

**OBITUARIES OF THE MEMBERS OF THE OHIO ACADEMY OF SCIENCE
REPORT OF THE NECROLOGY COMMITTEE, 2002**

The Necrology Committee of The Ohio Academy of Science, chaired by Historian-Archivist Ronald L. Stuckey, consists of William R. Burk, University of North Carolina, Chapel Hill, NC, and Relda E. Niederhofer, Firelands College of Bowling Green State University, Huron, OH. Special thanks is extended to Christopher Cumo of Canton, OH, who wrote two obituaries. The committee also expresses its gratitude to the following individuals for providing information: Miles Barnes, Eastern Shore Public Library, Accomac, VA; Elizabeth Elbe, Yankton College, Yankton, SD; Kevin Grace, Archives & Rare Books Department, University of Cincinnati Libraries, Cincinnati, OH; Victor T. Jones, Jr., New Bern, Craven County Public Library, New Bern, NC; Becky S. Jordan, Special Collections, Iowa State University, Ames, IA; Jean Beaumont Mihalyka; Jerry A. Snider, University of Cincinnati, Cincinnati, OH; and Betsey S. Whitman, Framingham State College, Framingham, MA. The committee is seeking volunteers to provide information or to write obituaries on deceased members of the Academy whose obituaries have not yet been written for *The Ohio Journal of Science*. Please contact The Ohio Academy of Science if you can assist in this effort. A two-page outline of instructions for preparation of obituaries for publication in *The Ohio Journal of Science*, written by Ronald L. Stuckey, is available from the author or the Academy office.

The following is a list of deceased members of the Academy with the year joined and date of death, if known, whose obituaries have not yet been published in *The Journal*.

RONALD L. STUCKEY

NAME	DATE OF DEATH	YEAR JOINED
Clarence F. Clark	March 26, 2002	1943
Otto C. Elmer	October 16, 2001	1972
Ray T. Everly	?? 1985	1928
William S. Floyd	??	1984
Mark B. Gorman	August 18, 2001	1989
Howard C. Hopps	September ?? 1999	1983
George T. Jones	March 5, 1998	1929
Richard H. Mahard	April 9, 2002	1947
Gertrude Masters	February 9, 1989	1951
Harold L. Porter	October 12, 2002	1939
Paul B. Taylor	July 31, 1989	1956
A. Jack Wilfong	June or July ?? 2002	1961

The following obituaries appear in the 2002 Report:	PAGE
Harold Edward Bigony (1910-1998)	131
Robert Ellsworth Bowman (1905-1996)	131
David Culbertson Chandler (1906-2001)	131
Nancy Ruth Clendenon (1933-2001)	132
Margaret Hannah Fulford (1904-1999)	133
Harold Ray Heckendorn (1909-2000)	133
Francis James Jankowski (1922-2001)	134
Ernest J. Klotz (1934-2000)	134
Wallace Metcalf, Jr. (1909-2000)	134
Eugene Ernest Mihalyka (1917-1996)	135
Beatrice (Harger) Sellner (1907-2001)	135
Kenneth Albert Walsh (1922-1999)	136

Harold Edward Bigony (1910-1998)

Harold Edward Bigony, 87, a 50-year member of the American Chemical Society and a research chemist retired from Battelle Memorial Institute, Columbus, died 30 January 1998 at the Arbors of Delaware in Delaware, OH. He earned the BS and MA degrees from The Ohio State University. His master's thesis in Chemistry was titled, "Cerous Sulfate as a Reagent for the Detection of Alkali Metal Ions" (1956). A member of The Ohio Academy of Science since 1949, he was interested in chemistry and named an Emeritus member in 1977.

Born 7 October 1910 in Baltimore, OH, he was the son of Winfield Scott and Dessie (Miller) Bigony. He lived in Delaware, OH, for more than 50 years and was employed in Columbus at the Battelle Laboratories (1945-1966). His wife Elsie preceded him in death; from their marriage he is survived by three daughters: Maralyn (Mrs. Philip) Conaway (Columbus, OH); Beatrice Bigony (Menomonie, WI); Boneita (Mrs. Michael) Franklin (Cardington, OH); one son, Edward Bigony (Westerville, OH); 7 grandchildren, 2 step-grandchildren, and a great-grandchild; surviving also are his close friend and companion, Gladys Hines, a brother, Howard Bigony, and a sister, Margene Ellinger; deceased is a sister, Lucille Lehman.

Harold Bigony's funeral service was held 3 February 1998 at the Bennett Brown Rodman Funeral Home in Delaware, with burial in St. Michael's Cemetery, Baltimore, OH. Memorial contributions may be made to the Salvation Army in Delaware.

RONALD L. STUCKEY

Robert Ellsworth Bowman (1905-1996)

Robert Ellsworth Bowman, age 91, physician and surgeon in private practice for more than 50 years, died on 4 November 1996 of heart failure at Meridia Euclid Hospital in Euclid, OH. His selfless devotion to patients elevated medicine to the worthiest of humanitarian ideals. In 1979, *Cleveland Magazine* listed Bowman as one of the city's distinguished physicians. He joined The Ohio Academy of Science in 1979, affiliated with Section Medical Sciences, and was elected a Fellow in 1990.

Robert Bowman, born 10 June 1905 in Cleveland, OH, was the son of the late Harry Austin Bowman and Ann Elizabeth (Westerweller) Bowman. After graduating from Collinwood High School in Cleveland, OH, in 1924, Robert Bowman entered Western Reserve University (now Case Western Reserve University) in Cleveland, OH, where he earned a BS in biology in 1928. Bowman remained at Western Reserve University for medical studies in which he specialized in family practice, earning an MD in 1932. That year he began practicing medicine in Willoughby, OH, moving his practice in 1934 to Cleveland, OH. At about age 70 he delegated his duties as surgeon to Dr. Max Rak, who had joined his practice in 1965, though Dr. Bowman continued to practice medicine until 1985.

