

David Goodall - Multiple decades devoted to the service of ecological knowledge, a whole century devoted to the enjoyment of life



David William Goodall

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Dear Professor David Goodall:

We, your colleagues from the Editorial Board of Tropical Ecology, feel very honoured and proud for having you among us. Your work has been a major source of inspiration for generations of scholars, your life is a source of inspiration for each and every one of us. We send to you our warmest congratulations for your memorable and meaningful 100th birthday, celebrated on 4th April 2014.

Editorial Board

Born in London on 4th April 1914, David was educated at the Stationers' Company's School, St. Paul's School and Imperial College (University of London). Graduating Ph.D. in 1941, he undertook research in plant physiology at the East Malling Research Station in Kent, England, and later at the West African Cacao Research Institute, in Ghana.

In 1948 his career changed abruptly with his appointment as Senior Lecturer in the Botany School at the University of Melbourne, Australia. Having enjoyed the academic environment of Melbourne, David moved to the University College of the Gold Coast (now Ghana) and then to the University of Reading, in England, where from

1954 till 1956 he was Professor of Agricultural Botany.

After a relatively short time at Reading, David returned to the Tropics to establish, under the auspices of the CSIRO Division of Plant Industry, a Tobacco Research Station at Mareeba, in north-eastern Australia. Here his responsibilities were largely administrative leaving little time for research and so in 1961 he accepted transfer to the Division of Mathematical Statistics in Perth. Here he acted as an advisor on statistical problems and undertook research on the vegetation of arid shrub-lands.

His reputation now well established, in 1967

he accepted the offer of a Professorship at Irvine in California and later transferred to Logan in Utah. This appointment was his last academic appointment for in 1974 he returned to Australia and spent the remainder of his professional life in Perth as a Senior Principal Research Scientist, CSIRO Division of Land Resources Management.

As might be expected of a senior scientist, David accepted a series of professional responsibilities. Amongst these was the supervision of ten Masters and four Doctoral candidates. He was an active participant in the International Biological Program, being on the Australian National Committee (1965-1967), United States National Committee (1968-1973) and the International Arid-Lands Steering Committee (1969-1974). In 1968 the U.S. National Academy appointed him Director of the Desert Biome Program, a post from which he resigned in 1973. From 1972 until 1978 he was consultant for the program "Systems Analysis of Mediterranean Desert Ecosystems of Northern Egypt".

Additional responsibilities included the writing of book reviews and semi-popular articles, including the entries for tobacco in *Chambers Encyclopedia* (1967) and "Deserts: Life in the desert" in *Encyclopaedia Britannica* (1974). Another task was that of serving on the editorial boards of scientific journals, several of which were devoted to ecological research. These were *Vegetatio* (1958-1980), *Annual Review of Ecology and Systematics* (1968-1971), *International Journal of Ecology & Environmental Science* (1974-1982), *Oecologia Plantarum* (1974-1986), *Acta Oecologica* (1980-1984) and *Tropical Ecology* (2008-present).

Following his retirement David has undertaken teaching, research and consulting in Sweden, France, Italy, United States and Australia. Of these commitments several were long-term. From 1980 until 1996, under the auspices of the Swedish Academy of Sciences, two weeks or so of most years were given over to studying the growth of lichens at Abisko in Lappland; during the same period he worked with the staff of the Department of Biology at the Università degli Studi di Trieste developing computer methods for the classification of organisms and vegetation; from 1988 until 1992 he was a consultant to the Victorian Department of Conservation and Natural Resources, developing a model of eucalypt forests to guide their management.

The range of David's research has been astonishing and far exceeds that suggested by his publications. Trained as a plant physiologist he published on growth rates (lettuce, cocoa), germination (lettuce), translocation (tomatoes) and mineral nutrition and deficiency (barley, lettuce, wheat, apples). One outcome of the nutrition studies was the publication of "Chemical composition of plants as an index of their nutritional status" co-authored with Prof. F.G. Gregory, his mentor at Imperial College.

Due to the influence of Prof. John Turner, he became involved with the ecological studies being undertaken on the alpine grasslands of Victoria for which a considerable amount of point quadrat data had been collected. Having considered these records and his own data from the Victorian Mallee, David devised a method for describing vegetation using positive interspecific correlations. This exercise led to the development of several quantitative methods for classifying vegetation and the use of ordination (a term he coined) to describe vegetation across continua such as ecotones.

Many of these methodologies were taken up by taxonomists and others, sometimes with David as a collaborator. Such joint research was undertaken on diverse groups including grasses, sundews, livestock and the human G-group chromosome.

Given his background in both biology and mathematics it is not surprising David's interests included ecological modelling and along with co-authors he wrote many reports dealing with the underlying concepts and methodologies for making models including those for the management and growth of plants in semi-arid grazing lands. Many of these papers were published as *US/IBP Desert Biome Progress Reports*.

In addition to these major ecological research interests David had many others. These included the structure and species composition of desert seed banks, the role of probabilistic similarity indices in taxonomy and in recent years "Human Evolution".

Nonetheless, notwithstanding his immense literary output this does not do justice to the extent of his research, much of which remains unpublished. For example, the results of his Lappland lichen research were never published, due to the indisposition of a collaborator and his ecotone study ceased when he left Mareeba.

During his long and illustrious career David's scholarship has been widely recognised as indicated by his membership of 14 learned Societies and receipt of both the Distinguished Statistical Ecologist Award at the VI International Congress of Ecology (1994) and the Gold Medal of the Australian Ecological Society (2008). He has also been an exemplar to many and will long be remembered through his published works, and especially the massive "Ecosystems of the World" (Elsevier, Amsterdam), 1974-2005, of which during

his retirement, he was Editor-in-Chief for all 30 volumes. Seemingly indefatigable, his most recent paper was published in "*Plant Biosystems*" a few weeks ago.

Professor Emeritus H. Trevor Clifford

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