



**HONORED LIFE MEMBER  
BRIAN L. BAYNE**

Take a passion for marine science, a piercing intellect, and a zest for life, and mix them all together under the heat of a Caribbean sun, and it's a heady brew! No question either about the talent for marine biology and molluscan physiology—any guy who kicks off his career with a single-author paper in *Nature* means business!

Brian, one of four brothers and a fourth-generation Trinidadian, was born in the West Indies in 1938. He grew up in and on the water, his favorite activity being scuba and spear fishing, in which his Dad was a pioneer. His love of the sea and interest in marine animals thus developed from an early age. He was sent to boarding school in Barbados at the tender age of 8. He matured rapidly when at 15 he persuaded his parents to send him to Ardingly College in the U.K. to complete his high school education. His boarding school years were successful academically, producing exam successes in chemistry, zoology, and botany, but less successful socially, producing a definite absence of the famed English reserve and stiff upper lip. Following a year in the “smoke” at Queen Mary College, University of London, he negotiated a transfer to University College North Wales, Bangor, to be closer to the sea. He graduated with a First in 1960 and promptly celebrated by marrying a softly spoken Welsh beauty, Marianne. He then took the long walk over the bridge from Bangor to Menai Bridge to obtain a Ph.D. in double quick time in 1963 under the benign aegis of Professor Dennis Crisp, working on the reproduction and larval ecology of mussel larvae.

Desirous of working with the best and expanding his scientific horizons, Brian and Marianne packed their bags and took off for the various corners of the world. Two years in Helsingør, Denmark, as a Churchill Foundation postdoctoral fellow working under Gunnar Thorson (University of Copenhagen) on the growth and metamorphosis of bivalve larvae, was followed by one year as a Visiting Research Fellow at the University of Sao Paulo, Brazil. Here Brian was introduced to respiratory physiology by Kjell Johansen (University of Washington, U.S.A.), so sparking off a life-long interest in the comparative physiology (functional biology) of bivalves.

Eventually, the lure of the tropics was overcome, presumably by the beer and “singing in the hills” of Wales, as Brian returned to spend two years as a Senior Research Fellow at the Shellfish Research Laboratory, Conway, working on the settlement and gregarious behavior of oyster larvae. This was followed by six years as a lecturer in the newly formed School of Biology at Leicester University, where residence in England's heartland was overcome by the construction of excellent recirculating seawater facilities and the choice of the hardy mussel *Mytilus edulis* as the experimental animal. During this period, a “tropical fix” was obtained via a Nuffield Research Fellowship, working six months at the University of Kuala Lumpur, Malaysia, and six months at Phuket Biologic Laboratory, Thailand, on the physiology of mangrove bivalves. In these early years, scientific productivity was matched by reproductive productivity, with the birth of daughters Julia in 1964 and Siân in 1968.



In 1973, Brian moved to Plymouth as a Principal Scientific Officer at the new Institute for Marine Environmental Research (IMER), working on the functional physiology and ecology of mussels. Stardom and relative fortune rapidly followed as Brian ascended the scientific and managerial ladder of fame. Promotion to Senior Principal Scientific Officer was followed by appointments to Director of IMER (1983), Director of the Plymouth Marine Laboratory (PML) (1988; formed from IMER and part of the Marine Biologic Association, U.K.), and finally in 1994, the dizzy heights of Director of the Center for Coastal and Marine Sciences (CCMS, comprising PML, Proudman Oceanographic Laboratory, and Scottish Association of Marine Sciences). Directorial qualities were tested to the full in orchestrating the delicate creation of PML and navigating the choppy waters of the genesis and functioning of CCMS. But enough was enough of managerial time consuming research time, and in 1997 Brian swapped the desk for the bench and became Research Professor and Deputy Director at the Center for Research on the Ecological Impacts of Coastal Cities, University of Sydney, Australia. He held this position until 2000, using oysters to extend work on the role of genetic variation on feeding and growth of bivalves, in the field of evolutionary physiology.

