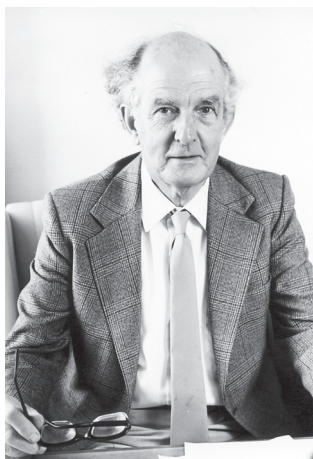


Obituary

Albert Russell (Bert) Main, FAA, CBE 1919—2009

ALBERT Russell Main, Emeritus Professor of Zoology and Senior Honorary Research Fellow at The University of Western Australia, had a most distinguished career as a scientist and public figure and greatly influenced the course of science and nature conservation, particularly in Western Australia.

Born in Perth, Bert grew up on a vineyard in the Swan Valley situated within easy access to the then undeveloped banksia woodlands on the sandy soils to the west of the Guildford clays. He was fortunate in that during his impressionable years he enjoyed accompanying his grandfather almost every weekend on walks through these woodlands and so was introduced to field studies of natural history of plants, as well as vertebrates and invertebrates. Undoubtedly these early experiences prepared the base on which his later interests developed.

Bert began his working life as a clerk in the State Public Service. Before World War II he joined the army reserve, commonly known as the “militia”, and after the outbreak of war moved to the Australian Army. Bored with an Australian-based army life he “deserted” to the RAAF, where his mathematical skills were appreciated, and was trained as a navigator. Transferred to Britain, he became a Warrant Officer Navigator on Lancaster bombers and commenced active duty, surviving several sorties before being shot down over Germany early in 1945, in the middle of winter. After parachuting safely into the snow he eluded capture for several days but was eventually interned as a prisoner-of-war. He saw out the remainder of the war in various camps, sometimes strategically placed by the Germans in the vain hope that the Allies would not attack heavily used railway junctions immediately adjacent to large numbers of air force personnel. The privations of prison-camp life were such that at liberation he weighed only 43 kg.

On returning to Australia he matriculated at night school and, in 1947, entered the Zoology Department of The University of Western Australia as part of a unique infusion into academia — the returned servicemen’s enrolment. Bert graduated with First Class Honours

in Zoology in 1950 and won a Fullbright Scholarship to the University of Chicago during 1950–51 where his interest in the new science of ecology was further stimulated. Following the period in Chicago, he balanced his American experience with several months at Oxford, at Elton’s Bureau of Animal Ecology. On return to The University of Western Australia, he was appointed Lecturer in Zoology in 1952. In the same year he married Barbara Anne York, well known for her research on spiders.

During the 1950s and 60s Bert conducted and published seminal research on the evolution and ecology of Australian animals. He is probably best known for his work on frogs and marsupials, but his interests and expertise were widely spread, encompassing terrestrial molluscs, reptiles, plants, freshwater fish, crustacea, spiders and many other groups. Indeed, his interests were not so much in particular groups of species as in the whole fauna and flora and their relationships with their environments. His talents of naturalist, laboratory scientist and brilliant theoretician plus an enormous capacity for hard work combined to enable him to get quickly to the heart of many ecological problems.

Bert was awarded a Ph.D. in 1956 and became Reader in Zoology in 1961. In 1967 he was appointed to a personal Chair in Zoology at The University of Western Australia, retaining this position until his retirement at the end of 1983 when he became Professor Emeritus and Senior Honorary Research Fellow. He served the wider academic world as a member of the Australian Universities Commission from 1971 to 1977.

Many academic honours came in recognition of his contributions to science. These included a Carnegie Travelling Fellowship in 1958, election as Fellow of the Australian Academy of Science in 1969, the Britannica Australia Award for Science in 1970 (with Professor H. Waring), Honorary Foreign Member of the American Society of Ichthyologists and Herpetologists in 1975, Honorary Membership of the Royal Society of Western Australia in 1982, Honorary Doctor of Science from The University of Western Australia in 1987, and the Ecological Society of Australia Medal in 1988.

Perhaps one of his greatest contributions to Australian science was through his students.

Many obtained positions in Australian universities, in State conservation departments and in CSIRO, and these institutions have benefited greatly from Bert's influence and his rigorous training of students in ecology and evolution.

From his earliest days Bert believed in taking science to the public. He was a member of the Western Australian Naturalists' Club for many years and was very active in club affairs in the 1950s. His commitment to enthusing others about natural history and ecology is reflected in the publication, in 1954, of two of the early WA Naturalists' Club Handbooks, *A key to the frogs of south-western Australia* and *A guide to naturalists*. He was a member of ANZAAS for many years and was President of Zoology Section at the Perth Congress in 1983. He was a Fellow of ANZAAS and was awarded the Mueller Medal in 1989.

Bert always maintained an interest in and a major commitment to conservation, particularly nature conservation. His first involvement with Government was as a member of the Fauna Protection Advisory Committee (FPAC), set up to advise the State Government on the "protection" of animals. Bert combined his knowledge of ecology with a profound understanding of how Government departments and politicians operate to make numerous effective contributions to the conservation of wildlife. The FPAC, under his guidance, was able to convince Government that the key to wildlife conservation was the reservation of habitat and the number of fauna reserves began to grow.

