

basic facts

Bulletin of the School of Basic Health Sciences

R. D. HUGHES MEMORIAL ISSUE (1903-1976)

DR. ROSCOE D. HUGHES -- Emeritus Professor, Department of Human Genetics -- Unsparring Standards of Performance in Service, Education and Research

Dr. Roscoe D. Hughes -- A Man of Vision

On August 11, 1989, the Science Museum of Virginia dedicated a plaque in memory of Dr. Roscoe D. Hughes for his efforts to establish this unique museum. Because of his vision, and with the support of the Virginia Academy of Science, the State of Virginia embarked on a bold new venture to build one of the finest science museums in the nation. To fulfill this mandate, the Governor of Virginia, Albertis Harrison, formed an Advisory Committee in 1965 for the Encouragement of the Establishment of a Museum of Science. In 1968, Governor of Virginia, Mills Godwin, established the Science Museum Study Commission which led in 1970 to the Virginia State Senate Bill creating the Science Museum of Virginia. Dr. Hughes, the impetus for and strong supporter of this museum, was appointed to both the committee and the commission. He brought with him his rich professional background, enthusiasm and strong personal commitment. This establishment of a science museum was a cherished dream and one to which he gave a characteristically determined effort to bring into reality.



The Individual -- His Life and Research

Born in Dupont, Georgia on March 1, 1903, Dr. Hughes attended elementary and secondary school in Valdosta. In 1927 he graduated from the United States Naval Academy. While serving in the Navy after leaving Annapolis, he became interested in the genetic studies of Charles Davenport at Carnegie Institute. Eventually he left active naval duty to pursue this interest. The final deciding factor was "an overwhelming positive reaction to science rather than a negative reaction to the Navy," he wrote to W. F. Rudd, Dean of the Pharmacy School at the Medical College of Virginia. Resigning from the Navy in 1930, Dr. Hughes worked at Carnegie Institute with Dr. Davenport on studies of inventive genius.



Medical College of Virginia Virginia Commonwealth University

In 1934 he moved to Columbia University where he earned his M.A. in zoology and genetics. Here too he met and married Elizabeth Drumtra who received her M.A. from Columbia in zoology. In 1938 Dr. Hughes came to the Medical College of Virginia as an Associate Professor of Biology. After receiving his Ph.D. from Columbia in cytogenetics in 1940, he was appointed as Professor and Chairman of the Department of Biology at MCV until his retirement in 1970.

He was called to active service in January of 1941 and trained in mine warfare. In April of 1941 he was sent as Assistant Naval Attache' to the American Embassy in Britain as a mine warfare observer. After his return in September 1941, he was attached to the Mine Warfare section in Washington as Executive Officer. After the war, he returned to civilian life taking up his post at MCV. He continued in the Naval Reserve thereafter rising to the rank of Captain USNR. From 1950 he was Commanding Officer of Naval Reserve Research Company 5-5, which met at MCV to discuss scientific developments and projects. For encouraging this and similar activities, MCV received the Department of Defense Reserve Award.

His major interests were in cytogenetics and radiation genetics. Publications included among others: "Family Studies of the Facial Complex," 1963 with B. L. Hanna and M.E. Turner, and "A Review of the Family Annetidae (Acari)," 1956 with C. G. Jackson. He also edited with H. Leidhiser, Jr., a book of papers, "Exploring Virginia's Human Resources," resulting from a Symposium in 1964, which he organized under the auspices of the Virginia Academy of Science. He organized VCU seminars on Human Ecology in 1970, the first of its scope in the Richmond area, and another such seminar the following year. The guest lecturers were a group of outstanding professionals in various fields who attracted a good deal of thoughtful editorial comment in the local newspapers on matters of the environment.

Always active in community service, from 1965-66 Dr. Hughes was President of the Virginia Academy of Science. As a Council member, he offered strong support to the Junior Academy and as President continued his interest in and involvement with the Academy. He was elected to the first class of Fellows of the Virginia Academy of Science and to honorary life membership. In 1970 he received the Virginia Academy of Science Ivey F. Lewis Distinguished Service Award. Dr. Hughes also served as President of the Virginia League for Planned Parenthood from 1966-68.

The Dream to Fruition

The establishment of the Science Museum embodies his belief that ideas are adventure and learning is fun. This was an exciting period in Dr. Hughes life for he enjoyed working with young people. This was truly a significant contribution to the educational experience -- one that takes place outside the formal classroom. There was a distinct need for a facility in which young people could come together to enrich relationships and extend the learning process. Dr. Hughes was the potent force in this scientific educational evolution.