Pastor Don Leitch of the First Baptist Church of Willowick, OH, praised Dr. Bowman for his selfless devotion to his patients. He recalls that Bowman made house calls and refused to take payment from his patients so often that he exasperated his receptionist, who fretted over how Dr. Bowman would pay rent for his office. He was as apt to give his patients money as to accept payment from them. Dr. Bowman often diagnosed ailments over the phone, saving his patients an office call. For years he worked for free at Booth Memorial Hospital in Cleveland, OH, in addition to fulfilling the duties of his practice. When patients required antibiotics or other medication, Dr. Bowman often gave them free samples. "He was truly a humble servant," said Pastor Leitch, "one of the most modest and giving men that I have known."

In addition to his medical duties, Dr. Bowman had a lifelong interest in photography, amassing a large collection of photographs of family, flowers, and nature scenes. Photography was his way of celebrating the kinship of family and the beauty of nature. Beyond photography, he developed in 1970 an interest in woodworking. Dr. Bowman made finely-crafted doll houses and furniture for them, displaying precision in the making of miniature items. These he gave away to family and friends. Pastor Leitch, among others, has a house and furniture he will always treasure.

Dr. Bowman's wife, Gladys Irene (Ewald) Bowman, whom he married on 28 October 1931 in Cleveland, OH, predeceased him in 1990. Surviving are three daughters, Sally Bowman (Cleveland, OH), Donna Bowman (Columbus, OH), and Bonnie Younkman (Tracy, CA); granddaughter Kristen Campbell (Tracy, CA); and great-grandchildren, Jeramee Campbell and Maegan Campbell, both of Tracy, CA. The family held a funeral service for Dr. Bowman on 6 November 1996 at Nottingham Baptist Church in Willoughby Hills, OH, with Rev. Michael Spiegel, Senior Pastor of the church, presiding, and Pastor Don Leitch giving the eulogy. Following the service, Dr. Bowman was interred at Lakeview Cemetery in Cleveland, OH. Friends may make donations to Nottingham Baptist Church, 2921 Bishop Road, Willoughby Hills, OH 44092.

CHRISTOPHER CUMO

David Culbertson Chandler (1906-2001)

David Culbertson Chandler, 95, Professor Emeritus of Zoology and Director Emeritus of the Great Lakes Research Division (GLRD) in the Institute of Science and Technology at the University of Michigan, Ann Arbor, died of heart failure 8 November 2001 in Friendship Village Nursing Center, Schaumburg, IL. Chandler, as the founding director (1953) of the Great Lakes Research Institute (GLRI), later named (1960) the Great Lakes Research Division (GLRD), developed an active research program on the University campus that involved faculty, graduate students, diverse scientific investigators, and support staff who conducted significant limnological and ecological studies on the Great Lakes. His leadership role in this program charted the Lakes' ecological history and provided basic scientific information that supported environmental management programs that were developed later in the twentieth century. A founding member and past president (1967) of the International Association for Great Lakes Research (IAGLR), Chandler's legacy in that organization resides in the Chandler Misener Award which was established (1968) for the best paper presented at the Association's annual meeting. With an interest in zoology, Chandler joined The Ohio Academy of Science (1939), was elected a Fellow (1941), and became an Emeritus member (1973). This obituary focuses on Chandler's professional life while he was employed in Ohio at the Franz Theodore Stone Laboratory of The Ohio State University (1938-1949). His distinguished career at the University of Michigan as a scientific investigator and administrative leader for research on the Great Lakes and his applications (1953-1973) are described to great extent by his former student, Claire L. Schelske (*J Great Lakes Research* 28:110-3. 2002).

Born 11 July 1906 in Walnut Grove, MN, David C. Chandler was the fourth of five children born to Frank and Amanda Chandler. He was raised in the farming community of Montfort, WI, where he starred as captain of the high school basketball team and developed an inquisitive interest about the natural environment. He graduated with an AB in biology from Greenville College, IL (1929), an AM in zoology (1930), and a PhD in zoology (1934), both from the University of Michigan, Ann Arbor. His doctoral research, on the fate of lake plankton in a downstream river, was published in *Ecological Monographs* (7:445-79. 1937).

After earning his doctoral degree, Chandler held academic positions as instructor (1934-1935) and assistant professor of zoology (1936-1938), University of Arkansas; professor of biology and chairman of the Science Department (1935-1936), McMurray College, TX; assistant professor (1938-1944), associate professor (1944-1947), and professor (1947-1949) of limnology, the Franz Theodore Stone Laboratory of The Ohio State University, Put-in-Bay, OH; professor of limnology (1949-1953), Cornell University; professor of zoology (1953-1973) and Professor Emeritus of Zoology (1973-2001), University of Michigan. Concurrently, Chandler held positions as a faculty member (summers 1951-1959), University of Michigan Biological Station, Douglas Lake, Pellston; director, Great Lakes Research Division, Institute of Science and Technology (1960-1973), University of Michigan; acting chairman, Department of Zoology (1958), University of Michigan; adjunct professor of zoology (summers 1974-1978), The Ohio State University, F. T. Stone Laboratory; visiting adjunct professor of zoology (1978-2001), University of Florida, Gainesville.

While a graduate student, one summer he was employed on an automobile assembly line in Detroit, and as an intellectual challenge to compensate for the somewhat monotonous routine duties, his mind focused on the Great Lakes and on the need for scientific information to understand the dynamics of this very important aquatic resource. For three summers (1934-1936) while at the University of Arkansas, Chandler

returned to northern Michigan where at the University of Michigan Biological Station he was a research assistant for Dr. Paul S. Welch, well-known limnologist of the University of Michigan. In the summer of 1937 Chandler served as Junior Aquatic Biologist and Party Leader for the State of Michigan Department of Conservation. Even though Chandler had these summer opportunities in the Great Lakes region while employed at the University of Arkansas, he was determined to return to the region to pursue full time his limnological research investigations.

