

Warren David Forrester, UNTD, an astronomic surveyor, physical oceanographer and tidal officer died on February 22, 2004 in Oshawa, Ontario. He was 78 years old.

Warren was born in Hamilton Ontario on March 4, 1925 and received a BA in Mathematics and Physics from the University of Toronto in 1947. After graduation he began working with the Geodetic Survey of Canada as an Astronomic Surveyor. In 1956 he joined the Canadian Hydrographic Service as a Special Projects Officer and became interested in measuring tidal currents in the Bay of Fundy using photogrammetry. This led him to take educational leave to study physical oceanography at the University of British Columbia where he obtained an M.Sc. in 1961. He continued studies in physical oceanography at Johns Hopkins University under the direction of Professor Raymond Montgomery. Partway through these studies Warren came to the Bedford Institute of Oceanography in Dartmouth Nova Scotia where he carried out the observational work for his Ph.D. thesis.

The aim of his study was to examine currents in coastal waters where the geostrophic approximation deteriorates because friction and acceleration are not negligible. To compare the geostrophic current with the true current he needed to measure both. The true current he measured by placing 18 current meters across the St Lawrence Estuary. For the geostrophic current he had to obtain water samples simultaneously across the section because the current is mostly tidal and changes speed and direction rapidly. He placed 8 moorings across the estuary with up to 12 water bottles distributed through the water column. All the bottles were closed at the same time using an arrangement of timers and messengers. After they were tripped the ship recovered and reset all the moorings for another set of observations. In this manner he obtained a complete set of observations on each of 11 consecutive days. At the time the experiment was considered innovative and ingenious and much discussed at BIO. Warren's careful analyses resulted in a successful Ph.D.; no mean feat as Professor Montgomery was rumoured to be uncommonly tough.

Following this study in the St. Lawrence Estuary, Warren continued to work in the Gulf of St. Lawrence examining internal waves, tidal transports, ice volumes and distributions of temperature and salinity. He was also involved in the aftermath of the grounding of the tanker ARROW on February 4, 1970. His role in this was to study the distribution of oil particles suspended in the water. Warren served as a valued member on a number of Ph.D. and M.Sc. committees at Dalhousie. His reputation as a thorough, helpful and perceptive reviewer was well known.

In 1975 Warren left the Bedford Institute for the Canadian Hydrographic Service where he became a Tidal Officer and rewrote the Canadian Tidal Manual. In 1981 he retired from government service and became a freelance oceanographic consultant. As a consultant he was involved in a number of overseas projects for the Canadian International Development Agency and the United Nations. In Mali he assessed the feasibility of hydrographic charting of the Niger River for navigation. In Goa he presented lectures on tidal theory, observation and prediction and in Malaysia he provided tidal and geodetic expertise. He also continued to be a regular attendee of CMOS Annual meetings including the Ottawa meeting in 2003. Warren is remembered by his colleagues at the Bedford Institute as a careful and thoughtful scientist. Beyond science he was known for owning the only Citroen in town, for living in interesting houses outside the city that seemed more like cottages, for having a firm hand on the pennies with less concern for larger sums when the price of gold fell out of bed and for many enjoyable conversations and parties.