

**The Anton Bruun Memorial lecture Series** is dedicated to the memory of the noted Danish oceanographer and first chairman of the Commission, Dr Anton Frederick Bruun. The “Anton Bruun Memorial Lectures” were established in accordance with Resolution 19 of the Sixth Session of the IOC Assembly in 1970, in which the Commission proposed that important inter-session developments be summarized by speakers in the fields of solid earth studies, physical and chemical oceanography and meteorology, and marine biology.



**Anton Frederick BRUUN** was born on the 14th of December 1901 as the oldest son of a farmer, but a severe attack of polio in his childhood led him to follow an academic, rather than agrarian, career. In 1926 Bruun received a Ph.D. in zoology, having several years earlier already started working for the Danish Fishery Research Institute. This association took him on cruises in the North Atlantic where he learned from such distinguished scientists as Johannes Schmidt, C.G. Johannes Petersen and Thomas Mortensen.

Of even more importance to his later activities was his participation in the *Dana* Expedition's circumnavigation of the world in 1928-1930, during which time he acquired further knowledge of marine animal life of the sea, general oceanography and techniques in oceanic research. In the following years Bruun devoted most of his time to study the rich *Dana* collections and to the publication of his treatise on the flying fishes of the Atlantic. In 1938 he was named curator at the Zoological Museum of the University of Copenhagen and later also acted as lecturer in oceanology.

From 1945-1946 he was the leader of the *Atlantide* Expedition to the shelf areas of West Africa. This was followed by his eminent leadership of the *Galathea* Expedition in 1950-1952, which concentrated on the benthic fauna below 3,000 m and undertook the first exploration of the deep-sea trenches, revealing a special fauna to which he gave the name “hadal”.

The last decade of Bruun's life was devoted to international oceanography. He was actively involved in the establishment of bodies like SCOR, IACOMS, IABO, and the IOC and was elected IOC's first chairman in 1961. His untimely death a few months later, on 13 December 1961, put an end to many hopes and aspirations.

In 1962, the former US Presidential yacht *Williamsburg* was converted into a research vessel and renamed Anton Bruun in honour of the great scientist. The *Anton Bruun* took part in the International Indian Ocean Expedition (1959-1965) and, in the late 1960s, circumnavigated the globe in one of the last great exploratory expeditions of modern oceanography.

To formally honour Bruun's role in international oceanography, Dr Patricio Bernal, IOC's Executive Secretary, announced the annual award of a 'Anton Bruun Medal' to all Bruun Memorial Lecturers, starting on the occasion of the Twenty-third Assembly in 2005.

TWENTY-THIRD SESSION OF THE ASSEMBLY, 21–30 June 2005

The Ecology and Oceanography of Harmful Algal Blooms: Multidisciplinary Approaches to Research and Management by Donald M. Anderson. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 2007. (*Technical Series, 74*).

TWENTY-SECOND SESSION OF THE ASSEMBLY, 24 June–2 July 2003

- Gas-Hydrates – A Potential Source of Energy from the Oceans by Harsh K. Gupta. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 2004. (*Technical Series, 65*)

- Energy from the Sea: The Potential and Realities of Ocean Thermal Energy Conversion (OTEC) by Patrick Takahashi. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 2004. (*Technical Series, 66*).

TWENTY-FIRST SESSION OF THE ASSEMBLY, 9–13 July 2001

Operational Oceanography — a perspective from the private sector by Ralph Rayner. IOC Bruun Memorial Lectures, Paris, UNESCO, (*Technical Series, 58*).

TWENTIETH SESSION OF THE ASSEMBLY, 29 June–9 July 1999

Ocean Predictability, by John Woods. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 2000. (*Technical Series, 55*).

NINETEENTH SESSION OF THE ASSEMBLY, 2–18 July 1997

Common Resources, Conflicting Uses: The Economics of Coastal Resources Management, by John A. Dixon. Sixty-five Years of the Continuous Plankton Recorder Survey: 1931-1995, by Philip C. Reid; Sonia D. Batten: Harry G. Hunt.

EIGHTEENTH SESSION OF THE ASSEMBLY, 13–28 June 1995

Some Results of the Tropical Ocean and Global Atmosphere (TOGA) Experiment Application of El Nina Prediction to Food Production in Peru, by Pablo Lagos; New Applied Knowledge Resulting from the TOGA Programme in all Three Oceans, by James J. O'Brien.

SEVENTEENTH SESSION OF THE ASSEMBLY, 25 February–11 March 1993

The Role of Marine Research, Systematic Observations and Related Capacity Building and Technology Development for Ocean and Coastal Zone Sustainable Development: The Global Ocean Observing System, by John Woods; Long-Term Systematic Environmental Monitoring and Sustainable Development: The Role of WMO and of the National Meteorological and Hydrological Services, by G.O.P. Obasi.

SIXTEENTH SESSION OF THE ASSEMBLY, 7–21 March 1991

Modelling and Prediction in Marine Science, Opening Statement, by Manuel Murillo; Overview of the Coastal Ocean Prediction Systems Programme, by Christopher N.K. Mooers; The Barents Sea/The Physical-Biological Connection, by Egil Sakshaug; The Real-Time Numerical Forecasting System for Marine Environmental Elements in China, by Chao Jiping and Wu Huiding. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 1992. (*Technical Series, 39*).