The opportunity came, when at the American Association for the Advancement of Science (AAAS) meeting in December 1937 at Indianapolis, IN, Chandler learned that a graduate level course in limnology was to be taught during the summer of 1938 in Lake Erie at the Franz Theodore Stone Laboratory of The Ohio State University. He immediately wrote to Director Dwight M. Delong about the teaching position; Delong's response of 13 January 1938 offered the position to Chandler. Chandler wrote his reply 17 January 1938 stating that he was "pleased to accept the position of teaching limnology at the Stone Laboratory during the summer of 1938 . . ." After providing Delong with information on his degrees, positions, and publications, Chandler concluded with the statement "The summer has all the indications of being a pleasant one. I am sure I am going to enjoy the contacts and an opportunity to do biological work in that particular part of the country." Later in January, The Ohio State University Board of Trustees asked for Delong's resignation as Laboratory Director. His replacement, Thomas H. Langlois, honored all of Delong's appointments for the Laboratory's 1938 summer teaching program. At this time, the University provided Langlois with financial support whereby he was to hire two full-time year-round research faculty members, a fisheries biologist and a limnologist. The latter was to investigate the character of Lake Erie as an environment for fishes. Director Langlois retained Chandler for the limnology position, and allowed him complete freedom to engage in investigations of his own interest, so long as they were within the research mission of the Laboratory. While there (1938-1949) Chandler pioneered in the use of a floating platform to gain access to sample the open water of Lake Erie, which was readily available from the Stone Laboratory location. Chandler's first paper on the Lake Erie fisheries research program concerned the year-round quantitative study of the planktonic organisms as basic fish foods and of the ecological factors affecting the various components of this food in the region of South Bass Island. From his field studies at the Stone Laboratory, Chandler published five baseline now classic papers on the dynamics of plankton in relation to physical, chemical, and climatic factors in western Lake Erie. These papers were published under the general heading, "Limnological Studies of Western Lake Erie." Paper numbers I and III appeared in the Academy's journal, *The Ohio Journal of Science* (40:291-336. 1940; 42:24-44. 1942). The other three were published in *Ecology* (23:41-52. 1942), the *Transactions of the American Microscopical Society* (43:203-36. 1944), and *Ecological Monographs* (15:435-56. 1945).

When interviewed in the early 1990s Chandler referred modestly to his limnological research on Lake Erie waters as "elementary, pioneer investigations that provided basic information for comparison to determine changes in the future. I worked year-around, even through the ice in winter, as no one previously had ever done this kind of research. It was a beginning historical record. There were no new concepts in my papers. This work had never been done for any of the Great Lakes. It was survey work, but important!" Chandler was a member of several scientific societies in which he held positions of leadership. Among these were the American Microscopical Society (vice-president, 1950; president, 1951); American Association for the Advancement of Science (Fellow); American Society of Limnology and Oceanography (charter member, vice-president, 1949; president, 1957); Ecological Society of America; International Association for Great Lakes Research (founding member; president, 1967); International Association of Theoretical and Applied Limnology; Michigan Academy of Science, Arts, and Letters; and the Great Lakes Foundation (president, 1966-1969). He was elected to the honorary societies of Phi Sigma, Sigma Xi, and Phi Kappa Phi. Chandler was active in various committees of the National Academy of Sciences (1965-1968; 1971), the International Field Year of the Great Lakes (1966-1975), National Sea Grant Committee (1965-1968), Committee on Institutional Cooperation (1963-1971), American Institute of Biological Sciences (1965-1970), Organization for Tropical Studies (1968-1972), and various committees of the University of Michigan (1954-1973). In Ann Arbor, Chandler was the organizer and chairman of the Inter-Church Blood Bank Association (1959), and in Gainesville, FL, he served on the Advisory Board of the Alachua County Public Library (1982-1986) and was a member of the Board of Directors of the retired faculty of the University of Florida (1990-1995).

Claire L. Schelske wrote that "David Chandler was known for his good humor, dedication, integrity and innovation. He was thoughtful, kind, knowledgeable, and articulate, but soft-spoken and very modest about his accomplishments. No other person contributed more to the establishment of IAGLR, but he would have been more comfortable with recognition just as a founding member. His vision and many contributions will be a lasting benefit to the Great Lakes scientific community. He was regarded with great respect by his many colleagues, associates, friends, and students and will be remembered fondly by those who survive him."

Chandler's wife Pearl, whom he married in 1935, died in 1995. Surviving are a son, Robert, one daughter, Candace (Mrs. George Loechl), and one granddaughter, Jessica Loechi.

RONALD L. STUCKEY

Nancy Ruth Clendenon (1933-2001)

Nancy Ruth Clendenon, age 67, neurochemist, died 13 June 2001, at her home in Arapahoe, NC. An author of nearly 40 publications, Dr. Clendenon specialized in biochemical mechanisms of neural trauma, radiation enhancement of nervous system tumors, and lysosomal enzyme release in central nervous system disease. She joined The Ohio Academy of Science in 1967 and was accorded Emeritus status in 1989.

Born 27 July 1933, in Ahsoskie, NC, Nancy Ruth Clendenon was the daughter of Walter Fox and Mildred (Powell) Clendenon. She graduated in 1951 from Granby High School, Norfolk, VA. Subsequently, she received two certificates from the American Society of Clinical Pathology: MT (Medical Technologist, 1956), DePaul Hospital, Norfolk, VA, and CT (Cytotechnologist, 1958), Cornell University Medical School, New York, NY. After earning a BS in chemistry (1962) from Norfolk College of William and Mary (Old Dominion University), she pursued doctoral studies at the University of North Carolina in Chapel Hill, receiving the PhD in biochemistry (1968). Her dissertation, entailing the "Arylsulfatases in Brain," was published in part (*J Neurochemistry* 17:865-79. 1970). Her early professional experiences were a post doctorate (1968-1969) and research associate (1969-1971), Division of Neurology, Department of Medicine, The Ohio State University (OSU). Continuing her service at OSU, Dr. Clendenon was instructor, Department of Medicine (1969-1971) and Department of Physiological Chemistry (1969-1972); assistant professor, Department of Medicine (1971-1981), Department of Physiological Chemistry (July 1972-September 1982); associate professor, Department of Medicine (July 1981-September 1982), Department of Physiological Chemistry (October 1982-1988), and Department of Neurology (October 1982-1988). Concurrently, Clendenon was a research collaborator, Medical Department, Associated Universities, Inc., Brookhaven National Laboratory, Upton, Long Island, NY (August 1985-1988). At OSU she served on several committees, including Promotions and Tenure in the Department of Neurology (1982-1988). She retired (1989) as Associate Professor Emerita from the Department of Neurology. In retirement, Dr. Clendenon pursued genealogical research, becoming a member of the Henry Lee Society.

