

## **Alan Newsome**

Alan Newsome was born in Rockhampton, Queensland. He graduated from the University of Queensland in 1957, completed a Masters and PhD at the University of Adelaide in 1963 and 1967 respectively, and was awarded a D.Sc. by the University of Queensland in 1983. In 1966 Alan was recruited by CSIRO Division of Wildlife Research, and he stayed with this Division and its successors until retiring in 2000.

In the early 1960's Alan undertook groundbreaking research focussed on the dynamics of eruptive mouse plagues in South Australian wheat crops. Variations on his model of eruptive dynamics have underpinned most subsequent work on rodent plagues in Australia, and recent work on eruptive mouse populations in New Zealand beech forests.

Alan then moved on to detailed studies of reproduction, abundance, distribution and habitat preferences of red kangaroos in the mulga woodlands north of the MacDonnell Ranges in central Australia. This work provided the first insights into how red kangaroo populations responded, for example through reproductive adaptations, to the volatility of the environments they inhabit. Alan's work was also strongly linked to local aboriginal mythology concerning the creation of red kangaroos and other wildlife, and provided a basis for subsequent research on the species by Graeme Caughley and his co-workers.

In the mid-1960s, Alan initiated what became a 10-year study of dingoes and their principle prey populations in central Australia, with complementary studies in southeastern Australia. The results of this study strongly supported the notion that, under most circumstances, dingoes provided a net benefit to cattle graziers by limiting the abundance of native and introduced herbivores during periods of food shortage.

During the late 1970's and into the 80's, Alan took his interests in predators and their influence on prey populations under the volatile conditions of Australia's rangelands a step further, when he initiated ground breaking experiments at Yathong Nature Reserve in central New South Wales. Along with emerging evidence from fox control operations in Western Australia, these studies refocussed attention on the role that introduced predators played in the extinction of native mammals in parts of Australia.

Alan's pioneering research on predator-prey interactions in Australia was then used as a starting point for another ambitious research program that sought to understand how controlling the fertility of foxes would influence the ecosystems within which they occurred. This research was undertaken at Burrendong Dam, in central tablelands of New South Wales.

For over 40 years, Alan has played a key role in wildlife research and management in Australia, making fundamental contributions to our understanding of how plant-herbivore and predator-prey interactions influence animal abundance generally, and in arid and semi-arid systems more specifically. Alan's work has provided unique insights that have changed the way in which we think about and manage systems as diverse as out-breaking mouse populations in cereal crops, interactive predator-herbivore-vegetation complexes in arid and semi-arid areas, and introduced predators in grassland, scrub and woodland habitats. Alan's research has had a major influence on management agencies at both a technical and more heuristic level. In particular, Alan's research often made pest managers as well as scientists think beyond the simple issue of animal abundance. In doing so, Alan has left an invaluable legacy of ideas, approaches and hard-won data that will challenge, inspire and inform wildlife researchers and managers for generations to come.