Science has been the major driving force in Brian's career, and his contribution to bivalve physiology, ecotoxicology, and adaptive biology is immense. His talents at the bench were manifest from the beginning in the rearing, handling, and experimentation of larval to adult animals. He sensed early on that bivalves were far more complex and interesting in their functional biology than was commonly appreciated, and that by applying relatively simple physiologic principles, it was possible to understand functional attributes. He was intrigued as to how such attributes could be used to analyze environmental quality, as well as understanding the adaptive features of the animals themselves. As different genetic stocks became available, so he researched the balance between environmental and genetic factors in determining phenotypic traits, leading to his current interest in the evolution of life histories.

He led substantial research groups from Leicester onwards, siring sixteen Ph.D. students, including a number of talented physiologists and the "odd" biochemist. Attracting a wide multidisciplinary team, the *scope for growth* and related approaches were developed, the legacy of which is that biologic effects measurements in mussels are today used worldwide in pollution monitoring. In later years, his bivalve research focused on the molecular bases underlying the physiologic advantages of genetic polymorphism, slower protein turnover being shown to explain faster growth. Studies on the interrelations between seston and bivalve feeding have helped define conditions for sustainable environmental shellfish aquaculture. Throughout his research career, Brian has benefited from and enjoyed collaborations with students, post-doctoral fellows, and fellow scientists, both at home and around the world. He has published some 180 primary papers, reviews and book chapters, and research funding has been obtained from many national and international grants.

Under Brian's directorship, IMER and PML continued to flourish into a major force in marine biology, attracting a host of talented staff and international visitors. In addition to the usual directorial qualities, this was achieved by Brian's own research pre-eminence and enthusiasm, plus a multidisciplinary breadth of knowledge that gave every scientist a fair shout and throw of the dice. Whatever the climate, fundamental studies were always encouraged. Inevitably, time for hands-on research was reduced, but ties were maintained by Visiting Research Fellowships to the State University of New York and Universities of Cape Town, South Carolina, and California at Davis. When schedules permitted, Brian would also be found back in the physiology laboratory, crouched over equipment, with concentrated disposition and faithful tea towel over the shoulder. And the first was always there! When a younger colleague quipped that it was good to see an old pro back at the bench, it was intimated where a scientific leg with scientific foot and boot attached might be heading if such flippancy persisted! And the same fire was taken to cricket matches with rival laboratories where no quarter was asked and none was given! In one infamous game, a foreign visitor, ignorant of the rules, was kept in conversation way outside his line of safety, while Brian snook up and dismissed him by whipping off his bails (for the non-cricketers amongst us, the aforementioned items refer to small horizontal wooden structures and not to a part of the man's anatomy)!

Such a distinguished career inevitably brings honors and accolades, and Brian has collected more gongs than you would find on a field marshal's chest. These include Honored Life Member Award of the National Shellfisheries Association, for which he is particularly pleased; Professorial Fellowships at the U.K. Universities of Plymouth, Sheffield, and Wales at Swansea; Honorary Fellowship at his *alma mater* University of Wales at Bangor; and Fellow of The Institute of Biology, the Zoological Society of London, The Royal Society of Arts, and The European Environmental Research Organization. Not surprisingly, word eventually reached the palace, and in 1998 he was awarded the Order of the British Empire for services to marine science. He has served on some thirty national and international committees, and seven international journals, including managing editor of the *Journal of Experimental Marine Biology and Ecology*.

Brian is an avid and accomplished single-handed sailor, and has spent much of his later years exploring the English Channel and further afield to Ireland, Scotland, and the Atlantic coasts of Spain. Avoiding the offshore passages, Marianne sensibly likes to join Brian once the boat has arrived at a pleasant cruising destination. I, along with other students, owe Brian much for being shown the correct way to do research, with thoroughness, no compromise, and integrity. I remember fondly the laugh to shake and warm your socks, the decisiveness (when it was time to go, it was time to go!), and the perceptive reasoning that cut straight to the heart of a debate amid the whirring of a cacophony of disparate arguments. Brian continues to work on the Australian study and to sail into various scientific and nautical ports. I can see him now, standing on the poop deck, gazing at the horizon, a broad smile alternating with a furrowed brow and intent peer that would send any perfect storm scuttlin' for cover! Sail on science boy, and congratulations on a career well done!

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