

2012 MEDALS & AWARDS

GILBERT H. CADY AWARD

Presented to
Leslie “Jingle” Ruppert



Leslie “Jingle” Ruppert
U.S. Geological Survey, Reston, VA

Citation by James C. Hower

Leslie “Jingle” Ruppert was born on 14 June 1953 in Washington, DC. Through her +30-year career at the U.S. Geological Survey, she has distinguished herself through her work in coal geochemistry and mineralogy, coal geology, coal resource evaluation, and coalbed methane.

Jingle got her BS and MS degrees from George Washington University in 1979 and 1987, respectively. Upon joining the U.S. Geological Survey in August 1980, she worked closely with Ron Stanton and Blaine Cecil, among others, in studies of the Upper Freeport coal in western Pennsylvania. The series of papers in the *Journal of Sedimentary Petrology*, *International Journal of Coal Geology*, and *Energy & Fuels* provided a basis for such fundamental studies of a coal resource. Later studies dealt with aspects of the mineralogy and geochemistry of low-rank coals in the US Gulf Coast, Wyoming, and Kosovo and of peats in Kalamantan, Indonesia. The latter investigation also dealt with the differentiation of volcanic ash-fall and water-borne detrital minerals. She has studied As- and Pb-bearing pyrite and lanthanide-bearing phosphates from the Fire Clay coal bed, eastern Kentucky, and Ge- and B-rich coals from western Kentucky.

Jingle led the USGS’s Northern and Central Appalachian Coal Regions Assessment Team, part of the overall effort to characterize both the quantity and quality of

U.S. coal resources. The coal characterization efforts fully integrated knowledge of mined-out areas and coal quality issues in a comprehensive analysis of the resources. These innovative studies were published as USGS Professional Papers and were summarized in a 2002 paper in *International Journal of Coal Geology*.

Through her career, she has been a valued colleague to people both in and out of the USGS. Perhaps nowhere is this collaboration more evident than in Kentucky where she has a long history of cooperation in coal assessment and quality studies with the Kentucky Geological Survey and the Center for Applied Energy Research and in West Virginia where she has worked closely with the state geological survey on coal assessment and coalbed methane projects. With respect to coalbed methane and gas shale, she is collaborating with physicists from CSIRO, Australia, in the use of the Extended Q-Range Small-Angle Neutron Scattering Diffractometer (EQ-SANS) instrument at Oak Ridge National Lab (ORNL) to examine how pores in gas shales are connected. Jingle is also using the Ultra Small Angle Neutron Scattering (USANS) instrument at the National Institute of Standards and Technology (NIST) to identify the amount of internal volume of the shale that is accessible to methane.

Most recently, she compiled coal rank data from throughout the Appalachians from varied sources and, working with regional experts, developed Pennsylvanian thermal maturation maps to complement thermal maturation maps of Ordovician and Devonian strata. This effort is part of a larger study of the framework geology of fossil-fuel bearing strata in the Appalachians. She has also conducted studies of the fate of trace elements in coal combustion, including the use of mercury isotopes as a tracer of the origin of this environmentally-sensitive element in fuels and its ultimate destination in the environment. Other coal combustion studies include examination of trace elements in fly ash from the co-combustion of coal and biomass.

Jingle has generously given her time to professional societies, serving in leadership positions in the GSA Coal Geology Division, The Society for Organic Petrology, the International Pittsburgh Coal Conference, and the Geological Society of Washington (DC). She is a member of the editorial board of the *International Journal of Coal Geology*.

Response by Leslie F. Ruppert

I would like to thank the Coal Geology Division of GSA for this award. It’s an honor I never expected to receive, so I am surprised and deeply appreciative. I also thank Jim Hower, my colleague and often co-author, for nominating me to join the illustrious company of Gilbert H. Cady award recipients.

Unlike many of my colleagues, I stumbled into a career in geology. As a philosophy major, I needed six science credits. My future husband suggested I should choose either rocks or stars: I picked rocks. With great trepidation, I signed up for Introductory Geology with Geza Telecki at GWU, and my future career suddenly came into view. Later, Roy Lindholm opened my eyes and my imagination to sedimentary geology and I thank him to this day.

At USGS, I have benefitted from collaboration with many extraordinarily talented scientists, both inside and outside the Survey. In my first project, I was part of a team that included Blaine Cecil, Ron Stanton and Brenda Pierce. Later, I had the pleasure of working with Sue Tewalt (USGS) and State geological survey scientists on the Appalachian coal assessment.

There have been many memorable moments along the way, but in addition to those mentioned above, I’ve benefitted from working with international colleagues. In 1989, my USGS colleague Tim Moore, moved to New Zealand. With the help of the early Internet, we completed a paper on Indonesian peats - online! No more “paper has not yet been received” excuses. The future of global collaboration had arrived.

Of the many people who helped me to become a better geologist, my greatest thanks goes to Ron Stanton, the 2002 posthumous recipient of this award. Ron guided my interests in sedimentary geology to focus on coal. He was tough but fair and his insatiable scientific curiosity set him apart as a mentor.