The Roscoe D. Hughes Human Genetics Fund

This fund was established as a memorial to Dr. Hughes in 1981 to support the academic activities of the Department of Human Genetics at the School of Basic Health Sciences MCV/VCU. Specifically it provides for student support in the field of Human Genetics. Each year the Roscoe D. Hughes Fellowship is awarded to an outstanding student. Dr. Hughes felt that youth is that time when a student must capture the impetus of the moment and respond with the vigor that makes possible the realization of his/her full potential. Through the generous support of our alumni and friends we have been able to provide educational opportunities for the scientific student who otherwise might be found wanting. This fund is most worthwhile and will continue to have a dramatic impact on the life and future of the study of human genetics here at this University.

Taken from material supplied by:
Elizabeth (Drumtra) Hughes,
Elizabeth (Hughes) Waugh and
William D. Hughes

AN AFTERNOON WITH ROSCOE HUGHES

Dr. Roscoe D. Hughes of the MCV faculty was special in bringing environmental education to VCU's summer sessions on the Academic Campus in the late 1960s.

With considerable help from Mrs. Hughes, he planned and directed a large afternoon class that attracted lively adults from the Fan District along with traditional summer students who were interested in hearing about these novel environmental threats to our usual ways of living. He brought in scientists from other institutions, both in and out of the State. These scholars joined the VCU faculty in lecturing on a comprehensive spectrum of environmental concerns. Often these speakers were alarming in their dire predictions! Once I was moved to ask Dr. Hughes if there were any available scientists who were more "optimistic." He said, "Yes," he had a Ph.D. friend at Princeton who was "confident that the good Lord had provided a 200% excess backup to the 100% oxygen supply which we use in the atmosphere."

Those 1960s were days when ordinary citizens were beginning to learn about the environment due to the efforts and interests of concerned leaders like Roscoe Hughes. The Richmond media had been alerted to the topics being discussed in Dr. Hughes' class of eighty-five students. Subjects ranged from the James River to the promises of environmental law. There were panels of experts for this relatively new kind of law dealing with environmental matters. My memory is that Gerald L. Baliles served on one of these panels. Dr. Hughes knew of the future governor's early work with environmental law as a young lawyer in the Attorney General's Office and subsequently as a respected member of the House of Delegates.

Dr. Roscoe D. Hughes seemed to anticipate VCU's slogan "Making a Difference"! I had the feeling he was working to have those who did "know something" pass some of this knowledge on to those who could help make a safer and better world for us all.

In retrospect, I think Roscoe Hughes sensed that it was imperative to persuade the public. His was both an acceptance and an extension of Thomas Jefferson's idea of how vital education is in sustaining our style of democracy.

With his genial smile and Mrs. Hughes by his side, he kept right on pushing and sharing his expertise. He truly made a positive contribution to the community.

John A. Mapp, Ph.D.
Professor Emeritus, Education

ROSCOE D. HUGHES -- A Colorful Faculty Member

When I arrived at MCV in July 1966, one of the colorful faculty members I came in contact with was Dr. Roscoe D. Hughes, Chairman of the Department of Biology and Genetics. The Department's primary responsibility was teaching general biology to pharmacy and nursing students who entered MCV directly from high school. Roscoe was a classical geneticist and had wisely recruited biologists with specialization in genetics in his four-man department. This provided the expertise not only for teaching general biology but offered the instruction in genetics for the Schools of Medicine and Dentistry.

When MCV was merged into VCU in 1968 and general biology dropped from the MCV curriculum, the Hughes' geneticists provided the core for the present Department of Human Genetics in the School of Basic Health Sciences.

After retiring in 1970, Roscoe devoted his considerable energies to the founding of the Science Museum of Virginia. He not only struck the spark for this idea, but also he continued to fan a public flame until the Virginia Legislature provided seed money and the Richmond business community rallied behind the effort to develop the outstanding museum in the classical building on West Broad Street.

In summary I remember Roscoe as a geneticist, a Darwinian biologist, a scientist and a patriot. Unfortunately, in this era of ultra-specialization, we seldom find individuals with such broad interests.

Daniel T. Watts, Ph.D.
Emeritus Professor of Pharmacology and
Dean Emeritus, School of Basic Health Sciences

ROSCOE D. HUGHES -- Some Reminiscences

On a hillside, off the walk between the last stable (now Emporium) and the Dooley Mansion, above the gardens in Maymont Park, stands a tree planted by the Science Museum of Virginia in "happy" memory of Roscoe Durall Hughes. This living memorial reminds me not only of his life-long love of living things but also of his hope that some day an arboretum might be established as part of the Science Museum.