In professional organizations, Dr. Clendenon held memberships in the American Association for the Advancement of Science, American Association of University Professors, American Chemical Society, International Society for Neurochemistry, and Society for Neuroscience (Central Ohio Division: secretary, 1973-1974; president, 1974-1975). In honorary societies, she was elected to Sigma Xi (OSU Chapter). She was a member of the Talbot Park Baptist Church, Norfolk, VA.

Dr. Clendenon is survived by her mother, Mildred Powell (Norfolk); one brother, Claude Eugene Clendenon (Norfolk); one niece, Anne Laura Clendenon (Lynchburg, VA); and one nephew, Kerry Eugene Clendenon (Roanoke, VA). Graveside services were conducted by the Reverend Keith Martin at the Ahsoskie Cemetery on 16 June 2001. The Bryant Funeral Home in Alliance, NC, and the Garrett Funeral Home in Ahsoskie, NC, were in charge of arrangements. Memorial contributions may be made to The American Cancer Society or Hospice of Pamlico County, 11146 NC Highway 55 E, Grantsboro, NC 28529-9450.

WILLIAM R. BURK

Margaret Hannah Fulford (1904-1999)

Margaret Hannah Fulford, age 95, Professor Emerita of Botany at the University of Cincinnati, died 28 November 1999 in Cincinnati, OH. A world-renowned botanist specializing in the study of Hepaticae (liverworts), she devoted her 47-year career at the University of Cincinnati. She published over 70 articles and numerous bibliographies in scientific serials, held leadership roles in botany, and directed 13 Masters and 7 PhD students. Dr. Fulford was also recognized for her role in assisting women in their pursuit of botanical studies. Joining The Ohio Academy of Science in 1927, she affiliated with Section Plant Sciences, was elected a Fellow (1936), and was accorded Emeritus status (1981). In 1947, she received a research grant from the Academy.

Born 14 June 1904, in Cincinnati, OH, Margaret Hannah Fulford was the daughter of Alfred T. (an attorney) and Lottie May (Holloway) Fulford. At the University of Cincinnati (UC) she earned three degrees: BA in botany (1926), BE in education (1927), and MA in botany (1928). Her Masters thesis, entailing the "Bryophytes of the Cincinnati Region," was completed under the supervision of E. Lucy Braun. Subsequently, she pursued doctoral studies at Yale University under the direction of noted hepaticologist Alexander Evans. Awarded a PhD in botany (1935), she wrote her dissertation on "The Genus *Bazzania* in North America," which was published (*American Midland Naturalist* 17:385-424. 1936). While matriculating at UC (and afterwards), she served there as an instructor of botany (1927-1940) and curator of the herbarium (1927-1974). In the Department of Botany at UC, Dr. Fulford advanced through the academic ranks: assistant professor (1940-1946), associate professor (1946-1954), professor (1954-1974), and professor emerita (1974-1999). She also taught bryology and plant systematics at the University of Michigan Biological Station (1947-1949, 1951-1953). During retirement, she continued her botanical studies.

In botanical research, Dr. Fulford focused on the taxonomy of leafy liverworts of Latin America and also on sporeling development, regeneration, nutrient studies, and the phylogeny and evolution of liverworts. Her pioneering research and resulting publications on these plants provided important foundations in the development of modern bryological methods and concepts. Active in The Sullivant Moss Society and its successor association, American Bryological and Lichenological Society, she served as the curator of its hepatic herbarium (1933-1971), verifying or helping others identify specimens. After devoting a lifetime to the study of liverworts and serving as an associate editor (1947-1974) of the Society's journal, *The Bryologist*, the Winter 1987 issue of this journal was fittingly dedicated to her. In the introduction to the tribute issue, Raymond E. Stotler stated "her most time consuming service contribution was the creation and publication of the series, 'Recent literature on hepatics' (1-79, 1932-1978) and 'Recent literature on mosses' (1-86, 1932-1970) published in *The Bryologist*." Her personal collection of liverworts now constitutes the Margaret H. Fulford Bryophyte Herbarium and Library at UC.

Possessing a strong will, Fulford entered the academic halls of science at a time when opportunities for women were limited. It has been said elsewhere that while she studied for her doctorate she wasn't always permitted to participate in classes with men, relegating her to sit outside in the hallway. She later assisted women who chose botany as a profession. She was the first woman elected Fellow of UC's Graduate School in 1957.

In professional service, she was chairman of a Special Committee for Nomenclature of Bryophytes, International Commission for Nomenclature for several International Botanical Congresses (7th-1950 through 12th-1975). Her other professional contributions were as a collaborator for *Biological Abstracts* and associate editor for *Brittonia* (1956).

Among Dr. Fulford's professional memberships are: American Association for the Advancement of Science (Fellow), American Association of University Women, American Association of University Professors, American Bryological Society, American Institute of Biological Sciences, American Society of Plant Taxonomists, Botanical Society of America, British Bryological Society, Indiana Academy of Science (Fellow), International Association of Plant Taxonomy, International Association of Plant Morphologists, Ohio Biological Survey (Editorial Committee for Botanical Papers), Society for the Study of Evolution, and Torrey Botanical Club. In honorary societies she was elected to Sigma Xi. She was made an honorary member of the Sociedad Latino-Americano de Briologia at the World Conference of Bryology in Tokyo (1983). Fulford's outstanding scholarship and research earned her several fellowships: Daniel Eaton Fellow, Yale University (1931-1932); New York Botanical Garden Scholar (Summers 1938, 1939); Guggenheim Fellow, Harvard University, Yale University, and New York Botanical Garden (1941-1942); and Marshall Howe Fellow, New York Botanical Garden (1943-1944). She also earned special awards: American Association of University Women Achievement Award (Cincinnati Branch, 1950), UC's George Rieveschl, Jr. Award for Distinguished Research (1957), and Certificate of Merit from the Botanical Society of America (1979).

