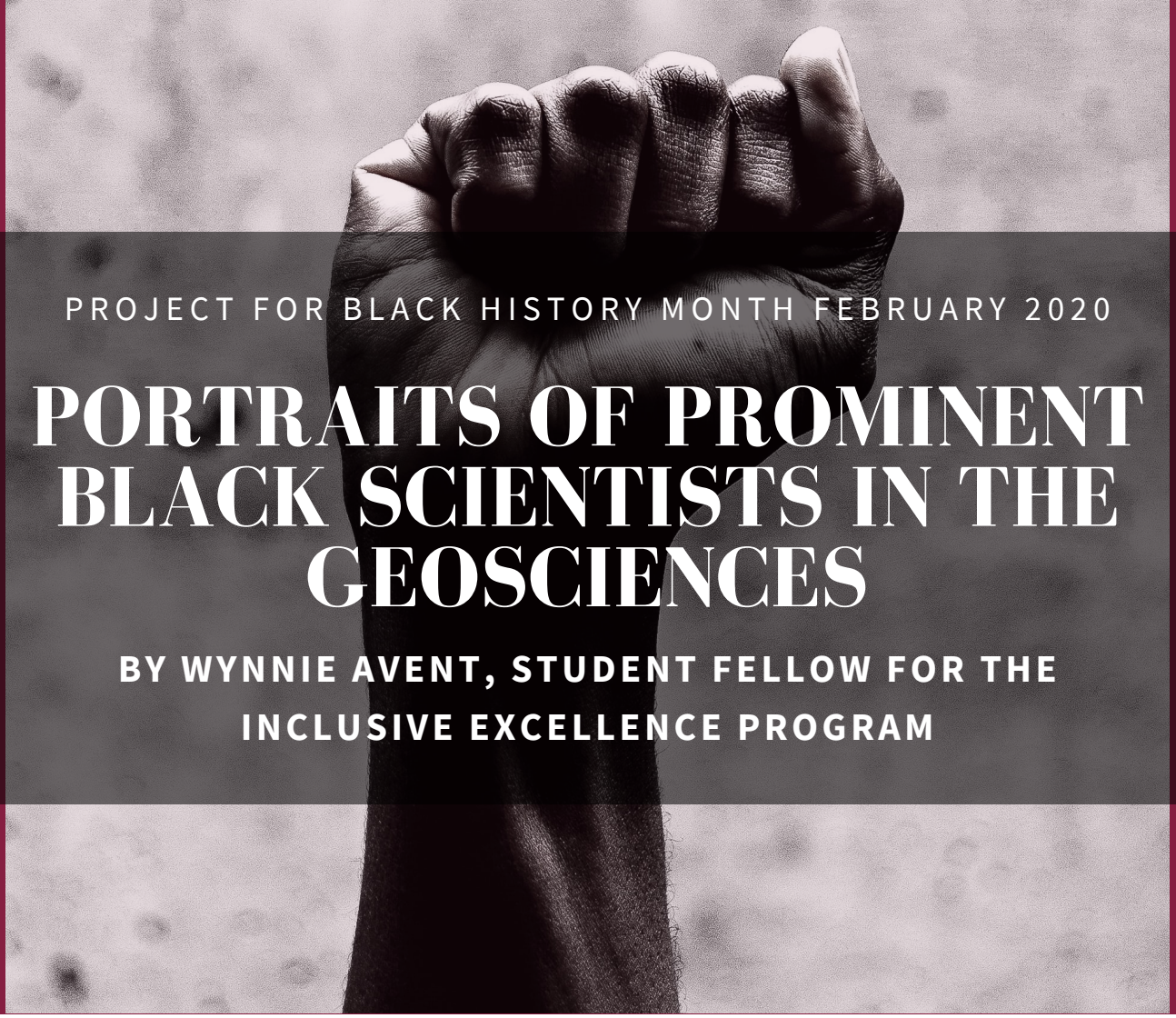

PROJECT FOR BLACK HISTORY MONTH FEBRUARY 2020

PORTRAITS OF PROMINENT BLACK SCIENTISTS IN THE GEOSCIENCES

BY WYNNIE AVENT, STUDENT FELLOW FOR THE INCLUSIVE EXCELLENCE PROGRAM

INTRODUCTION

WYNNIE AVENT

Geoscience is a complex science that has been around for centuries, with geologic thought going as far back to Aristotle. Geoscience tackles every issue concerning the terrestrial worlds, from climate change to human-earth interactions. With such complex tasks that geoscientists take on, the insight of diverse perspectives and voices is needed to provide unique solutions to such unique questions. Despite that, the field of geoscience is the least diverse of all the sciences, and the work and voices of Black geoscientists have been buried under centuries of a white-dominated field, and very few know their contributions to the field of geoscience and their efforts to create a more inclusive world. This collection of Black geoscientists is an attempt to amplify the geoscientists that have come before us and to honor their legacy of paving the way for future scientists everywhere.

