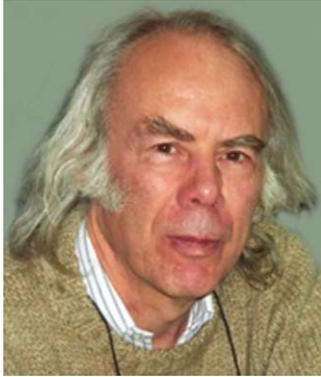


Obituary
Nick Shackleton
The Passing of a Giant



Sir Nicholas John Shackleton, Emeritus Professor at the University of Cambridge and Director of the Godwin Laboratory, died of leukemia on January 24, 2006, at the age of 69. The Quaternary community mourns the passing of a giant in paleoceanography.

Nick Shackleton revolutionized Quaternary geochronology and paleoclimate studies through isotopic studies of deep-sea sediment and his work on the role of Milankovich cycles in climate change. During his distinguished career, which spanned 40 years, Shackleton was showered with honours by his peers and the wider scientific community. He was a member of the Royal Society of London, US National Academy of Sciences, and Royal Netherlands Society of Arts and Sciences. A list of “Sir Nick’s” awards captures his extraordinary scientific impact:

- 2005 Blue Planet Prize, Asahi Glass Foundation
Founder’s Medal, Royal Geographical Society
- 2004 Vetlesen Prize, Lamont-Doherty Earth
Observatory and the G. Unger Vetlesen
Foundation
- 2003 Royal Medal, Royal Society of London
Urey Medal, European Association of
Geochemistry
Honorary member of EUG
- 2002 Ewing Medal, American Geophysical
Association
- 2001 Foreign Member, Royal Netherland Society of
Arts and Sciences

- 2000 Foreign Associate, US National Academy of
Sciences
Henry Charnock Lecture
- 1999 Milankovitch Medal, European Geophysical
Society
Emiliani Lecture, American Geophysical Union
- 1998 Knighthood for service to the earth sciences
- 1997 Honorary Doctor of Philosophy, Stockholm
University
- 1996 Honorary Doctor of Laws, Dalhousie University
Wollaston Medal, Geological Society of London
Jardetsky Lecture, Lamont-Doherty Geological
Observatory
- 1995 Crafoord Prize, Royal Swedish Academy of
Sciences
- 1990 Fellow American Geophysical Union
Huntsman Medal for Excellence in the Marine
Sciences, Bedford Institute of Oceanography
Cooper Memorial Lecture in Plymouth
- 1988 Flint Lecturer, Yale University
Founding Member Academia Europaea
Tate Lecturer, Southern Methodist University
- 1987 Lyell Medal Geological Society of London
- 1985 Fellow Royal Society
Shepard Medal Society for Sedimentary Geology
Carus Medal Deutsche Akademie fuer
Naturforscher Leopoldina

Her Majesty Queen Elizabeth awarded Nick a Knighthood for services to earth science in 1998. There is no Nobel Prize for earth sciences, but the Crafoord Medal of the Royal Swedish Academy of Sciences is considered by many to be an equivalent honour. The Blue Planet Prize, the last award that Nick received, in December 2005 only 2 months before his death, may have been his greatest honour. In accepting the award, Nick indicated that his research was sparked by a desire to understand Earth’s past climate for the benefit of humankind. Such a lofty goal can be achieved only

through a global scientific effort, and Nick was a focal point and catalyst of paleoceanographic research—he worked with and mentored scientists from a wide range of disciplines in at least 20 countries.

In 1967 Nick defended his PhD dissertation entitled “*The measurement of paleotemperatures in the Quaternary Era.*” His defence was a pivotal event in Quaternary science in the 20th century and set the stage for major advances in our understanding of Earth climate. Two years later, in 1969, Nick published a paper in the Proceedings of the Royal Society of London entitled “The last interglacial in the marine and terrestrial records”, in which he defined subdivisions of Marine Isotope Stage 5 and correlated substage 5e with the continental Eemian. In the early 1970s, Nick was a key player in a consortium of scientists studying past climates that became widely known by its acronym CLIMAP. The CLIMAP group published a benchmark paper in *Science* in 1976, which presented the distribution of temperatures on the Earth’s surface at the Last Glacial Maximum. This paper was followed in the same year by what is perhaps the most influential paper in Quaternary science in the 20th century, co-authored with Jim Hays and John Imbrie. It proposed that Earth orbital variations are the pacemaker of climate change by showing the relationship between orbital parameters and proxies of climate, specifically the oxygen isotope composition of the foraminifer *Globigerina bulloides* and percentages of *Cycladophora darvinsiana* in deep-sea sediments. A third paper that illustrates Nick’s tremendous contributions to paleoclimatology appeared in 2000 in *Paleoceanography*. It followed papers by other scientists describing the oxygen isotope stratigraphy of Greenland and Antarctic ice cores. Nick had found that the pattern of oxygen isotope variations in planktonic foraminifera in late Pleistocene

marine sediments mimics that of the isotope variations in Greenland GRIP ice cores, whereas the pattern of oxygen isotope variations in benthic foraminifera is similar to that of the $\delta^{18}\text{O}$ variations in the Antarctic Vostok cores. This finding suggests that, while atmospheric circulation appears to be driven by Northern Hemisphere ice sheets, deep water temperatures are controlled more by Antarctic temperatures and thus seems to be decoupled from global ice volume.

Nick Shackleton generously gave of his time for professional service. He participated in numerous commissions studying Cenozoic stratigraphy. He served INQUA for 12 years, first as a Vice-President, then, from 1998 to 2003, as President, and most recently as Past-President. While INQUA President, he oversaw a restructuring and reshaping of the organization that placed it in a position to successfully apply for full membership in the International Council for Science (ICSU) in 2005. Nick served on the Editorial Board of *Quaternary Research* for 30 years and on the board of *Paleoceanography* for 16 years.

Nick Shackleton was far more than a scientist. He had a passion for music and was a skilled classical clarinetist. Few of those who attended the 2003 INQUA Congress in Reno will forget his touching solo performance, dedicated to his friend and former INQUA President Hughes Faure on his passing. Nick was also a famous clarinet collector, well known among clarinet makers and dealers.

Our community has lost a remarkable ambassador, a brilliant scientist, colleague, and, to many, a friend. To quote Cronis Tzedakis, “a guiding light has been removed”. The light may be gone, but Nick’s spirit lives on.

Denis-Didier Rousseau and John Clague, on behalf of INQUA