Margaret Hannah Fulford, who remained single her entire life, is survived by one sister, Martha L. Lawwill (Falls Church, VA), three nieces, and four nephews. Private services were arranged by the Elden A. Good Funeral Home, Hyde Park (a suburb of Cincinnati), OH. Memorial contributions may be made to The University of Cincinnati Foundation, 425 Oak Street, Cincinnati, OH 45219-2594, in care of the Margaret H. Fulford Bryophyte Herbarium and Library.

WILLIAM R. BURK

Harold Ray Heckendorn (1909-2000)

After suffering a series of strokes, Harold Ray Heckendorn, age 91, died on 31 December 2000 at Sunrise at Tucker Creek in Worthington, OH. He had retired after 32 years at Western Electric, the last 14 as Superintendent of Manufacturing Engineering at its Columbus, OH, office. Among his contributions to the profession of electrical engineering was his work in designing a radar-guided anti-aircraft system during World War II. He joined The Ohio Academy of Science in 1964, affiliated with Section Education and became an Emeritus member in 1989.

Harold Heckendorn, born on 16 December 1909 in Cedar Point, KS, was the son of the late Martin and Myrtle (Boblits) Heckendorn. After graduating from Cedar Point High School, Heckendorn entered Kansas State College (now University) in Manhattan, KS, where he earned a BS in Electrical Engineering in 1927. After graduation he worked as an electrical engineer for the American Telephone Company in Troy, KS, where he saved the life of a colleague, Wayne Welliever. Lightning struck Welliever, stopping his heart; Heckendorn revived him with artificial respiration. He left the American Telephone Company in Troy to be a lineman for the Wichita Telephone Company in Wichita, KS, until 1943 when he became an electrical engineer at the Chicago, IL, office of Western Electric, the subsidiary of the American Telephone and Telegraph Company (today's Lucent Technologies). There he rose to be manager of the Hawthorne Plant in Chicago. During his first two years at Western Electric, the US was embroiled in World War II, which led Heckendorn to concentrate on defense technology. He helped design Western Electric's Sky Sweeper radar air defense system and also helped develop the first guided munitions system, which US forces used against Japanese targets. In 1960 the company promoted him to Superintendent of Manufacturing Engineering in its Columbus, OH, office, where he remained until retirement on 31 December 1975.

Aside from his work, Heckendorn began in 1927 a 67-year tenure as a member of the Institute of Electrical and Electronics Engineers, whose corporate office is in New York City. In 1954 he served as chairman of its Consumer Electronics Society, and in 1961 its members elected him Fellow. In 1974 he began an association with the Worthington Historical Society in Worthington, OH, where he volunteered as an oral historian, compiling historical anecdotes from the city's longtime residents. That year he began his service as Industrial Division Chairman of the Board of Trustees of the Columbus Symphony Orchestra where he nurtured a passion for opera. His interest in music drew him to the Association of Recorded Sound Collection (ARSC) in Columbus, OH, where he served 20 years as archivist. This position involved him with the Library of Congress in Washington, DC, and the Ohio Historical Society in Columbus, OH, in cataloging and preserving audiotapes of the "Bell Telephone Hour." In addition, Heckendorn was a consultant to the Ohio Historical Society, assisting in the restoration and transcription of the Society's audio recordings onto archival master and cassette tapes, making them available for historical research. In yet another project, Heckendorn was a recording engineer with the University of South Carolina in Columbia, SC, assisting in recording the voices of prominent educators.

Heckendorn's passion for music led him to amass a large record collection including disks manufactured by Thomas Edison. His interest in science led him to serve as a judge at the State Science Day on numerous occasions. His wide interests won him lifelong friends. One recalls that Heckendorn "was much loved by ARSC conference attendees and all who worked with him."

He is survived by his wife, Adah Carol (Stocking) Heckendorn (Worthington, OH), whom he married on 15 August 1937 in Hiawatha, KS; son Larry (Columbus, OH); daughters Cherry Goszyk (Worthington, OH) and Nancy Tannenbaum (Gahanna, OH); 5 grandchildren and 2 great-grandchildren; three brothers, Charles (Azusa, CA), Frank (San Francisco, CA), and Martin (Colorado Springs, CO); and one sister, Faye Morland (Colorado Springs, CO). His family held a memorial service on 27 January 2001 at Thurston Funeral Home in Columbus, OH, after which he was cremated. His ashes, and those of his wife when she dies, are to be spread on Konza Prairie, KS. The family welcomes donations to the Worthington Historical Society, 50 West New England Avenue, Worthington, OH 43085-3536 or the Arthritis Foundation, 3740 Ridge Mill Drive, Hilliard, OH 43026.

CHRISTOPHER CUMO

Francis James Jankowski (1922-2001)

Francis James Jankowski, age 78, design and nuclear engineer and former professor of engineering at Rutgers University and Wright State University, after battling Lou Gehrig's disease, died 6 July 2001, at Bethany Lutheran Village, Dayton, OH. A pioneer in the development of nuclear engines, he authored nearly 20 publications and over 40 technical reports. Jankowski was an active member and leader in several professional organizations. Joining The Ohio Academy of Science in 1970, he was elected a Fellow (1979) and actively served the organization. Acting on the suggestion of Academy member Harold A. Bolz, Jankowski obtained signatures and submitted the petition to establish an Engineering Section in 1973. He was its first vice president (1973-1974). He also served as a member of the Academy's Executive Committee (1974-1976) and as a Division editor for *The Ohio Journal of Science* (1975-1978).

Born 22 November 1922, Francis James Jankowski was a native of Amsterdam, NY. He earned a BS in chemical engineering (1943) from Union College. In 1945, he graduated from the Air Force Institute of Technology at Wright-Patterson Air Force Base where he studied aeronautical engineering. Serving in the United States Army Air Force, he was a bomber test pilot on ten models of aircraft and a flight instructor. As a Research Fellow, he then matriculated in the graduate school of the University of Cincinnati, earning the MS in engineering (1947) and ScD in physics (1949). His dissertation entailed "A Method for the Absolute Determination of Neutron Flux," which was published with A. Wattenberg (Atomic Energy Commission, Unclassified Report - 526 [UAC-95]. 1949).

