



In Memoriam: John Clayton Kingston (1949–2004)

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John Kingston was born September 26 1949 in Austin, Minnesota and died from the effects of a brain tumor in Ely, Minnesota on June 9 2004. With John's premature passing, our field lost an exceptional intellect, and a truly unique personality.

John undertook his secondary education in the public schools of Austin, Minnesota and obtained his BS in Botany from Iowa State University in 1970, his MS from the University of Delaware in 1975, and his PhD from Bowling Green State University in 1980.

John's first and abiding interest was the natural history, particularly the taxonomy, of diatoms. His interest in natural history was sparked by his boyhood exposure to nature, and he remained an avid outdoorsman for his entire life. His interest in diatoms was developed primarily by interactions with Dr John D. Dodd, an inspiration to many American diatomists. As an undergraduate, John

particularly enjoyed the opportunities and atmosphere of Iowa Lakeside Laboratory. He took the Laboratory's diatom class, taught by Dr C.W. Reimer, in 1969, and then returned as an honors research student in 1970, and continued to return as a research investigator and guest scientist on numerous occasions. The degree to which the research opportunities and collegial interactions provided by Lakeside Lab affected John's career is reflected by the fact that he requested his ashes be returned there.

After graduation, John pursued his MS studies under Dr Ruth Patrick, one of the major figures in the study of the North American diatom flora. Although his MS was granted by the University of Delaware, he had substantial intellectual support from Curators at the Academy of Natural Sciences, Philadelphia. Besides Dr Patrick, Dr Charles W. Reimer was especially instrumental in shaping John's career aspirations. Following a brief stint in a technical position in Gene Stoermer's lab at the University of Michigan, he undertook his doctoral research under the direction of Rex Lowe, completing his doctorate in 1980. His doctoral dissertation, published in *Ecology* in 1983, provided unique insights into structuring of diatom communities in Lake Michigan, and large oligotrophic lakes in general.

During his graduate studies he met, or as he was wont to say, re-met, Sarah Rayman, the 'little' sister of a close secondary school friend, who was to become a constant and stabilizing influence in his life and career. They married in 1976 and continued to share their love for nature, a liberal view of life, and each other, to the end of John's life. The union produced two sons, O'Neil and Hudson, who, together with Sarah, survive.

John began concentrated work in paleolimnology when he undertook post-doctoral research at the University of Minnesota's Limnological Research Center (LRC), under the direction of Dr Herb Wright. This was a natural connection. Wright recognized the great potential power of diatom analyses in reconstructing Quaternary histories before the topic was popular in North America and frequently sponsored foreign diatom investigators, such as Maj Brit Florin and Elizabeth Haworth, at the LRC.

The LRC of that era provided John with both the mode for expanding his research interests and contact with professional colleagues who helped shape and forward his career. Notable among the Minnesota group were Dr Dan Engstrom and Dr Sheri Fritz, who published with John during his tenure at LRC and in the years following. Work at LRC also provided John with contact with many foreign colleagues whose perspectives he greatly valued and whose company he greatly enjoyed. Throughout his career John was an astonishingly active correspondent who was one of the first diatomists and paleolimnologists to appreciate the power of the internet. Those interested in diatoms and paleolimnology, in any part of the world and in any research capacity, but particularly students, benefited from his extensive experience, knowledge of the literature, and keen insights as well as his willingness to communicate.

John's tenure at LRC was also particularly fortunate in terms of timing. Like many diatomists of his and previous generations he was forced, by lack of academic positions in his specialty, to approach his main interest more or less obliquely, through more easily sponsored research in various branches of ecology. By the end of John's post-doctoral program, the problems of lake acidification and the potential for diatom-based reconstructions to provide insights into past acidification trajectories were becoming evident. John's first professional position in paleolimnology was leadership of the group at the University of Minnesota at Duluth engaged in the large, multi-investigator and multi-institutional study termed Paleocological Investigations of Recent Lake Acidification (PIRLA). The PIRLA project influenced the career of many North American paleoecologists. In John's case, it put him in contact with most of the active investigators in the world, including the growing paleolimnology group at Queen's University in



Kingston, Ontario. At the conclusion of the PIRLA project John moved to Queen's as a research scientist at PEARL where he was instrumental in bringing the tools of diatom-based ecological reconstructions, as they are currently understood, to a number of topics. In retrospect, this was probably the most productive period of his career in terms of quantity and novelty of publications.

Faced with the vagaries of funding in an untenured position, John eventually opted for a more stable, if perhaps less intellectually stimulating position, as an environmental manager with the Canadian provincial government of Newfoundland. Although he found the ecological problems of the region fascinating, and genuinely fell in love with the local culture and music, deteriorating economic conditions and the depression-spawned 'one job per family' philosophy that limited possibilities for Sarah, eventually drove him to seek other opportunities. In truth, John was not ideally suited for the inevitable constraints of a governmental position. He possessed the type of inquiring mind that always found more problems than answers. He was also more attendant to academic rigor than to the rigors of report production, although he certainly had a talent for the latter. 'Good enough for government work' was simply not part of John's vocabulary.

Unfortunately, the next turn in John's career path tended to crystallize the conflict between his ideal world and the realities of the day. He accepted a position with the United States Geological Survey National Water Quality Assessment Program (NAWQA). In theory this should have been an ideal position for John, and John should have been an ideal person for the position. The NAWQA program samples many largely unexplored habitats in poorly known, at least so far as

the diatom flora is concerned, parts of North America. Because of this there was a large need for careful taxonomic assessments and quality control. Although John and the co-workers he enlisted to the project managed to produce some of the required background, he became increasingly conflicted between his intellectual aspirations and the rigid requirements of the federal bureaucracy.

The potential solution arrived in the form of his final position at the Center For Water and the Environment, Natural Resources Research Institute, University of Minnesota, Duluth. This position allowed John more latitude to pursue research and especially allowed him to investigate problems of his favorite research topics, sub-boreal lakes and the Laurentian Great Lakes of North America. Cruelly, these dreams were cut short by his terminal disease.

This brief recapitulation of John's career and the list of his publications that follows does not begin to really capture his scientific impact. Personally, he was a genuine 'frontier liberal academic', a type more commonly encountered in previous generations. Social and academic graces were not his main concerns, but he was generous and honest almost to a fault. An extremely empathetic person, his first individually published paper was a memorial to a brilliant young investigator whose career was tragically cut short. He was an editor's or a project officer's dream as a reviewer, knowledgeable and demanding, but always constructive. He was patient and thorough with students and beginners, either in person or through correspondence, and perhaps his most lasting legacy will be found in those he helped as beginners to the field of diatom taxonomy, as well as paleolimnology.

John's incisive intellect and dry humor will be sorely missed by those fortunate enough to know him well, and by the rest of our research community denied this opportunity by fate.

John Kingston's Publications

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