

# Memorial to Kenneth J. Englund 1925–2003

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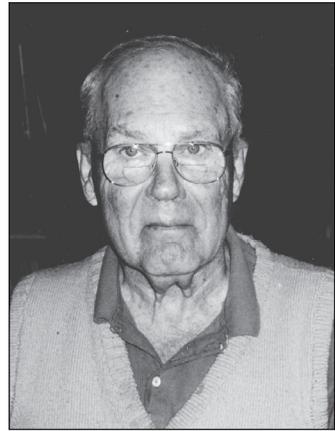
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Kenneth J. Englund was born on October 10, 1925, in Ironwood, Michigan, and raised in Hurley, Wisconsin. He spent his summers fishing and ran a trap line in the winter. Ken enjoyed skiing and ice-skating. He and his friends made their own ice rink and played hockey with homemade hockey sticks. After serving in the U.S. Army Medical Corps, Pacific Theatre, in World War II, he entered the University of Wisconsin, where he received a B.S. (1949) and M.S. (1950), both in geology. In 1950, Ken, as he was known to his friends and colleagues, joined the U.S. Geological Survey (USGS) and began his career as a dedicated and productive scientist. His 38 years of service as a USGS geologist are a model of excellence.

Ken's early career focused on geology, mapping, and coal resources of eastern Kentucky and adjoining parts of Tennessee, Virginia, and West Virginia. He quickly mastered the stratigraphy and structure, and his expertise was fundamental to training geologists working in the coal measures. Ken was assigned to the Kentucky Project, a 20-year cooperative geologic mapping project between the Kentucky Geological Survey and the USGS. Later, Ken broadened his interests to the entire central Appalachian basin, where his maps, reports, bulletins, guidebooks, and professional papers from the 1950s and early 1960s became benchmarks and guides for later workers studying and mapping in these areas. His geologic maps and cross sections became the starting point for determining the coal geology and coal resources of eastern Kentucky, the largest area of coal production in the nation at that time. He was called upon to conduct resource studies in wilderness areas and to lead drilling programs for coal exploration. His most important leadership role was as project chief of the Pennsylvanian Stratotype Project (1972–1982), which became a benchmark for all later work in the central Appalachian basin.

Keeping in good physical condition was a priority for Ken. Before going into the field, he would take long walks near his home in Aldie, Virginia, to get his body ready for the rigors of fieldwork. While in the field, Ken walked so briskly that he was often difficult to keep up with. He paused only for a 15-minute lunch and then continued with his day's work. By example, he trained his assistants to work hard and diligently.

Ken's nearly 150 publications focus on central Appalachian geology and are basic to an understanding of Appalachian coal geology. His accomplishments include contributions to



stratigraphy, mapping, sedimentology, astroblemes, coal geology, coal resources, economic geology, and structural geology. His field-based studies supported and clarified the regional geology and the coal resources of the region. Ken was an exceptionally keen mapper and produced a number of important maps throughout his career, including *Geology of the Ewing Quadrangle, Kentucky and Virginia*, and *Geology of the Middlesboro North Quadrangle, Kentucky*. Ken identified the key marine units, significant sandstone members, and tonsteins that were used to decipher the complex Pennsylvanian stratigraphy. He always had the nation's interests as his top priority. His work was focused on strippable, low-sulfur coal resources, and he delineated large amounts of low-sulfur coal resources in the central Appalachian basin.

In addition to being a researcher, Ken served as a teacher to many geologists attempting to unravel the complexities of central Appalachian geology. Throughout his entire career, he trained numerous assistants and led many field trips, particularly in connection with his work on the Pennsylvanian System stratotype. Through these field trips, countless geologists—including those from the USGS, state geological surveys, and academia—were introduced to Pennsylvanian stratigraphy and sedimentology.

Beyond the Pennsylvanian System stratotype (one of his best-known works), Ken also received additional international attention and praise for his research on the recognition of the Mid-Carboniferous (Mississippian-Pennsylvanian) Boundary in the central Appalachian basin. These accomplishments are the crowning achievements of his research on Appalachian geology.