His initial professional positions were research nuclear engineer (1949-1950), Battelle Memorial Institute in Columbus, and advisory scientist (1950-1955), Westinghouse Electric Corporation, where he helped design, develop, and test a nuclear power plant for the Nautilus submarine. He returned to Battelle as a consultant (1955-1959), directing its assembly program. Under his administration experimental nuclear reactors were tested for use in aircraft and space launches. Changing his professional focus to the academic setting, he joined the faculty at Rutgers University as a professor of nuclear and mechanical engineering (1959-1969). During several summers, he worked at Republic Aviation (1959), Atomics International (1960, 1961, 1962), United Nuclear Corporation (1963), and Picatinny Arsenal-United States Army (1964). Subsequently, he joined the faculty at Wright State University (WSU), serving as the first chair of the Department of Engineering (1969-1974) and as professor of systems engineering (1969-1984). While at WSU, Jankowski developed programs in systems engineering, human factors engineering, and materials engineering. He took a sabbatical leave (1979-1980), conducting research at the Foreign Technology Division, United States Air Force. He retired in 1984.

Concurrently, he served as a consultant for Engelhard Industries, NJ (1959-1962); United Nuclear Corporation (1959-1965); Westinghouse Electric Corporation, Reactor Safety Committee (beginning 1960; chairman, 1971-1975); Picatinny Arsenal-United States Army (1964-1969); and United States Department of Energy (1973-1978). Next, Jankowski returned to laboratory research outside academia. He managed Air Force and private projects in solar power, fluid behavior in the zero gravity of space, and nuclear power. In 1993, he retired for the second time.

His primary research interests were the principles and methodologies of engineering design process with an emphasis on incorporating human factors variables, life cycle costs, and systems approach. As a pastime he was interested in the Southwest United States culture, collecting an array of Indian rugs.

In professional organizations, Jankowski held memberships in the American Association for the Advancement of Science, American Association of University Professors, American Institute for Aeronautics and Astronautics, American Nuclear Society, American Physical Society, American Society for Engineering Education (Executive Board, North-Central Section, 1977; chairman, Human Factors Engineering Committee, Engineering Design Graphics Division, beginning 1978), Council of Ohio Engineering Deans (vice-president and secretary, 1971-1973), National Society of Professional Engineers, and Ohio Society of Professional Engineers. He also served as senior board member (1977-1979), Dayton Society for Professional Engineers. In civic involvement, he was a member (beginning 1974) and chairman (Traffic Safety Committee, 1971-1975) of the Dayton Area Chamber of Commerce, and vice-chairman (1976) and general chairman (1977) of the Engineers Week Committee-Dayton area. He also provided professional service in the Governor's (OH) Traffic Safety Committee (1972-1976), Management Task Group, Science Institute of Dayton (chairman, 1972-1975), and Engineering Management Society-Dayton Section (Executive Committee member, 1970-1974). In honorary societies he was elected to Sigma Xi and Tau Beta Pi. His special awards included a Visiting Fellowship (summer 1947) at the University of Illinois and Junior Physicist (1948) at the Argonne National Laboratory. He was licensed as a Professional Engineer, State of Ohio, and as a Nuclear Reactor Operator (1955-1959) for experimental reactors, Battelle Memorial Institute. He also earned a Commercial Pilot Certificate (1946).

Surviving Francis James Jankowski are his wife, Marilyn "Pat" Jankowski, whom he married in 1946, and daughter, Beth Ellen Castelee. Memorial services were held on 11 July 2001 at David's United Church of Christ, Centerville, OH.

WILLIAM R. BURK

Ernest J. Klotz (1934- 2000)

Ernest J. Klotz, 66, a United States Army Veteran and retired employee of the Research Center of Owens Corning Corporation in Granville, OH, died 9 July 2000 at Mt. Carmel East Hospital, Columbus, OH. A member of The Ohio Academy of Science since 1968, his interest was in mathematics and computer science.

Ernest J. Klotz, who is survived by his wife Josephine (Osborne) Klotz, lived in Columbus. Brothers Eugene, Raymond, and James, all of Detroit, MI, also survive him. His funeral was held 12 July 2000 at Holy Cross Cemetery Chapel, Pataaska, OH. The Rev. Fr. Daniel L. Ochs presided. Memorial contributions may be made to the Granville Fire Department.

RONALD L. STUCKEY

Wallace Metcalf, Jr. (1909-2000)

Wallace Metcalf, Jr., 91, a retired chemist with Westinghouse in Columbus, OH, died 12 May 2000, at the Holzer Medical Center, Gallipolis, OH. He lived in Jackson, OH. Metcalf was a member of the American Chemical Society, the American Tree Farmers Association, and an original member of the Jackson County Emergency Preparedness Committee. A member of The Ohio Academy of Science, he joined in 1980.

Born 3 July 1909 in Springfield, MA, he was the son of Wallace, Sr. and Elizabeth (Ward) Metcalf. He married Elve Lafever, whose death occurred 3 July 1987.

RONALD L. STUCKEY

Eugene Ernest Mihalyka (1917-1996)

Eugene Ernest Mihalyka, age 78, surgeon and medical consultant, died in Sentara Norfolk (VA) General Hospital on 24 May 1996. Serving in the United States Air Force (1941-1946), he was a pilot, attaining the rank of major. A diplomate of the American Board of Otorhinolaryngology, he authored numerous articles in medical journals. In The Ohio Academy of Science, he joined (1960), affiliated with Section Medical Sciences, was elected a Fellow (1964), and was accorded Emeritus status (1983).

