

EARL ALFRED CHRISTIANSEN (1928-2019)

by Les Henry



Earl Christiansen was born September 20, 1928 in Shellbrook, Saskatchewan and raised on a neighbouring farm. Between 1936 and 1947 he attended Summit Prairie School, Shellbrook High School and Prince Albert Collegiate Institute, where his portrait and contributions to geology hang on the “wall of honour”. He died in Saskatoon on September 29, 2019.

Earl attended the University of Saskatchewan (1947-1956) and received a BSA (Bachelor of Science in Agriculture degree in Soil Science and a MSc in Geology. His Masters’ thesis was on the “Glacial Geology of the Moose Mountain Area, Saskatchewan”. Earl obtained his PhD in Geology at the University of Illinois, in 1959, under the supervision of Dr. George White. His thesis was on the “Glacial Geology of the Swift Current Area, Saskatchewan”. This started a long relationship between Illinois and Saskatchewan. Other geology graduate students came from Illinois to map areas in Saskatchewan. Earl spoke often about the influence of Dr. White on his career.

From 1959 to 1977 Earl directed the groundwater geology program of the Saskatchewan Research Council which published geology and groundwater resources maps for the settled areas of the province. He devised a procedure to obtain useful 1.5 m long side-wall samples from hydraulic rotary drill cuttings. The program established the methodology to use geologic logs, drillers logs and elogs as a basis for establishing the stratigraphy of drift and bedrock.

Earl had great respect for drill contractors and vice versa. His motto was “there must be no ambiguity at the test hole”. Each testhole was a new and exciting challenge for Earl. His curiosity about the underground was without equal. His enthusiasm for the task was infectious. From testhole data and all other information, Earl constructed hand colored geologic cross-sections to best interpret and communicate the information.

From 1977 -2007 Earl worked under his own banner, E.A. Christiansen Consulting Ltd. From their home office, Earl and his wife, Muriel, continued the work he had started in the public sector. Earl provided the geologic framework for soil salinity investigations; groundwater studies; engineering challenges in mining, highways and slope stability; and urban development.

In his consulting career, Earl continued to publish scientific articles in refereed journals, principally the *Canadian Journal of Earth Sciences* and the *Canadian Geotechnical Journal*. He continued to advance the glacial stratigraphy of Saskatchewan, and the protocols he established are now accepted practice.

In addition to scientific articles, Earl completed nearly 100 private consulting reports. These reports, including complex hand drafted cross-sections are now available in the “E.A. Christiansen Collection”, in the University of Saskatchewan Library. They are also available online at <https://www.wsask.ca/Water-Info/Ground-Water/Miscellaneous-ScienceGeology-Reports/>.

Earl was the recipient of many awards from the CGS, including the Thomas Roy Award from the Engineering Geology Division in 1984, 1992 and 1994, and the R.M. Quigley Award for the best paper in the *Canadian Geotechnical Journal* in 1992 and 2000. He presented the R.M. Hardy Keynote Address at GeoSask2005, and was profiled as a Saskatchewan Geotechnical Pioneer at GeoRegina 2014. In 2017, at GeoOttawa2017, his 26-year collaboration with Karl Sauer “To characterize the Quaternary and Cretaceous deposits in Saskatchewan” was profiled as a CGS Geotechnical Achievement.

Earl’s legacy will be in the extensive written record he has left behind. When it comes to glacial processes and stratigraphy in Saskatchewan Earl Christiansen ‘wrote the book’.