Roscoe worked long and hard with various committees and commissions to involve the Virginia Academy of Science in his proposal to the State Legislature for support of Science Museum in Virginia. He served as President of the Academy (1965-66), received its Distinguished Service Award (1970) and was elected to its first class of Fellows in 1970. His unrelenting efforts led the Virginia Academy of Science to propose, and the Legislature to establish, the Science Museum of Virginia. With this modest beginning, it has since progressed and flourished under the excellent leadership of its Board of Trustees, Foundation and director Paul Knappenberger. Dr. Hughes served as the first Chairman of its Board of Trustees (1971-73).

In 1940 when I came to MCV, Roscoe Hughes was teaching biology in the 4 year curriculum of the School of Pharmacy. His 12 foot by 12 foot office and laboratory were located in the original McGuire Hall, at that time a three-story building acquired by MCV in 1913. It housed not only the School of Pharmacy and the School of Dentistry (with a Dental Clinic on the first floor) but also the Departments of Anatomy, Chemistry and Pharmacology and Physiology. He alone (Associate) was the total staff of the Biology Department.

Roscoe had been here a couple of years when Hester and I arrived. He and Betty were among our earliest friends in Richmond. At that time they lived in a bungalow on Horsepen Road off Broad Street. It was in the country near a "flying field" (small planes) and a golf course. They were gracious hosts and very helpful to newcomers.

Although he sometimes referred to himself as a "Georgia Cracker," Roscoe was no "red-neck"! He was a soft-spoken, unassuming gentleman who had many and diverse interests.

As a Naval Academy graduate (1927) with service from 1927-31, Roscoe was called to active duty early in World War II. He served in the Navy Department in Washington in mine research and development and later in London studied British naval mines. For a number of years while he was on military leave (1941-46) his wife Betty taught his biology course in the School of Pharmacy at MCV.

After the war he worked hard at building a Biology and Genetics Department. He started research and graduate studies in the Department. His interests ranged from *Drosophila* to people (including the Virginia League for Planned Parenthood and research on twins). Some of his work led to publication of an extensive monograph on mites. Later the department developed into the widely-known Department of Human Genetics in the School of Basic Health Sciences, Medical College of Virginia of Virginia Commonwealth University. The Roscoe D. Hughes Award in Human Genetics is presented annually to a graduate student for research in human genetics.

For many years, Dr. Hughes headed a landscape committee for Dr. Sanger to improve the area with plantings of trees, shrubs and flowers. He moved to Hanover County where he farmed, had a fish pond and raised dogs and cattle.

His interest in, and involvement with, the Navy continued. Following World War II he established a Volunteer Naval Reserve Research Unit at MCV. It was officially activated in 1950 under the Office of Naval Research and the Fifth Naval District. Captain R. D. Hughes was Commanding Officer and Dr. George Z. Williams was Executive Officer. The unit met at MCV twice a month for some dozen or more years. During this time, Roscoe, through his personality and leadership, kept the group together. He also did two weeks active duty in the summer in the Navy Department. He and others from MCV remained active in the Naval Reserve for 20 years or more. Dr. Hughes retired with the rank of Captain in the Naval Reserve.

He was appointed Emeritus Professor of Biology, July 1, 1970, and died April 19, 1976.

Lynn D. Abbott, Jr., Ph.D.
Emeritus Professor, Biochemistry

REMINISCENCES OF ROSCOE

Nearly sixteen years of almost daily contact with Roscoe Hughes, as his associate in the Department of Biology and Genetics and as a friend, engendered in me a deep appreciation of his passion for knowledge, beauty, and people. Both his natural curiosity about our world and his insight into the enormous potential for bettering the human condition led him to devote nearly all of his life to expanding knowledge and passing it on to succeeding generations. He did these not only through his own teaching and research, but also in numerous other ways, especially by the support and encouragement he gave to students and to other teachers.

To reach a wider Virginia audience, he conceived of a state science museum, appointed the first committee to study its feasibility while he was president of the Virginia Academy of Science, and later chaired the Commonwealth's committee that planned the present museum. Without doubt, his was the leading spirit behind its establishment. Roscoe delighted in button-holing people who showed any interest at all and in telling them of his plans for the most technologically advanced science museum, to be built in Byrd Park. Though such a building was not to be realized, I am sure that he would be elated with the Science Museum of Virginia and its planetarium, as they have developed, and I am also sure that they would not have developed as soon as they did, if ever, had Roscoe not given so much of himself to make certain that they did.

