

A 75th Birthday Tribute to H. B. S. Womersley

At age 75, Emeritus Professor Bryan Womersley is actively continuing his pursuit of scientific excellence. His current goal, completion of the *Marine Benthic Flora of Southern Australia*, constitutes part of a publication career spanning 52 years. Throughout that career, Prof. Womersley has been uncompromisingly committed to quality research and quality publication.

Hugh Bryan Spencer Womersley, born on 19 November 1922 in Bristol, England, arrived in Perth, Western Australia on 25 September 1930 where his father had accepted a position in C. S. I. R. (now the Commonwealth Scientific and Industrial Research Organisation). The family moved to Adelaide at the beginning of 1933 when his father was appointed Entomologist at the South Australian Museum.

Bryan's association with the University of Adelaide began in 1941 as an undergraduate student; his B. Sc. was conferred in 1943 based on studies in botany, bacteriology, chemistry, biochemistry, physics and zoology. His B. Sc. Honours degree, conferred in 1944, involved a project on the development and metabolism of copper-deficient oat plants carried out under the supervision of Prof. J. G. Wood, and it resulted in his first (and only non-alga) publication (Wood and Womersley 1946).

During his third-year botany course (1943), Bryan became impressed by the dearth of knowledge of Australian marine algae, and during a holiday trip to Kangaroo Island, south of Adelaide, the richness of the marine algal flora became apparent to him. At that time, active research on southern Australian marine algae was virtually non-existent, and, thus, after completing his Honours degree, Bryan's interests (1945) became focused on marine botany and were supported initially by a University Research Scholarship of £140 per annum. His subsequent degrees (M. Sc., 1947; Ph. D., 1952; D. Sc., 1960) from the University of Adelaide are all based on marine algal research.

In 1946, while working as an M. Sc. student, Bryan was asked by Prof. Wood if he would be interested in a teaching appointment as Demonstrator. Bryan responded positively, but when a letter arrived from the University Registrar three weeks later, it contained an offer of appointment to a lectureship, which at that time carried immediate tenure. Bryan held positions as Lecturer (1946–1949), Senior Lecturer (1950–1960), Reader (1961–1973) and Professor (Personal Chair) (1974–1987) of Botany at the University of Adelaide, and he was appointed Emeri-



Professor Bryan Womersley
Photograph taken in 1978.

tus Professor in 1987. Bryan currently is the Honorary Associate and Curator of Algae at the Botanic Gardens of Adelaide and State Herbarium.

The University of Adelaide Department of Botany, under Prof. T. G. B. Osborn and then Prof. J. G. Wood, had developed a strong line of research in terrestrial ecology which was reflected in Bryan's undergraduate botanical training. This, coupled with his marine interests, led to intertidal ecological studies of the coasts of Kangaroo Island in 1945. Almost immediately, however, Bryan realised that considerable doubt and confusion attended correct application of many of the names to the species of marine algae present, and that detailed taxonomic studies were needed to rectify this situation. Consequently, his research also turned to the comparative morphology and taxonomy of various groups of marine algae, and his publications during the period 1946–1958 (see

list) reflect a dual interest in marine algal ecology and taxonomy.

Bryan soon appreciated that besides thorough comparative morphological and anatomical data, quality taxonomic research is dependent upon the study of type specimens, a knowledge of which underpins nomenclatural stability and the correct application of names to taxa. Consequently, during his first period of study leave from the University of Adelaide (December 1951–February 1953), he located and checked the type specimens of nearly all of the then described species of southern Australian marine algae deposited in British and continental European herbaria. Supported by a Carnegie Corporation Travel Grant, he also worked for six months during this time with Prof. G. F. Papenfuss at the University of California, Berkeley and visited other North American phycologists. Knowledge gained from this period, combined with extensive collecting and field experience, provided a firm, permanent foundation for Bryan's subsequent taxonomic studies.

