING A CENTURY OF ACCOMPLISHMENTS: THE ACADEMY'S CENTENNIAL YEAR - 2022-2023

Did you know about our role in establishing the state park system?

The centennial of the Virginia Academy of Science is only a few years away. We have plenty to commemorate!

Centennial commemorations will begin with our 100th annual meeting in May 2022 and conclude with the end of our hundredth year in May 2023. Those meetings and related events are being coordinated by the Long-Range Planning Committee chaired by David Crosby, and by the Fundraising Committee chaired by Rob Atkinson.

As chair of the Academy's Ad Hoc Committee on Publicity, I have been overseeing the review of VAS and VJAS publicity procedures. Among our small group's responsibilities is updating and expanding a list of Academy accomplishments that can be used as "bullet points" to tell our organization's story. Several of these appear in the printed programs for our annual events in the fall and spring.

In your workplaces, at professional meetings, and with your colleagues, help share

the Academy's story as we approach our Centennial Year. Among the Academy's accomplishments that you may wish to highlight are the "bullet points" below.

- Academy leaders provided testimony in 1925 in *The State of Tennessee v. John Thomas Scopes*, in which high school teacher John Scopes was tried for teaching evolution, a violation of state law at the time.
- In partnership with the Garden Clubs of Virginia and the Izaak Walton League, Academy representatives met in 1929 to establish the Virginia State Parks System, which opened with six parks in 1936.
- The VAS founded the Virginia Journal of Science in 1940 and continues to publish this research periodical.
- Our annual VJAS Research Symposium involves more than 800 presentations by middle and high school students. The Junior Academy awards over

\$80,000 in sponsored or endowed scholarships and prizes each year to Virginia middle and high school students for original research.

- The Academy Council enacted resolutions supporting the modern theory of evolution and its teaching (1981), the Talloires Declaration on environmental sustainability (1993), the importance of laboratory experiences in science education (1995, 1996), the elimination of coal ash ponds (2018), and the conversion to renewable energy (2019). These can be viewed at <https://vacadsci.org/resolutions/#R4>

Submitted by **Woodward S. Bousquet**

Professor Emeritus, Environmental Studies and Biology, Shenandoah University Chair, Ad Hoc Committee on Publicity for the VAS and VJAS



Shenandoah River State Park was established in 1994. In 1929, Academy representatives worked with other organizations and with state leaders to establish the Virginia State Parks System, which opened with its first six parks in 1936.

Photo: Woodward Bousquet

Know your VAS logo



1. What is the flower depicted in the inner circle of the VAS Logo?

2. Who are the four famous Virginia Scientists listed in the middle ring of the Seal or Logo?

3. What is the Academy's Maxim?

Answers: 1. The flower is the Dogwood. It is in full bloom at the top of the seal and as a bud at the bottom of the seal. 2. The four famous scientists are Walter Reed, a physician, Matthew Fontaine Maury, an explorer and cartographer, John Clayton, a botanist, and Thomas Jefferson, an agriculturist and educator. 3. Of course everyone should get the last question correct, the maxim is "Ignorantia Supremus Tyrannus" Ignorance is the greatest tyrant.

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VAS Office Hours:

Tuesday & Thursday ~11 am to ~1 pm

Research Mentoring Initiative Update

The Science Education Committee launched its new K-12 classroom mentorship program this past fall in which VAS members work with science classes across the Commonwealth over several weeks on a research project designed by the class instructor and the VAS mentor. The intent of the program is to allow students who entered ninth grade in or after the 2018-19 academic year to earn the Virginia Department of Education's new Seal for Excellence in Science and the Environment on their high school diploma upon graduation. To earn the Seal, students must complete a laboratory or field research experience and present their findings in a formal, juried setting. The program directly provides students with access to the research experience while the Virginia Junior Academy of Science provides an excellent professional presentation venue.

The Committee brought together 6 members of the Academy with middle and high school science classes across the Commonwealth in the fall of 2019. Matches were made on the basis of research interest, K-12 grade level, and proximity of mentor to the K-12 class. While a face-to-face mentorship would be an ideal situation, a series of virtual mentor meetings between a class and mentor could also be used. Unfortunately, the COVID-19 pandemic cut many of

these pilot projects short before they could be brought to fruition or presentation in 2020. Going forward, the Committee wants to create new mentor/class partnerships, further explore the best practices for offering an ideal mentorship, creating a web presence where students and mentors can exchange ideas via a message board, and bringing completed projects to the Virginia Junior Academy Annual Meeting.

Submitted by **Mike Wolyniak**

VAS President 2020/21



Dinwiddie High School Environmental Science teacher William Kissner studies aquatic ecology of Stony Creek with his students under mentorship of Longwood University Biology professor Sujan Henkanaththedegara.

We Invite You to Contribute to *Virginia Scientists*

Virginia Scientists is the official newsletter of the Virginia Academy of Science (VAS). This publication offers information for VAS members such as upcoming events, past events, scholarships/awards information, accomplishments of VAS members and other timely information. We electronically publish Virginia Scientists twice every year and circulate to all current members and academic institutions.

We would like to extend an invitation to you to submit articles to Virginia Scientists and/or use the advertising space. We are currently accepting articles for the next issue.

The length of the article should not exceed 500 words. Any exceptions must be get approved by the editors prior to submission. Please consider following categories to submit.

- Member achievements – your publications, awards and other professional achievements related to science
- Upcoming events – information about educational and professional events
- Historical notes – articles related to history of science and scientists in Virginia, and VAS

- Summaries of scientific studies related to Virginia
- Advertisements (commercial events, products etc.)

If you have ideas beyond these categories and think it is suitable for publication here, please check with editors before you proceed. Article and any accompanying high quality photographs must be electronically submitted to Sujan Henkanaththedegara (henkanaththedegara@longwood.edu).

If you would like more information about the advertising space, please contact Debbie Neely-Fisher (dneely-fisher@reynolds.edu).

Please let us know if you need more information and/or have any questions.

Sujan Henkanaththedegara
Deborah Neely-Fisher

Editors, Virginia Scientist