When a recent graduate of the U.S. Naval Academy, Roscoe found himself interested in becoming a scientist because of, in part, his social consciousness, his concern about both the blessings and curses that science has the potential to bestow on mankind. Unrestricted population growth has long been recognized as one of the most difficult problems facing us. Roscoe chose to make his contribution to lessen its ill effects by vigorously advocating the responsible approach of Planned Parenthood, the Virginia Chapter of which he was president.

Even casual visitors to MCV benefit from Roscoe's interest in beauty. It was under his direct supervision that landscaping and planting of flowers on nearly every bit of yet-unpaved ground was undertaken for years. The present planting is a direct result of the gardening tradition that Roscoe established.

After he was among the first geneticists in the United States to succeed in having genetics made a required course in the medical curriculum and the first anywhere to do the same in the dental curriculum, Roscoe decided that the time had come to have a genetics department at MCV. But there was the bureaucracy to be finessed, so he had new stationery printed with the letterhead, "Department of Biology and Genetics," then called in the sign painter and had him paint "and Genetics" on every door marked "Department of Biology" -- all without approval from anyone. Once, with a twinkle in his eye, he said, "It really isn't officially a genetics department." He was ahead of his time with plans to establish a large institute of human genetics at MCV. If he could see the successor, Department of Human Genetics -- which is official -- wouldn't he be delighted!

J. Ives Townsend
Department of Human Genetics

AS I REMEMBER ROSCOE HUGHES

My family's and my acquaintance with Roscoe Hughes and his family goes back to 1946. We met them in the very early weeks after our immigration from Germany. I was puzzled a bit about the pronunciation of his name. In Germany, words are pronounced exactly the way they are spelled, letter by letter. But listening to the natives, northern and southern variety, helped us to reduce this (and other) language hurdles, and to cultivate an enduring friendship with Roscoe and his family. My professional interactions with Roscoe were limited to three occasions. I served on the advisory committee of Roscoe's graduate student Marion Waller. Later, when Roscoe was President of the Virginia Academy of Science, at which time his long held dreams of the establishment of a Science Museum came to fruition, he appointed me to serve on a committee charged with suggesting ways to vigorously promote science education in the State of Virginia. Education was always on Roscoe's mind. Then, at the time when the late Ebbe C. Hoff was the Director of Graduate Studies at MCV, Roscoe and I served on a study committee concerned with a singular mission, i.e. to establish at MCV a graduate degree program in Biomedical Engineering. Roscoe, always looking far ahead, strongly supported this plan. At least two N.A.S.A. candidates did eventually enroll and earned advanced degrees, with two Physiologists serving as advisors. But this was an early venture and, one would like to think for valid administrative reasons, this program was abolished. Roscoe was a person with genuine leadership traits. I, for one, always felt "his presence" in a group of scholars. Roscoe would have made a first rate senator, concerned with improving the human condition in our society. Not infrequently, he reminded me of the late Lyndon B. Johnson, both gifted with the pleasant southern charm of putting their arms around their disputants, and with a persuasive, sonorous voice swinging the adversary over to their side. Roscoe was a man ahead of his time in his stunning, engaging visions of the importance in the sciences and the humanities of Genetics, Molecular Biology, Environment, Family Planning and, above all, Education. Evidence for this is embodied in the creation of the Science Museum of Virginia of which Roscoe is the founder. It is a tribute to Roscoe's sound instinct for recognizing in persons professional expertise coupled with the traits of leadership and commitment to education, that he recommended the appointment of the dynamic Paul Knappenberger as its first (and present) Director of the Science Museum of Virginia. In his relentless efforts to see his dreams come true, Roscoe had an ardent partner in his wife Betty who served for many years after Roscoe's death on the Board of the Directors. Roscoe was a great naturalist. He knew the birds and the stars in the sky as well as he knew what grows in the earth into which he loved to plant things and see them thrive. That was at his beloved Powhickory Farm, a few miles north of Richmond. The family also raised dogs and for a short period of time also had a small herd of cattle. Roscoe served for many years at MCV as the Chairman of the Landscaping Committee, and all of us can still enjoy the fruits of his endeavors as we criss-cross the campus. How appropriate it was when the Science Museum of Virginia decided to have several live oak trees planted in Richmond's Maymont Park in honor of Roscoe after his untimely death. At the site of one of the oaks, near the rose garden, there is a commemorative plaque placed into the ground. There was a brief ceremony at that time. Paul Knappenberger, among others, expressed his thanks to and respect for Roscoe. He was a colorful man, one of the best among us in the Basic Health Sciences Faculty.

