

Professor Ian Potter

Professor Ian Potter, together with his many research students, colleagues and Australian and international collaborators, has made exceptional contributions to the scientific knowledge of the (i) biology and (ii) community ecology of fish and benthic invertebrates in marine and estuarine waters throughout Western Australia, and to the (iii) ecology, systematics and physiology of lampreys Australia-wide.

Ian's vast contribution to Australian marine and estuarine science, which he started in the mid-1960s and continues to maintain as a Research Professor in the Centre for Fish and Fisheries Research (CFFR) at Murdoch University, is reflected in part by the ~370 journal publications and various book chapters he has authored or co-authored in the above fields.

Ian's extraordinary drive and productivity is complemented by his extensive research impact at a world scale, which is demonstrated by his position on the Thomson Reuters ISI list of highly-cited researchers in the field of Plant and Animal Sciences, where he is one of only 20 Australians or those affiliated with an Australian university.



Ian's research has not only greatly expanded the knowledge base of Australian marine and estuarine faunas, but has been vital in informing the strategies of fisheries and environmental managers. As stated by Professor Peter Rogers (CEO, WA Department of Fisheries, 1991-2006), "The work undertaken and led by Ian has been fundamental to the understanding of nearshore marine and estuarine species and their habitats and the interpretation of research for fisheries management...". Professor Norm Hall (Principal Research Scientist, WA Department of Fisheries) further reiterates that "Ian has, without doubt, provided much of the drive, attention to detail and demand for quality that has been key to the publication of many top quality papers in this field. The information and data produced by those studies are invaluable for the ongoing assessment and management of targeted species."

Perhaps Ian's most important legacy, however, is his tireless commitment to the training of younger scientists, demonstrated by the 60+ Honours and 40+ PhD students he has supervised to completion. This led to Murdoch University and the Australian Fisheries Research and Development Corporation supporting Ian to develop a Murdoch 'Centre of Excellence' in fish and fisheries research in 2000 to further assist with providing high quality training to the next generation of fisheries biologists and aquatic ecologists. His scientific rigour, drive for exploring the best contemporary approaches and extensive collaborations with many world-renowned scientists has rightly earned Ian and this Centre the reputation of being the premier provider of research training in fisheries biology in WA. Indeed, many of the State's fisheries biologists were initially trained under his supervision. These include Dr Alex Hesp (Research Scientist, WA Department of Fisheries), who states that "Ian's dedication and generosity towards his students is exemplified by the numerous occasions on which he has worked with students over weekends and holidays to help them complete their theses and publish papers. In commenting on his students' work, they feel he has surely kept his favourite red biro-making company afloat!"

A brief summary of Ian's contributions to Australian marine and estuarine research in each of his main areas of interest is provided below.

Biology of key fish and invertebrate species

Ian and his numerous co-workers have made a massive contribution to the biological understanding of many recreationally and commercially important fish and crustacean species, encompassing crucial information on attributes such as their growth, reproductive age and dietary characteristics. In many instances, these data were the first available and have provided 'cornerstones' for the sustainable management of targeted species, such as the ability to set reliable minimum legal lengths at capture and bag limits. These biological studies have included many iconic fish species such as Flathead, Black Bream, King George Whiting, West Australian Dhufish and Western Blue Groper, to name a few.

Ecology of fish and benthic invertebrate communities

The first comprehensive and widely accessible studies of the fish and/or benthic invertebrate communities in various estuaries and coastal areas throughout WA were, in several cases, undertaken by Ian and his co-workers. These studies provided seminal information on the biodiversity of these environments, their importance as fish nurseries, resident areas or migratory routes and their uniqueness in a global context. The 90+ papers that Ian and his collaborators have published in this field since the 1970s have continued to build an extensive knowledge base for researchers and managers, providing wide-ranging data on faunal community structure, their relationships with the environment and, in some cases, extremely rare multi-decadal data sets for assessing long-term ecological change and ecosystem health.

Ecology, systematics, and physiology of Australian lampreys

Ian has in many respects pioneered the understanding of lamprey ecology in Australia and, in conjunction with several other researchers, the taxonomy and physiology of lampreys worldwide. In undertaking the first detailed study of southern hemisphere lampreys for his PhD in the mid-1960s, he discovered the first and, to this day, the only, non-parasitic lamprey species in the southern hemisphere (*Mordacia praecox*). This and subsequent work led to Ian and his co-workers revising the taxonomy of lampreys worldwide, and later to conducting seminal studies of lamprey morphology, systematics, karyology, biochemistry and, more recently, visual systems.