As assistant to the branch chief of coal resources, Gordon H. Wood Jr., and several subsequent branch chiefs, Ken traveled to many countries, attended numerous international meetings, and offered assistance for improving international coal programs. He was the survey's geologic representative to many coal-developing countries.

His assistants and friends will always remember Ken's sense of humor. He especially loved to tell stories while relaxing after a long day in the field. During these times, Ken could always tell a humorous story about the shenanigans of his assistants that would keep the group entertained during the evening dinners while in the field. The story would generally be embellished more and more each time he told it, but the punch line always remained the same.

After retirement from the USGS in 1988, Ken continued his research as a *scientus emeritus*. One of his most significant products from this period was a detailed geologic section across southwestern Virginia into the eastern Kentucky coal fields, which he compiled with his assistant, Roger Thomas. It is a masterpiece of presentation and geologic interpretation.

Ken was a member of several professional societies, including the Geological Society of America (Fellow and 50-year member), the American Association of Petroleum Geologists (delegate 1976–1979, 1988–1991), and the Cosmos Club (Washington, D.C.). In 1972, he presented an invited paper at the first meeting of the Eastern Section of the AAPG. In 1974, Ken served in Geneva on the Coal Committee of the Economic Commission for Europe. In 1979 at the 9th International Carboniferous Congress, he received a commemorative plaque for the establishment of the Mississippian-Pennsylvanian Boundary in the central Appalachian basin. Two Carboniferous fossils—*Plavskella englundii* Sohn (1983) and *Kenenglundia penningtonensis* Gillespie et al. (1986)—have been named in his honor. He served as chairman of the U.S. working group of the IGCP project (meetings in the Netherlands, 1981; Madrid, Spain, 1983). Ken was a certified professional geologist in the Commonwealth of Virginia since 1984. He received several USGS commendations for his research on Appalachian geology, and the U.S. Department of Interior's Meritorious Service Award in 1982. In 2001, he was awarded the Gordon H. Wood, Jr., Award of the American Association of Petroleum Geologists.

Ken's career accomplishments reflect the highest standards of his profession and of the USGS. He was admired for his professional integrity, dedication to his work as a research

geologist, and outstanding contributions to central Appalachian geology and coal resources. His work as researcher, mentor, and promoter of the understanding of coal geology and coal resources of the central Appalachian basin brought him widespread recognition and admiration, both nationally and internationally.

After retirement from the U.S. Geological Survey, Ken continued to grow Christmas trees and raise sheep, long-time avocations, at his farm in the countryside of Aldie, Virginia, where he had lived since the mid-1970s.

Ken Englund died of Parkinson's disease on April 6, 2003. His wife, Virginia, and two daughters, Lynn and Karen, survived him. Those of us who worked with him in the USGS will fondly remember him as a friend, mentor, and esteemed colleague.