In 1958, the Australian Academy of Science, concerned that Australia was not taking adequate steps to create National Parks and Nature Reserves, set up a National Parks Committee. Each State was asked to establish an expert sub-committee and Bert became a driving force in the Western Australian Sub-Committee, which finalized its work with a report released in 1962. Many of the areas recommended for reservation as a result of this report are now some of the State's best known national parks and nature reserves — among them are Prince Regent Nature Reserve, Karijini (Hamersley Range) National Park, Barlee Range Nature Reserve, Queen Victoria Spring Nature Reserve, Great Victoria Desert Nature Reserve, Nuytsland Nature Reserve and Drysdale River National Park. The declaration of many of these was facilitated by a Reserves Advisory Council, chaired by Cyril Gibson, the Under-Secretary for Lands and including Bert among its members, set up to implement the Academy recommendations. It says much for the standing of the Council that it was able to persuade the Government of the day to declare the Karijini National Park at a time of massive iron ore development in the Pilbara.

In 1968, the FPAC was replaced by a statutory Authority — the Western Australian Wildlife Authority — and Bert became a founder member, continuing in this role until the Authority was superseded under the Conservation and Land Management Act in 1985. Bert's reputation on the FPAC and Wildlife Authority led to other appointments — he became a member at its inception of the Western Fisheries Research Committee, and was also a member of the Zoological Gardens Board (President 1979 to 1985), a member of the National Parks Authority (President 1980 to 1985) and a member of the Council of the Australian Institute of Marine Science from 1972 to 1979. He also chaired the Government's Greenhouse Coordinating Committee and a review of forest management.

Western Australians probably owe their greatest debt to Bert for his work on the Environmental Protection Authority (EPA). He was a member of the Authority from its creation by Act of Parliament in 1972, becoming Deputy Chairman in 1981 and Chairman from 1982 until his retirement in 1985.

One of the EPA's first decisions was to set up a Conservation Through Reserves Committee to continue the work Bert started on the FPAC, as a member of the W.A. subcommittee of the Australian Academy of Science Committee on National Parks and as a member of the Reserves Advisory Council. The reports of this Committee to the EPA resulted in the declaration of many new national parks and nature reserves throughout the State and provided the basis for nature conservation for many years to come. Conservation reserves that resulted from the CTRC Reports include Rudall River National Park, Gibson Desert Nature Reserve, Neale Junction Nature Reserve, Plumridge Lakes Nature Reserve, Yeo Lake Nature Reserve, Peak Charles National Park, D'Entrecasteaux National Park, Shannon National Park, Collier Range National Park, Millstream-Chichester National Park, Ningaloo Marine Park and the consolidation and enlargement of the Leeuwin-Naturaliste National Park.

The EPA's main duty was to assess the environmental impact of development proposals. Since the Environmental Protection Act had "teeth", this work often resulted in dealing with complex and controversial issues and in glaring publicity. Bert absolutely refused to be swayed or intimidated by pressure from lobbyists and politicians alike and was particularly unwilling to be rushed into quick decisions. As a result the Authority quickly developed a reputation for fair and sensible recommendations and its decisions were generally accepted by most sectors of society. His encyclopaedic knowledge of the State, its biota and the

ecological literature frequently amazed those with whom he dealt. It certainly never paid to argue with him unless you were very sure of your grounds. In 1981, in recognition of both his public service and his scientific research, Bert was made a Commander in the Civil Division of the Order of the British Empire.

As his interest in environmental management grew, Bert turned his academic talents to the problems of management of habitat and endangered species, producing a number of research and review papers that have had considerable influence on land and wildlife management agencies. While many of his early contributions to nature conservation revolved around the selection and declaration of conservation reserves, his later interests were strongly directed towards conservation management and encouraging scientists and decision-makers to anticipate events, rather than reacting once decisions have been made.

A theme throughout Bert's work was the need to develop a theoretical basis for the management of species, ecosystems and natural areas. As early as 1954 he published a paper titled "The role of pure research in conservation", which presented ground-breaking ideas for those days. Early papers on the need for reserves to be of sufficient size and the need for numerous reserves spanning a range of sizes and geographic locations led to discussions of the place of rare species in ecosystems and the need to manage them. Then followed papers on aspects of reserve management, including nutrients, fire, the effect of insect grazing on post-fire regeneration and the response to stress by vertebrates. Next came work on the need to manage whole landscapes and the need to integrate management of nature conservation reserves with other land uses; papers which emphasized the basic similarities in the resources required by all living things. The problems associated with the potential loss of biodiversity in conservation reserves were addressed and a possible approach to decision-making when faced with uncertainty was presented. Bert's early interest in the effects of past climatic changes on the evolution of the biota led to an interest in the effects of possible future climate change and he contributed papers on this subject as well.

Bert had a unique influence on the development of zoology and environmental conservation in Australia. His retirement was a far from inactive one and he continued to conduct and publish research, and write review papers and conference contributions covering a wide range of subjects. His love of field work was unabated: in 1988, for example, he participated in an expedition to document the biota of rainforests

in the Kimberley, helping Barbara collect spiders and writing the Foreword to the resulting book. Field work continued to the turn of the century and one of his last publications (in 2002) concerned a moth in the wheatbelt and its association with fire.

Bert is survived by Barbara and their three children Rebecca, Gilbert and Monica, and three grandchildren Eleanor, Marjorie and Harold.

Andrew A Burbidge

(This obituary is based on the author's biography of Bert Main published in the 1996 book *Gondwanan Heritage* eds S.D. Hopper, J.A. Chappill, M.S. Harvey and A.S. George (Surrey Beatty & Sons, Chipping Norton, NSW. My thanks go to Dr Barbara York Main for her help.)