FIFTEENTH SESSION OF THE ASSEMBLY, 4–19 July 1989

impact of New Technology on Marine Scientific Research, Opening Statement, by Manuel Murillo; Submersibles and Remotely-Operated Vehicles at the Service of Oceanological Research, by B. Grandvaux; The Shape of the Ocean Floor, by Anthony S. Laughton; Observing Change in the Global Ocean: the View from Space, by 1). James Baker. In: IOC. Bruun Memorial Lectures, Paris, UNESCO. 1991. (*Technical Series, 36*).

FOURTEENTH SESSION OF THE ASSEMBLY, 17 March–1 April 1987

Recent Advances in Selected Areas of Ocean Sciences in the Regions of the Caribbean, Indian Ocean and the Western Pacific. Opening Statement, by M.A. Martin-Sane; The Scientific Basis for the Assessment of Marine Pollution in the Caribbean Sea and Adjacent Regions: the CARIPOL Experience, by Jorge E. Corredor; Monsoon and Currents in the Indian Ocean, by

MichPle Fieux; Sea-level Changes, Environments, Tectonics, Marine Resources and Phosphorites. by Peter J. Cook. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1988. (*Technical Series, 31*).

THIRTEENTH SESSION OF THE ASSEMBLY, 12–18 March 1985

Past and Future Perspectives of the Commission, Opening Statement, by M.A. Martin-Sank; On the Benefits of Ocean Studies, by W.S. Wooster; What Steps Should Be Taken to Meet the Challenges of the Future in Ocean Services and Technology and in the Identification of Disturbances Caused by Men? by S. Z. Qasim: How Can the International Scientific Community Work Together in the Era of an Emerging Ocean Regime to help all Partners to Achieve a Better Understanding of Ocean Phenomena and their Impact on Man? by A. Yankov.

TWELFTH SESSION OF THE ASSEMBLY, 3–19 November 1982

Ocean Science for the Year 2000, Opening Statement, by Neil J. Campbell; Future Research on the Ocean Floor and What Lies Beneath it, by M. Talwani; Future in Physical Oceanography and Climate, by I. 1 asselmann: Future Research in Ocean Chemistry, by I). Dyrssen; Future Research Biological Oceanography, by M.V. Angel. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1984. (*Technical Series 28*).

ELEVENTH SESSION OF THE ASSEMBLY, 22 October–3 November 1979

Marine Environment and Resources in the Ocean, Opening Statement, by Neil J. Campbell; Non-Living Marine Resources, by E. Seibold; Ocean Energy, by Kenzo Takano; A Short-term Climatic Change: A Physical Oceanographer's Point of View, by J.S. Godfrey; Living Marine Resources, by D.H. Cushing. In: IOC Bruun Memorial Lectures, Paris, UNESCO, 1980. (*Technical Series, 21*).

TENTH SESSION OF THE ASSEMBLY, 27 October–10 November 1977

The Importance and Application of Satellite and Remotely Sensed Data to Oceanography, Opening Statement, by Agustin Ayala-Castañares; Past, Present and Future Capabilities of Satellites Relative to the Needs of Ocean Sciences, by John R. Apel; Remote Sensing of the Ocean in the USSR, by Boris Nelepo; Interaction of Electromagnetic Waves and Oceanic Waves, by Werner Alpers; Determination of Oceanic Tides from Space, by DE. Cartwright. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1978. (*Technical Series, 19*).

NINTH SESSION OF THE ASSEMBLY, 22 October–4 November 1975

Co-operative Study of the Kuroshio and Adjacent Regions (CSK), Opening Statement, by H.U. Roll; Co-operative Study of the Kuroshio and Adjacent Regions (CSK), by Ken Sugawara: Accuracy of the Determination of Nutrient Elements in Sea Water by Using CSK Standard Solutions, by Mitsuko Ambe; Dynamics of the Kuroshio Current: Experimental and Theoretical Studies from South of Kyushu to the Izu-ogasawara Ridge, by Allan R. Robinson; The Dynamics and Thermohaline Structure of the Waters of the Kuroshio and Adjacent Regions, by Vladimir G. Kort. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1976. (*Technical Series, 15*).

EIGHTH SESSION OF THE ASSEMBLY, 5–17 November 1973

Tropical Atlantic, from the Guinean Trawling Survey and the International Co-operative Investigations of the Tropical Atlantic (ICITA) to the Present day; Introduction, by T. Austin; The Equatorial Undercurrent in the Atlantic, by K. Voigt; Plankton of the Tropical Atlantic, by J. Krey; Fishery Resources of the Tropical Easter-Central Atlantic Ocean: Exploration, Utilization and Management since 1960, by F. Williams; Some Results of the Eastern Atlantic Continental Margin Programme, by K.O. Emery. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1974. (*Technical Series, 11*).

SEVENTH SESSION OF THE ASSEMBLY, 26 October–6 November 1971

The Biology of the Indian Ocean, by G.F. Humphrey; Recent Meteorological Results from the International Indian Ocean Expedition, by C.S. Ramage; A Review of Recent Physical Oceanographic Work in the Indian Ocean, by J.C. Swallo. In: IOC. Bruun Memorial Lectures, Paris, UNESCO, 1972. (*Technical Series, 10*).