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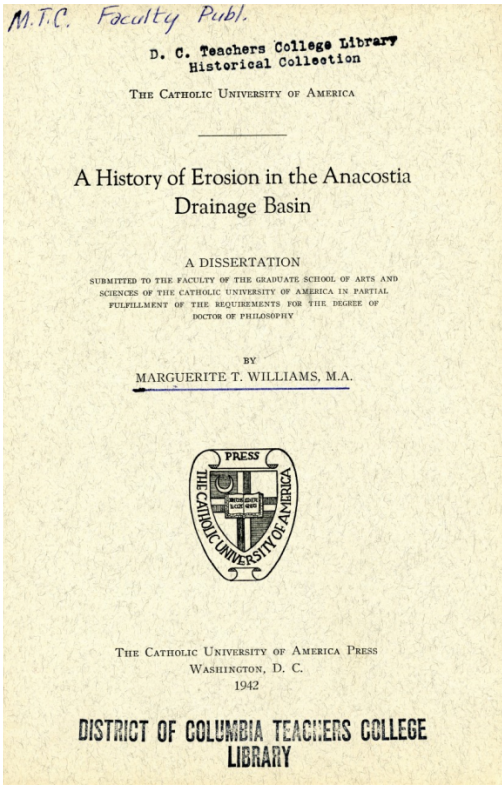
DESIGNED BY ABBY MERCATORIS

MEET MARGUERITE THOMAS WILLIAMS

(DECEMBER 24, 1895 – AUGUST 17, 1991)

Dr. Marguerite Thomas Williams, (December 24, 1895 – August 17, 1991) was the first Black individual of any gender, to earn a doctorate degree in Geoscience in 1942 from the Catholic University of America. Her dissertation was titled A History of Erosion of the Anacostia Drainage Basin which explored the factors that eventually lead to the erosion observed in the Anacostia River that she concluded that was not only due to natural erosion but human activities like deforestation, agriculture, and urbanization.



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THE CATHOLIC UNIVERSITY OF AMERICA

A History of Erosion in the Anacostia Drainage Basin

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL OF ARTS AND SCIENCES OF THE CATHOLIC UNIVERSITY OF AMERICA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY

MARGUERITE T. WILLIAMS, M.A.

PRESS
THE CATHOLIC UNIVERSITY OF AMERICA

THE CATHOLIC UNIVERSITY OF AMERICA PRESS
WASHINGTON, D. C.
1942

DISTRICT OF COLUMBIA TEACHERS COLLEGE LIBRARY

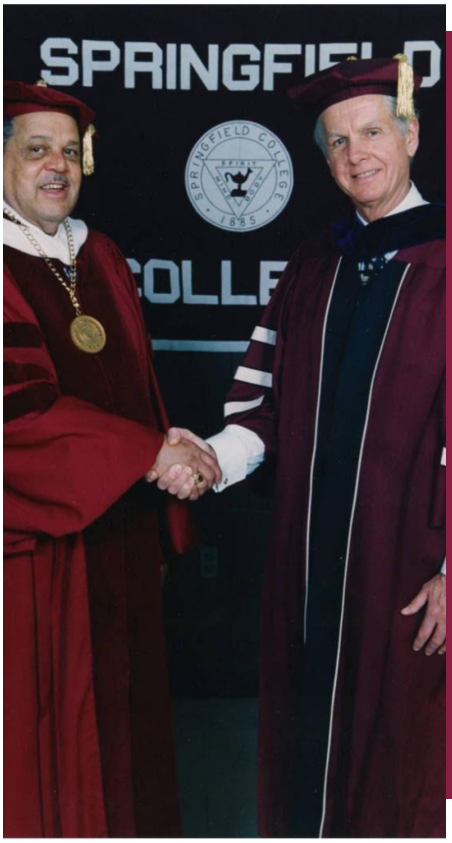
She attended Howard University for her Bachelor's degree, all the while teaching at a nearby elementary school herself. After graduating in 1923, she became an assistant professor at Miner Teacher's College, which is now a part of the University of the District of Columbia where she taught for almost a decade, becoming Chair of the College's Division of Geography in 1933 while also pursuing a masters degree in geology which she completed in 1930. After getting her Ph.D from the Catholic University of America, she was promoted to a full professor position at Miner's where she taught during the day and at Howard University by night. She continued to serve as an educator for minority students, and retired in the 1950s.

There is very little information available on Dr. Marguerite Williams, but we recognize her hard work of opening the doors of Geology to young Black students and pursuing the path of higher education which was rarely seen at that time from people of color. Thank you Dr. Williams for being a pillar of inspiration to us all.