Eugene Ernest Mihalyka, born 21 November 1917, in New Brunswick, NJ, was the son of Daniel Alexander and Elizabeth Rose (Kristofer) Mihalyka. He attended New Brunswick Senior High School (1933-1936). His academic education included the BA (1940) from the Johns Hopkins University and MD (1950) from the Medical College of Virginia. After completing his internship at Sewickley Valley General Hospital, Pittsburgh, PA (1950-1951), he served as a resident in the Crile, VA, and Western Reserve University hospitals (1953-1957). At the latter hospital he specialized in otorhinolaryngology. He was a surgeon in private practice in Cleveland, OH (1953-1971), as well as head and neck surgeon and senior clinical instructor at Case Western Reserve University School of Medicine where he subsequently served as senior visiting lecturer. Concurrently, he was associate staff head and neck surgery, Fairview General Hospital, Cleveland (beginning 1957). Returning to the east coast where he made his home in Cherry-Core Cheriton (Northampton County), VA, he became director of medical education and medical affairs (beginning 1972), chief of staff (beginning 1978), and an active member of the surgical staff at Edward McCready Memorial Hospital, Crisfield, MD. Concurrently, he was an instructor (beginning 1975), Department of Surgery, Eastern Virginia Medical School-Norfolk.

Dr. Mihalyka was also a consultant, being listed in *Who's Who in Consulting* (Gale Research Company, Detroit, 1973). Among his interests as a consultant were industrial medical instruments, general management, and the electronic industry in medicine. His advisory role was with medical programs, State of Maryland; chairman to the Board, Chesapeake Systems Corporation (beginning 1964); vice president, Tru-Har Products, Inc., Lakewood, OH (beginning 1959); and senior partner, W.A. Gillian and Associates-Cleveland (beginning 1961). He served as director, Pandor Coal Corporation Physician, Metropolitan Opera Association-Northeastern Ohio (beginning 1960).

In professional associations Dr. Mihalyka held memberships in the American College of Cryosurgery (Fellow), American College of Otorhinolaryngology (Fellow; vice president, 1974-1975), American Management Association, American Medical Association, Cleveland Academy of Medicine, International Oceanographic Foundation (Fellow), Johns Hopkins Surgical Association, Maryland Medical Society, Ohio State Surgical Society, Virginia Medical Society, and Young President's Association. Concerned about environmental causes, he was also a member of Save the Chesapeake Bay Foundation and Great Lakes Foundation. He was active in the Boy Scouts of America, earning the rank of Eagle Scout and ultimately life membership. In social organizations he was a proud member of Kappa Sigma, one of the ten largest fraternities in the United States. In Masonic work, he was a member and former master of Capeville Masonic Lodge #107-Ancient Free and Accepted Masons of the Commonwealth of Virginia, and was a member of the Royal Arch Chapter #12 and of the Chesapeake Commandery #28. A Grand Physician of the Grand Commandery of Virginia, he was also a member of the Portsmouth Scottish Rite, holding the rank of Knight Commander, Court of Honor. Dr. Mihalyka was past president and secretary-treasurer of the Eastern Shore Scottish Rite Association, Khedive Shrine Temple, and Commonwealth York Rite College. He was a devout Episcopalian and an active member of the Christian Men's Business Association.

Eugene Ernest Mihalyka is survived by his wife, Jean Beaumont (Merritt) Mihalyka, whom he married 25 March 1942; one son, George Kristofer (Vicksburg, MS); one daughter, Jane Beaumont Gibson (Chesapeake, VA); and two grandchildren, Kristofer George Mihalyka and Charlotte M. Gibson. Fr. Peter Jacobsen conducted a memorial service 27 May 1996 at Emmanuel Episcopal Church, Cape Charles, VA. Arrangements were made by the Wilkins-Doughty Funeral Home, also in Cape Charles. Internment was in the Christ Episcopal Church yard, Eastville, VA. Contributions in memory of Dr. Mihalyka may be made to the Eastern Shore Room, Eastern Shore Public Library, PO Box 360, Accomac, VA 23301.

WILLIAM R. BURK

Beatrice (Harger) Sellner (1907-2001)

Beatrice (Harger) Sellner, age 94, teacher, ecologist, and conservationist, died 9 May 2001, after experiencing a series of small strokes, at the Mansfield Center for Nursing and Rehabilitation, Storrs, CT. She had previously resided in Oxford, CT, Loudonville, OH, and Tallahassee, FL. An avid supporter of ecological and conservation causes before they were in vogue, she earned several honors for achievements in these areas, as well as in teaching. Joining The Ohio Academy of Science in 1963, she affiliated with Section Zoology and was accorded Emeritus status (1987).

Beatrice (Harger) Sellner, born 19 February 1907, in Oxford, CT, was the daughter of Edgar Burton and Olivette (Platt) Harger. Her father, a noted botanist, was one of several people who founded the Connecticut Botanical Society in 1903. At age 5, Beatrice (known as Bea) entered Quaker Farms School, a one-room schoolhouse in Oxford, serving grades 1-8. She and her brother Alfred walked nearly two miles each way to school. Having skipped one grade, she graduated in 1919. Bea attended Ansonia (CT) High School, graduating in 1923. She earned a BS in agricultural science (1928) from the Connecticut Agricultural College, now University of Connecticut. For several years she taught five subjects in a Connecticut high school. Between 1961 and 1983, she advanced her education, enrolling in a diversity of courses in ecology, conservation, entomology, ornithology, mathematics, and biology at The Ohio State University and its affiliated Franz Theodore Stone Laboratory, Miami University (OH), Ashland College, Eastern Connecticut State College, and Florida A & M University. In 1971, Bea earned an Ohio State Teaching Certificate in High School Science and K-8 Science. At age 61, she became an instructor of ecology in the program of education for a better environment at the Mohican School in the Out-of-Doors, first full-time, then part-time until retiring in 1985. Having instructed nearly 60,000 visiting students, she was warmly known by staff as the "walking encyclopedia of natural history." In summers Bea was also a plant ecology instructor (1970-1982) for adult week-long ecology workshops at the National Audubon Society, Greenwich, CT, and a teacher at Dinosaur State Park in Connecticut.

Bea's unselfish work advanced not only the cause of conservation, but also the teaching of natural history. In the 1960s, she chaired the Conservation Committee of the Ohio Federation of Women's Clubs. She investigated a proposed State of Ohio ski resort in the Mohican Memorial Forest where the Ohio Federation had been responsible for tree plantings. Along with her Committee, she worked steadfastly to save the forest. These endeavors, along with petitions and 7,000 personal letters, ultimately preserved the forest from development. During this effort, she was called "a vigilance committee of one." She initiated and coordinated the contribution of the Eugene Allen Collection of Small United States Animals and Birds (over 200 glass specimen cases) to the Connecticut State Museum of Natural History, University of Connecticut. Her interests and love of nature extended beyond the United States. Many of her foreign travels were associated with natural history tours, taking her to Costa Rica, Ecuador, Guatemala, and Mexico.