Ernst G. Huf, Ph.D., M.D.
Professor Emeritus, Physiology

ROSCOE HUGHES IN RETROSPECT

My first meeting with Roscoe Hughes in 1949 was marked by some of the singular distinctives that characterized who he was and where he thought he should be going. The meeting was in a laboratory with a "thirties" look located at the northeast corner of the second floor of McGuire Hall. Roscoe "generally speaking" let me know he was a graduate of the United States Naval Academy and not really a biologist, but a geneticist. Over the next twenty years, our relationship was to be collegial although in 1949 that was not so evident to me. Roscoe at that time was the designated head of the Department of Biology and Genetics responsible for teaching general biology and comparative anatomy to students in the School of Pharmacy.

After I joined the faculty as Chairman of the Department of Chemistry and Pharmaceutical Chemistry, I soon learned that Roscoe's driving ambition was to have genetics taught in the School of Medicine (by his group) and that his area should be administratively located there instead of in the pharmacy school. This ambition was realized in part in the sixties when the structure of the pharmacy curriculum changed, eliminating biology instruction in Roscoe's area. However, the School of Pharmacy transferred the Department and its budgetary resources to the emerging School of Basic Sciences with the goal of developing a Department of Genetics, which has led to the current Department which is a recognized Center of Excellence.

In the fifties, Dr. Hughes, who was heavily involved in the Virginia Academy of Science, began to envision a Science Museum for the State of Virginia. After all, Virginia had a Museum of Fine Arts and it was "past time" for a similar Museum of Science. His continual bold and tenacious advocacy of the institution made him a prime mover, if not THE prime mover, in seeing this realized. His old pharmacy ties stood him in good stead as he continually made the treks to the legislative halls, for pharmacist W. Roy Smith (Chairman of the House Appropriations Committee and a former student of Dr. Hughes) and Senator Edward Willey (also a pharmacist and Chairman of the Senate Finance Committee) were instrumental in allocating funds to implement Dr. Hughes' long-held vision.

Dr. Hughes' vision for and realization of the Science Museum of Virginia (along with the Department of Human Genetics) is a magnificent remembrance of the impact Dr. Hughes made at the Medical College of Virginia and within the State of Virginia. It was good to have known him and worked with him over the years when these ideas were beginning to bloom and emerge into active advocacy.

Warren E. Weaver, Ph.D.
Dean Emeritus, School of Pharmacy

MY ASSOCIATION WITH ROSCOE HUGHES

A memorial issue of the School of Basic Health Sciences Basic Facts Newsletter in honor of Dr. Roscoe D. Hughes will be met with a concert of approval from his MCV associates. When I joined the faculty of MCV in 1947, the post-war development was underway. Those were memorable years for all of us associated with Roscoe Hughes. He was actively involved in many programs. We came to know him as a man of deep concern for the betterment of life. As a Geneticist, he promoted programs of teaching and appreciation of genetics which finally led to the establishment of the Department of Human Genetics by the time of his retirement in 1970. But during those 32 active years at MCV and long association with science education in Virginia, he nurtured a strong conviction that a Science Museum can play a vital role in education. On August 11, 1989, a memorial plaque was dedicated in the Science Museum of Virginia in honor of Dr. Roscoe D. Hughes. It is now 20 years since the foundation was laid. Young people attending the dedication were not even born when the museum they have visited was only a vision in the mind of the man being honored. We old friends take great pleasure in this beautiful fulfillment.

E. Clifford Nelson, Ph.D.
Professor Emeritus, Microbiology & Immunology

ROSCOE HUGHES -- The Problem Solver

I will leave it to others to comment on the considerable contribution that Roscoe made to the academic life of our institution. Instead I propose to document a lesser known but equally impressive aspect of his career: the part he dedicated to solving problems of our society.

His procedure was to first analyze our present society to determine it's areas of strength and weakness and then use this information to determine how best to use his time and talents in public service.

The project was his from start to finish. He obtained financial support from the Virginia Chamber of Commerce and the full and enthusiastic support of the Virginia Academy of Science and its contributing members. The study was completed and published in book form by the University press of Virginia in 1965; titled "Exploring Virginia's Human Resources."

Now he had the information he needed to help him make an intelligent choice of projects he might undertake in the public interest.

One needs only to scan the statistics presented in chapter three on "Changing Density of Population" and chapter six on "How Birth Patterns Shape our Population" to understand why he was persuaded and persuasive in championing family planning. Or turn to chapter five on "Skills and Training and Education" to appreciate his early and persistent campaign for the creation of a science museum.

More could but need not be said except to acknowledge the fact that his wife Betty was a full and equal partner in his every effort. It is also no secret that she still continues her efforts toward the objectiveness they held in common.

Erling S. Hegre, Ph.D.
Emeritus Professor, Anatomy

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