

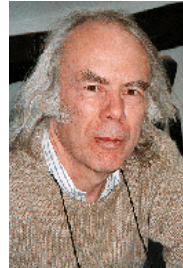


International Union for Quaternary Research

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The Sir Nicholas Shackleton Medal for outstanding young Quaternary scientists

Nominations are invited for the **Sir Nicholas Shackleton Medal**, which is awarded to an early-career scientist, who will normally be under 35 years of age, working in any branch of Quaternary science.

The process for nomination and evaluation is as follows.

Nomination

- In principle, any scientist working in the field of Quaternary sciences may propose an appropriate candidate for the Sir Nicholas Shackleton Medal, but see the nomination form below for further details.
- Proposals should include a summary and a short personal statement in support of the candidate, the *curriculum vitae* and list of publications of the nominee, and two letters of recommendation (see details on the nomination form below).
- Proposals should be submitted electronically to both the Secretary-General of INQUA and the Chair of the Award Committee.
- All nominations will be acknowledged, and nominators are advised to request such confirmation if it is not received.
- The deadline for the current round is **30th July 2009** and no late proposals will be considered.

Evaluation

- Proposals will be forwarded to an Evaluation Group composed of eminent Quaternary scientists, who will consider each case in confidence and may seek further information if it is deemed necessary.
- After completion of the evaluation, the Chairperson of the Evaluation Group will send the recommendation of this Group, together with a one page summary and a two-line citation of the selected candidate, to the Secretary-General of INQUA. The Secretary General will prepare and forward the necessary documents and citations to the Executive Committee members for final approval.
- The President of INQUA will then inform the medalist of the award by the end of November 2009.
- The medalist will be invited to the next General Assembly of the Union, where the medal will be presented.

Closing date for receipt of nominations is 31st July 2009

A nomination form is attached below and is available on the website



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Sir Nicholas Shackleton

The medal was established in honour of Sir Nicholas Shackleton not only because he was an eminent Quaternary scientist but also because he was a dedicated supporter of young researchers. Sir Nicholas served as Vice President of INQUA for two terms, then as President (1999-2003) and finally as Past President, a position he held at the time of his death in 2005.

To demonstrate Nick Shackleton's major achievements it is only necessary to consider his key papers, beginning with his PhD. This was awarded by the University of Cambridge in 1967 for his thesis entitled "The measurement of palaeotemperatures in the Quaternary Era". Apart from developing a new method in stable isotope mass spectrometry, Nick designed and rebuilt a mass spectrometer capable of analyzing very small amounts of carbonates.

After being appointed to the staff of Cambridge University, Nick Shackleton published a paper in the *Proceedings of the Royal Society of London* (Shackleton, 1969) entitled "The last interglacial in the marine and terrestrial records". Building on the definition of the marine isotope stages by Emiliani (1955), he defined subdivisions of MIS 5, creating substages 5e to 5a and correlating marine isotope substage 5e with the continental Eemian, an interpretation which was not questioned until 1997 (Kukla *et al.* 1997).

In the 1970s, Nick Shackleton was involved with the CLIMAP consortium, which brought together scientists from different institutions to study past climates. This resulted in two papers published in *Science* during 1976. In the first (CLIMAP Project Members 1976), in which Nick was largely responsible for the oceanography, the status of the Earth's surface at the last glacial maximum was published for the first time.

Later the same year, Nick Shackleton was associated with another seminal paper (Hays, Imbrie & Shackleton 1976), this time on "Variations in the Earth's orbit: pacemaker of the ice ages", which constituted a revolution in palaeoclimatology. Whereas Milankovich (1941), in proposing his theory on the astronomical origin of climate changes, had compared the results of his calculations with the Alpine glaciation stratigraphy (Penck & Bruckner 1909), this paper demonstrated the relationship between climate change, as indicated by three indices ($\delta^{18}\text{O}$ from *Globigerina bulloides*, T_s ($^{\circ}\text{C}$) [summer sea surface temperature] and the percentage of *Cycladophora darwinskiana*) with variations in orbital parameters from cores RC11-120 and E49-18.

The last paper illustrating Nick Shackleton's contribution to palaeoclimatology was published in *Paleoceanography* during 2000. Several previous attempts had been made to correlate the ice cores from Greenland and Antarctica but Shackleton, Hall & Vincent (2000) provided another revolution by focussing on the record of MIS3 from marine core MD 95-2042. The oxygen isotope study of the planktonic and the benthic foraminifera shows peculiar patterns. Indeed the isotope variability from the planktonic forams mimics the variations in the $\delta^{18}\text{O}$ from the Greenland GRIP ice core. Conversely, the fluctuations of the $\delta^{18}\text{O}$ from benthic forams, match variations described from the Antarctic Vostok cores.

One of the characteristics of Nick Shackleton's approach to research was his great enthusiasm for cooperating with scientists from numerous countries and disciplines. Nick was always open to discussion and persuasion, no matter what the experience or standing of the scientist concerned, an approach he considered essential for the enrichment of his personal scientific, cultural and social life.



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The Sir Nicholas Shackleton Medal for outstanding young Quaternary scientists

Nomination Form

Two nominators are required. The nominators should be two independent persons from different national organizations, preferably (but not essentially) from different countries. At least one of the nominators must be from an INQUA member country

Nominator 1:

Name:
Position:
Address:
.....
Email:
Fax: (include country code)

Nominator 2:

Name:
Position:
Address:
.....
Email:
Fax: (include country code)

Please attach the following documentation:

1. Letters of support from both nominators named above
2. *Curriculum vitae* of the nominee, including a list of the nominee's publications
3. Short statement of major contributions to Quaternary research of the nominee.

This nomination form and attached documentation should be sent to the following:

1. the Secretary-General of INQUA: pcoxon@tcd.ie
2. the Chairperson of the Award Committee: mavery@iziko.org.za

Closing date for receipt of this nomination is 31st July 2009