In associations, she held memberships in the Columbus (OH) Audubon Society; Columbus (OH) Historical Society; Connecticut Botanical Society (member of the archives committee); Connecticut State Museum of Natural History; Gorman Nature Center, Mansfield, OH; Loudonville's Gardener's Guild; Ohio Conservation and Outdoor Education Association (charter member and former board member); and Royal Horticultural Society, England. Among her honors, she received the Finlay-Johnson Award (1985)—given for outstanding service, Ohio Conservation and Outdoor Education Association (now Environmental Education Council of Ohio); Conservation Award (1986), Ohio Association of Garden Clubs; and Personality of the Week, *Loudonville* (OH) *Times*. In recognition of Bea's many years of service to the Mohican School in the Out-of-Doors, the School dedicated to her the 1987/1988 edition of its in-house course book, *Mohican Pioneer Student Textbook*.

Beatrice Sellner is survived by two daughters, Betsey Whitman (Framingham, MA) and Bonnie Havholm (Wooster, OH); six grandchildren, William Whitman (Cathedral City, CA), Eliza Jane Whitman and Rebecca Whitman (Pasadena, CA), Harrison Whitman (Scottsdale, AZ), Nicholas Havholm (Boulder, CO), and Nathaniel Havholm (Los Angeles, CA); and two great-grandchildren, Atticus and Aude Claire Moats. She was

predeceased by William Sellner, whom she married 12 September 1933 in Pikesville, TN; one sister, Ruth Harger Joy; and two brothers, Alfred and Nelson Harger. Funeral arrangements were by the Potter Funeral Home, Willimantic, CT. Bea was cremated and on 26 July 2002, her ashes were interred in a family plot in the Riverside Cemetery, Shelton, CT. Memorial contributions may be sent to the Connecticut Botanical Society, PO Box 9004, New Haven, CT 06532; The National Audubon Society of Greenwich, 613 Riversville Road, Greenwich, CT 06831; and The Mohican School in the Out-of-Doors, Inc., 5370 Bunker Hill Road, Butler, OH 44822.

WILLIAM R. BURK

Kenneth Albert Walsh (1922-1999)

Kenneth Albert Walsh, age 77, chemical metallurgist and ceramicist, died 4 November 1999 in Tyler, TX. He worked on the Manhattan Project during World War II. Author of numerous technical publications, he held patents in the areas of his scientific research. He joined The Ohio Academy of Science in 1972, affiliating with Section Chemistry and being accorded Emeritus status in 1987.

Kenneth Albert Walsh, born 23 May 1922 in Yankton, SD, was the son of Albert Lawrence and Edna (Slear) Walsh. After receiving his diploma from Yankton High School in 1939, he attended Yankton College, which closed in December 1984 but currently maintains a records office. Graduating *magna cum laude*, Walsh earned a BA in chemistry and mathematics (1942). While attending Yankton College, he also took two courses—Chemical Research and Electricity & Magnetism—at South Dakota State University. He then entered the graduate program at Iowa State College, now Iowa State University. Soon after, he accepted an offer from Frank H. Spedding, Professor of Chemistry (later Physics), to join the Manhattan Project at the Ames (IA) Laboratory of the Atomic Energy Commission where he became a research assistant. There, he conducted investigations on Goldschmidt reduction of beryllium fluoride with magnesium and of zirconium tetrafluoride with calcium, also zirconium-lanthanum, nickel carbonyl. He was later transferred to the University of California, Manhattan Project, Los Alamos, NM. In correspondence housed in the archives of the Iowa State University Library, Walsh reminisced on the ways security precautions affected life at Los Alamos. His incoming and outgoing mail was censored. In traveling, he could make trips to Albuquerque or Sante Fe, but not meet with friends from afar. He could address his co-workers by only their first names.

When World War II ended, Walsh returned to Iowa State University, where he completed his doctoral studies and was a research associate, half-time. Earning a PhD in chemistry (1950), Walsh wrote his dissertation on the "Preparation of Zirconium Metal." Subsequently he was assistant professor in chemistry, Iowa State University (1950-1951). About 1952, he returned to Los Alamos and worked on the mechanism of thin film metal plating by thermal decomposition of gaseous nickel carbonyl. His research included the solvent extraction of plutonium nitrate. Five years later, he embarked on a career with private firms as supervisor of inorganic chemical research, International Minerals & Chemical Corporation, Mulberry, FL (1957-1960); manager, Brush Beryllium Company, Elmore, OH (1960-1972); and associate director of corporate technology, Brush-Wellman, Inc., Elmore (1972-1986). His research focused on beryllium metal extraction, role of trace elements in properties of beryllium, beryllium chemicals, ecology, and electronic materials. After retiring in 1986, Walsh became a consultant.

Kenneth A. Walsh held professional memberships in the American Association for the Advancement of Science, American Ceramic Society, American Chemical Society (secretary/treasurer, 1956), American Society of Metals, New York Academy of Science, and Society of Mining Engineers—American Institute of Mining, Metallurgical and Petroleum Engineers. In fraternal clubs he joined the Elks, Lions, and Toastmasters International. Among his honors was election to Phi Lambda Upsilon and Theta Xi, as well as as being designated honorary lieutenant governor of Ohio. He was active in civic affairs, serving the Democratic Party as precinct chairman in Los Alamos, NM (1956) and Sandusky Township, Fremont, OH (1980). He was also secretary of the Sandusky County Democratic Party (1985-1986).

Kenneth Albert Walsh is survived by his wife, Dorothy Jeanne (Thompson) Walsh, whom he married 22 December 1944; one son, Kenneth A. Walsh II; and one daughter, Jeanne Walsh O'Dell. According to alumni records at the Yankton College offices, he and his wife started a second family by adopting in 1970 three children, David B., Rhonda J., and Leslie G.

WILLIAM R. BURK