Another important ingredient of quality taxonomic research is a command of all pertinent literature. The 1951–53 study leave period also allowed Bryan to meet with most of the active marine phycologists in North America, the British Isles and continental Europe, to exchange reprints, and to obtain copies of a number of other publications relevant to southern Australian marine algae. His personal library, which has grown throughout his professional career and which he donated to the Botanic Gardens of Adelaide and State Herbarium in 1992, provided another essential foundation stone for his taxonomic research and a rich resource for his Ph. D. students, including the senior author of this tribute. Equally importantly, Bryan set forth to document all published records of southern Australian marine algae as well as significant studies of these and related species from other parts of the world by constructing an annotated card index of records; this took place long before the advent of personal computers.

Based on literature resources and knowledge gained from his field experience, his 1951–53 study leave, and his card index, Bryan published a critical survey of the Chlorophyta of southern Australia (1956), the first modern synthesis of marine green algae occurring in this area. It would be a further 28 years, however, before the first part of his monumental *The Benthic Flora of Southern Australia*, containing an account of southern Australian Chlorophyta, would appear. [This volume also includes treatments of the seagrasses (by E. L. Robertson) and the Charophyta]. During the intervening period (1957–1983), Bryan continued his studies of a number of groups of Chlorophyta, Phaeophyta and Rhodophyta, authored or co-authored additional intertidal and subtidal ecological papers, undertook four further periods of study leave (December 1961–January 1963; May–November 1969; April–November 1976;

July–December 1982), participated as marine botanist in the Royal Society of London Expedition to the British Solomon Islands (1965), supervised the Ph. D. studies of nine students, and wrote a review on the marine algae of Australia (1959).

While early ecological interests were largely put aside to taxonomic studies, the advent of SCUBA opened collaborative opportunities for subtidal work, with the diving undertaken by Scoresby Shepherd and others. Four joint publications (see list), representing the earliest subtidal algal ecological studies on southern Australian coasts, resulted from this work between 1970–1981.

Another major contribution made by Bryan was in his role as the inaugural President of the Australasian Society for Phycology and Aquatic Botany (ASPAB), founded in May 1980. Bryan provided critical leadership and guidance in the early years of the Society. Bryan also has served as President of the International Phycological Society (1970) and President of the Royal Society of South Australia (1966–1967).

Part I of *The Marine Benthic Flora of Southern Australia* (1984) not only constituted a personal milestone for Bryan, but was immediately recognised internationally for its excellence by receipt in 1985 of the first G. W. Prescott Award of the Phycological Society of America. This award is presented biennially to the author of the most outstanding scholarly book devoted to phycology. Part II of his flora, dealing with the Phaeophyta and *Vaucheria* (Chrysophyta), appeared in 1987, twenty years after his earlier critical survey (1967) of the group. Two of the four instalments of the Rhodophyta also have appeared: Part IIIA (1994) includes the orders of Bangiophyceae and the Florideophyceae orders Acrochaetiales, Nemaliales, Gelidiales, Hildenbrandiales and Gigartinales *sensu lato*; Part IIIB (1996) covers the Orders Gracilariales, Rhodomeniales, Corallinales and Bonnemaisioniales. Part IIIC, containing the families Ceramiaceae and Dasyaceae (Order Ceramiales), is being prepared currently and will be followed by Part IIID which will include the families Delesseriaceae and Rhodomelaceae (Order Ceramiales). When done, this flora will serve as a benchmark for all future taxonomic studies of southern Australian marine algae. It already serves as a model of excellence in floristic accounts, especially in relation to the wealth of detail provided for each species and the linking of all illustrations to particular herbarium specimens which can readily be found and examined by others.

It is important to remember that no flora is ever complete, however great the underlying scientific rigour and however high the standards of the author(s). Bryan has clearly indicated this in the preface (p. 7) to Part I of *The Marine Benthic Flora of Southern Australia*. Rather, a quality flora represents an update of existing knowledge and an update of hypotheses relating to classification and biodiversity

that are to be tested by further research in accordance with the scientific method. *The Marine Benthic Flora of Southern Australia* without doubt is a flora of the highest scientific rigour and quality and, as such,

constitutes a lasting tribute to one of the outstanding phycollogical scholars of the 20th century.

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