Silver Jubilee Award – 1993

Mr Bruce Hamon

Bruce Hamon has been one of the leading figures in Australian physical oceanography, and has left a profound influence on the science worldwide through his pioneering work on the development of the inductive salinometer and the CTD, in partnership with Neil Brown.

Bruce trained as a mathematician and electrical engineer gaining two degrees, both with first class honours, from the University of Sydney in 1938 and 1940. Rather than go on to an MSc or PhD he went to work for the CSIRO Division of Electrotechnology (currently the National Measurement Laboratory). While there, Bruce was introduced to oceanography with a request from David Rochford to design and build an instrument to measure, *in situ*, and in real time, temperature, salinity and depth. It is hard to believe we haven't always had a CTD or the inductive salinometer that Bruce and his colleagues invented. But before that it was Nanson bottles, reversing thermometers and very tedious titrations.

In 1957 he moved to the CSIRO Division of Fisheries and Oceanography. His curriculum vitae simply states he was responsible for the Division's physical oceanography program; but, in reality, in that 22 years he was instrumental in describing the tides, sea level changes and currents of both the east and west coasts.

Hamon's astute observations provided some of the first evidence of continental shelf waves, and the first essentially correct description of the East Australian Current and its eddy structure in an era when shiptime was scarce and measurements difficult. He was also the first to describe the features of the Eastern Indian Ocean and the eddies associated with the Leeuwin Current.

More importantly, Bruce's approach was unique, if not dangerous, in that he was curious about the anomalies in the data, instead of accepting the reigning paradigm. rather than accept that the East Australian Current was a smooth, coherent current, he surmised and hypothesised, from his observations and calculations, it to be complex and variable, with meanders, eddies, coastal jets and later continental shelf waves. These hypotheses are all the more remarkable when you consider that this was done without modern oceanographic vessels with their CTDs, ADCPs and GPSs, modern high speed computers to crunch the data, recording current meter arrays, and satellite remote sensing and tracked buoys. What a thrill it must have been for Bruce when he saw the first satellite image of ocean temperature or colour to realise he's got it right!.

After 22 years with CSIRO, he 'retired' in 1979 to become and Honorary Research Fellow at both the University of Sydney and the University of New South Wales. There he has continued his varied research interests in tides, sea level and ocean circulation around Australia.

Not only has Bruce Hamon provided guidance and inspiration to a generation of oceanographers, but through his representation in many national and international fora has set the foundation for Australian oceanography today.

July 1993 Peter Rothlisberg, AMSA President