

C. EDMUND BURGESS—A BRIEF BIOGRAPHY

T.B. RUSHING

A somewhat long and lanky baby boy, soon named Cecil Edmund Burgess, was born to Sallie Crawford Burgess and John Wesley Burgess on January 21, 1920. This happy event occurred, appropriately enough, in Happy, Texas. There came to be six children in the Burgess family, all of whom were to eventually complete college. (All but one of the children were to become teachers.) The children rode together in a Model T Ford over dirt roads to attend school in Happy. Ed was graduated from Happy High School in 1937 in a class of 28 people.

The Burgess' farm included the standard collection of farm animals, but was basically a wheat farm. Young Ed helped on the farm after school and during the summers. He continued the summer farm work during his undergraduate years.

Burgess did his undergraduate work at West Texas State University in Canyon, Texas which is located about 25 miles from his home place. (In those days the school was known as West Texas State Teachers College.) Ed double majored in mathematics and industrial arts with a minor in physics. He also earned a teachers' certificate. During the second semester of his senior year he taught mathematics and industrial arts at Sudan High School because he was 'broke', but he obtained a B.S. degree at West Texas State in the Summer of 1941. All of Burgess' undergraduate mathematics classes were taught by two teachers: C.A. Murray and Edna Graham. C.A. Murray had received a Masters' degree at the University of Texas (Austin) and he encouraged Burgess to attend graduate school there.

Ed Burgess entered graduate school in mathematics at the University of Texas in the fall semester of 1941. He shared an office with fellow first year graduate student R.D. Anderson. During this first year, he took topology with R.L. Moore, differential equations with H.J. Ettliger and algebra with H.S. Vandiver.

After his first year of graduate school, Ed was recruited by the Naval Ordnance Laboratory in Washington, D.C. There he collected data and performed laboratory work involving underwater weapons.

Shortly after arriving at the Naval Ordnance Lab, Burgess applied for, and was granted, a commission as an Ensign in the U.S. Naval Reserves. He was called to active duty in the summer of 1943. First, he was sent to Indoctrination School for two months at Fort Schuyler, N.Y. and then to the Naval Mine Warfare School at Yorktown, Va. for three months. After this he was reassigned to the Naval Ordnance Lab for almost a year. During this time he had temporary assignments at various locations along the east coast.

After late 1944, the officer served at a couple of mine assembly bases in the South Pacific (one in Hawaii and the other in the New Hebrides Islands). At the conclusion of the war, Burgess was assigned to duty in Japan for clean-up mine-sweeping operations. He concluded his naval service with the rank of Lieutenant.

In the fall of 1946, Burgess returned to the University of Texas as an instructor and resumed graduate studies in mathematics. Some of his fellow students during the next five years were: R.D. Anderson, B.J. Ball, John Barrett, Eldon Dyer, Mary Elizabeth Hamstrom, J.S. MacNerney, E.E. Moise, P. Porcelli, and Mary Ellen Rudin. Some mathematics faculty members who had an influence on Burgess during this segment of time were: R.L. Moore, H.J. Ettliger, H.S. Wall, F. Burton Jones, and R.H. Bing. Burgess received the Ph.D. degree in June of 1951. His dissertation was written under the direction of R.L. Moore and concerned continua in the plane.

Ed met Charlotte June Steveson during the summer of 1947 at the home of a cousin who was a friend of the Steveson family. Charlotte June, who was on the music faculty at T.C.U., had received her Bachelor's degree at the University of Texas in music, and a Masters' degree at the Eastman School of Music at the University of Rochester. During that summer, she was a visiting faculty member at the University of Texas (Austin). They were married in February of 1948. They have since created two children. Their son Grant is a geophysicist with an oil company in New Orleans, and their daughter Carol is a medical doctor in Albany, N.Y.

Burgess came to the University of Utah in the fall of 1951 as an instructor of mathematics. He has since seen the mathematics department grow from a relatively small department without an advanced graduate program to a department of 55 faculty members and 53 teaching fellows which is ranked in Group I of graduate mathematics departments by the American Mathematical Society (on the basis of the 1982 survey conducted by the Associated Research Councils).

The new instructor began doing research immediately after coming to the University of Utah. The first research was in the area of his thesis, i.e., indecomposable continua and generalizations of indecomposability. During this stage of his research, Burgess produced about fifteen papers in this general area. Burton Jones sent Burgess some of his reprints on homogeneous continua and they motivated some of Burgess' research at that time.

The mathematician had the good fortune to spend the academic year 1956–57 at the University of Wisconsin (Madison). During that visit his research began moving into the area of piecewise linear topology of 3-manifolds. This move was influenced by R.H. Bing who was then preparing his manuscripts on triangulation of 3-manifolds and on polyhedral approximations of surfaces in 3-manifolds.

The total transition of his research to 3 dimensions took place in 1962–63 when he spent a year at the Institute for Advanced Study. He was particularly influenced by his association that year with R.H. Bing, David Gillman, Jim Kister, Joe Martin, Rus McMillan, and Deane Montgomery.

During the 1960s, Burgess produced numerous papers in 3-dimensional topology and directed the doctoral dissertations of the following ten people: H.C. Wiser

(1961), L.O. Cannon (1965), L.D. Loveland (1965), H.W. Lambert (1966), F.M. Lister (1966), R.B. Sher (1966), W.T. Eaton (1967), J.W. Lamoreaux (1967), D.H. Pettey (1968), and J.W. Cannon (1969).

Ed Burgess served as chairman of the Department of Mathematics of the University of Utah from 1967 until 1977. This was a period of extensive growth and development for the department. In addition to being involved in university activities, Ed also served in various capacities in the MAA and AMS. For instance, he was a member of the Board of Governors of the MAA, a visiting lecturer for the MAA and a member of CUPM. He gave an invited hour address to the AMS in 1974, and was later chairman of the committee to select speakers for invited hour addresses. In 1985, the MAA awarded him a Certificate of Meritorious Service.

The sabbatical year 1977-78 was spent by the Burgesses at the University of Texas (Austin) and at the Mathematics Institute of the University of Warwick. They traveled extensively in Europe. Ed gave lectures in Germany and Yugoslavia. Charlotte June engaged in various musical pursuits during that year. (She has continued over the years to be active in music by teaching and performing.) The sabbatical leave was concluded with the International Congress in Helsinki and a topology conference in Warsaw.

Ed Burgess remains a member of the mathematics faculty of the University of Utah. He is still an effective teacher and contributes to the continuing development of the department. In addition, he continues to maintain sensible priorities as evidenced by the fact that his lanky silhouette can often be seen descending the slopes of Alta.