### SELECTED BIBLIOGRAPHY OF KENNETH J. ENGLUND

- 1955 Geology and coal resources of the Cannel City quadrangle, Kentucky: U.S. Geological Survey Bulletin 1020-A, 21 p.
- 1961 (with Harris, L.D.) Itinerary—Geologic features of the Cumberland gap area, Kentucky, Tennessee, and Virginia: Geological Society of Kentucky Field Trip (April 1961), Guidebook, 30 p.
- (with Smith, H.L., Harris, L.D., and Stephens, J.G.) Geology of the Ewing quadrangle, Kentucky and Virginia: U.S. Geological Survey Quadrangle Map GQ-172, scale 1:24,000.
- 1962 Geology of the Varney quadrangle, Kentucky: U.S. Geological Survey Quadrangle Map GQ-180, scale 1:24,000.
- 1963 (with Smith, H.L., Harris, L.D., and Stephens, J.G.) Geology of the Ewing quadrangle, Kentucky and Virginia: U.S. Geological Survey Bulletin 1142-B, 23 p.
- (with Roen, J.B.) Origin of the Middlesboro basin, Kentucky: U.S. Geological Survey Professional Paper 450-E, p. E20–E22.
- 1964 (with Roen, J.B., and DeLaney, A.O.) Geology of the Middlesboro North quadrangle, Kentucky: U.S. Geological Survey Quadrangle Map GQ-300, scale 1:24,000.
- 1968 Geology and coal resources of the Elk Valley area, Tennessee and Kentucky: U.S. Geological Survey Professional Paper 572, 59 p.
- 1974 Sandstone distribution patterns in the Pocahontas Formation of southwest Virginia and southern West Virginia, *in* Briggs, G., ed., Carboniferous of the southeastern United States: Geological Society of America Special Paper 148, p. 31–45.
- 1976 Geologic map of the Grahn quadrangle, Carter County, Kentucky: U.S. Geological Survey Quadrangle Map GQ-1262, scale 1:24,000.
- 1977 (with Bergin, M.J., Carter, M.D., Meissner, C.R., Jr., and Roen, J.B.) Slope angle distribution of coal beds with strippable reserves: U.S. Geological Survey Administrative Report to Council on Environmental Quality, U.S. Geological Survey Open-File Report OF-77-213, 80 p.
- 1979 The Mississippian and Pennsylvanian (Carboniferous) systems in the United States—Virginia: U.S. Geological Survey Professional Paper 1110-C, 21 p.
- (with Arndt, H.H., and Henry, T.W.), editors, Proposed Pennsylvanian system stratotype, Virginia and West Virginia: Field Trip No. 1, Ninth International Congress of Carboniferous Stratigraphy and Geology (Washington, D.C., and Urbana-Champaign, May 1979), American Geological Institute Selected Guidebook Series No. 1, 136 p.
- 1981 (with Henry, T.W.), editors, Mississippian-Pennsylvanian boundary in the central part of the Appalachian basin (Part I: Southwestern Virginia—southern West Virginia), *in* Roberts, T.G., ed., Geological Society of America (Cincinnati, 1981), Vol. 1,

- Stratigraphy, Sedimentology, Washington, D.C., American Geological Institute, p. 153–194.
- 1984 (with Hill, J.J.) Dolly Sods Wilderness, West Virginia, *in* Marsh, S.P., et al., eds., Wilderness Mineral Potential Professional Paper 1300, Volume 2, p. 1105–1108.
- 1985 (with Henry, T.W., Gillespie, W.H., Pfefferkorn, H.W., and Gordon, M., Jr.) Boundary stratotype for the base of the Pennsylvanian System, east-central Appalachian basin, U.S.A.: Tenth International Congress of Carboniferous Stratigraphy and Geology (Madrid, Spain), *Compte Rendu*, v. 4, p. 371–382.
- 1986 (with Gillespie, W.H., Johnson, P.L., and Pfefferkorn, H.W.) Depositional model for Upper Mississippian and Lower Pennsylvanian rocks of southwestern Virginia, *in* McDowell, R.C., and Glover, Lynn, III, eds., *The Lowry Volume, Studies in Appalachian Geology*: Virginia Polytechnic Institute, Department of Geological Sciences, Mem. 3, p. 37–45.
- 1989 (editor) Characteristics of the Mid-Carboniferous Boundary and associated coal-bearing rocks in the central and southern Appalachian basin: 28th International Geological Congress Guidebook T352B, American Geophysical Union, Washington, D.C., July 1989, p. 40–118.
- 1990 (with Thomas, R.E.) Late Paleozoic depositional trends in the central Appalachian basin: U.S. Geological Survey Bulletin 1839-F, p. F1–F19.
- 1993 Carboniferous plate tectonics and coalfield distribution in the Appalachian basin, USA: Douzième Congrès International de la Stratigraphie et Géologie due Carbonifère et Permien (Buenos Aires, Septembre, 1991), *Compte Rendus*, v. 1, p. 385–397.