MEET RANDOLPH W. ("BILL") BROMERY

(JANUARY 18, 1926 – FEBRUARY 26, 2013)

Dr. Randolph Bromery (January 18, 1926 – February 26, 2013) is an incredible and prominent figure within the world of Geoscience. Dr. Bromery grew up in the era of The Great Depression and segregation where young Black children attended schools with little to no funding. After his first school closed due to lack of funding, Dr. Bromery attended George Washington Carver High School in Cumberland, Maryland where he graduated top of class in 1942. After high school, Dr. Bromery enlisted in the US Army Air Corps, where he used his training in machinery, and became a pilot. He fought in World War II, flying missions in Italy, as part of the famous Tuskegee Airmen. After the war, Bromery started attending Howard University in 1946 for Mathematics after a brief year at the University of Michigan, to be closer to his mother who had fallen ill. However, when it was time for Bromery to graduate, he discovered that he was given the wrong information by his faculty advisor and thus would need to complete four more credits in physical education in order to graduate. Dr. Bromery was (obviously) upset by this and decided to leave which is then when he landed a job at USGS as an airborne exploration geophysicist - making him the very first professional geophysicist at USGS ever. Dr. Bromery went back to Howard to complete his degree, earning a B.S in mathematics in 1956. Dr. Bromery went on to earn his masters in geology from the American University in 1962, where by that time, he had already authored or coauthored 80 scientific reports in geology and geophysics. Dr. Bromery's work specifically included studies of the variations of Earth's magnetic field and how that could be used to identify and locate minerals such as manganese.



Afterwards, Dr. Bromery went to John Hopkins where he earned his doctorate in geology in 1968, during that time which he earned an award from the US Department of the Interior for his dissertation research that helped to determine the best routes for high speed transportation lines between DC and Boston. In1969 Bromery began teaching as a geology professor at the University of Massachusetts at Amherst. He quickly gained tenure and became chairman of his department, then moved quickly from Vice Chancellor for Student Affairs in 1970 to Acing Chancellor of the university in 1971, thus becoming the third person of African descent to head a major, at a predominantly white, American institution of higher learning. During his eight years as Chancellor he facilitated the depositing of the collected papers of W.E.B. DuBois and of Horace Mann Bond in the library's Special Collections and University Archives. As an exceptional scientist who studied the Earth's magnetic field in relation to the location of minerals, Bromery authored more than 150 research papers by the end of his career, many of them published as journal articles and government reports. In 1989 he was elected President of the Geological Society of America which later honored him with a service medal for his work in increasing minority participation in Earth Sciences.

The list of Dr. Bromery of exceptional achievements is almost endless. Dr. Bromery lived an extraordinary life, showing us all that there is no limit to what a geoscientist can do, and his legacy continues to live on today.

MEET LISA WHITE

Dr. Lisa White is one of very few Black female paleontologists. Dr. White grew up in San Francisco, close to the California Academy of Sciences. It is there, she says, that sparked her interest in geology and paleontology. Dr. White earned a BA in geology at San Francisco State University and credits her path and career in earth sciences due to having to take a geology course to fulfill an elective requirement as she originally started as a photography major! During her undergraduate career, she landed an internship at USGS which took her to Alaska. It was this trip to Alaska that cemented her desire to pursue earth sciences and paleontology. Dr. White completed her PhD at the University of Santa Cruz in 1989 with a degree in Earth Sciences and specialized in diatom microfossils and their applications to dating deep marine rock sequences around the Pacific Rim and interpreting ancient environments. For 22 years, she was a professor of geosciences, specializing in micropaleontology teaching paleontology, historical geology, and oceanography, and eventually becoming Associate Dean of the College of Science and Engineering at the San Francisco State University. She now serves as the Director of Education at the Museum of Paleontology at the University of California, Berkeley.

Dr. White has and continues to play an active part in bringing earth and environmental sciences to underrepresented groups. From 1988 to 1995 she coordinated the Minority Participation in the Earth Sciences program (MPES) with the USGS. In 2000, she was appointed Chair of the Geological Society of America (GSA) Committee on Minorities and Women in the Geosciences and was awarded the Bromery Award from the GSA in 2008 in recognition of her work with minorities in the field. Not only that, but Dr. White was also on an episode of Bill Nye the Science Guy and was featured on the three part PBS special Making North America. Today, Dr. White continues most of her efforts on outreach and bringing geology and paleontology to young students from age 5 to 15 to help usher in a new generation of diverse scientists who have an interest and love for geosciences.

Thank you Dr. White for all your hard work in the efforts of making geoscience more accessible and inclusive to people everywhere!

MEET RUFUS CATCHINGS

Dr. Rufus Catchings is one the first Black geophysicist at the USGS. Dr.Catchings grew up in the racially segregated South in the 1950s and 1960s and he, along with his siblings, were some of the first Black kids to attend previously segregated schools after the Brown vs Board of Education legislation. Dr. Catchings went to Appalachian State University where he earned his bachelor's in geology, and then to the University of Wisconsin-Madison where he earned his masters. After earning his Ph.D from Stanford in geophysics he worked for the National Earthquake Information Center, part of the USGS, in Golden, Colorado. He later joined the Earthquake Science Center at USGS where he works today and has done groundbreaking research on subsurface seismic activity and is the innovator of a model that combines seismic data with other geophysical and geological data to help characterize the structure of faults.

Outside of his amazing work, Dr. Catchings is a firm believer that positive mentorship is the key to expanding scientific fields to underrepresented groups and is sure that exposure to the amazing natural world around us will be what ushers in a new generation of diverse geoscientists.

To learn more about Dr. Rufus Catchings, read the full article published by the USGS or look through his Researchgate profile.