

**An appreciation of the contribution of Dr John Gibb to New Zealand ecology**

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A generation of scientists, even of ecologists, has grown up for whom John Gibb is not a household name. This is not surprising as he retired in an official sense in 1981, though he continued to work and to publish until 2001. This essay presents a summary of John's achievements and his valuable contributions to ecology.

John was on the Council of the New Zealand Ecological Society for twelve years. He served on the editorial panel and as editor for the Proceedings, but even when those formal roles ended he was a perceptive referee for many papers published in the NZ Journal of Ecology. For five years John was our Member Bodies Representative to the Royal Society at a time when the senior academy was becoming a much more participatory body in the scientific community. He was president of our Society for two years from 1966 to 1967. John seldom gave papers at our annual conferences, preferring the pen, with which he was a master, to the podium. The Society made him an Honorary Life Member in 1985.



John Gibb was born in Puddletown in Dorset, England. It is one of a string of villages on the River Piddle (as he delighted in recounting) including Piddlethrethide and Tolpuddle, home of the famous martyrs deported for establishing a farm workers' union. His secondary education was at the ancient abbey school of Sherbourne

not far away; so much of his early life was spent in modestly wild rural surroundings where he cultivated his love of ornithology. He went up to St Edmund Hall, Oxford to read law but was waylaid by the Second World War. He became a captain in the Royal Artillery, surviving the siege and aerial bombardment of Malta. The imperative to search the skies for enemy aircraft was leavened for him by watching the great seasonal migrations of birds between Europe and Africa.

John returned to Oxford, after a year with the Forest Service in Burma. He put law aside in favour of ornithology to become assistant to a team in the Edward Grey Institute studying birds in woodlands and heathlands. He quickly outgrew his apprenticeship and was allowed to enter his research towards a D.Phil. degree. The result was a series of papers that founded his reputation and culminated with what has become a classic ecological work, a paper on the population, food and feeding of tits and goldcrests in pine plantations (*Ibis* 102, 1960). These works earned such respect from British ornithologists that they awarded him their Bernard Tucker Medal in 1956 and he duly gained his D.Phil. (Oxon). In those years John moved among some of the great names of ornithology, ecology and animal behaviour — Tinbergen, Elton, Lack, Southern, Moreau, Lorenz and Wynne-Edwards — people who were to condition much of his scientific thinking. He was also to use that powerful network in later years when he sent many young New Zealand ecologists for overseas study, not only to Oxford, and brought eminent ecologists to this country for sabbatical terms.

In 1957 John moved to New Zealand with his family, to join a team working on rabbits in the Animal Ecology Division of the DSIR. Birds were still his first love and he produced a small, and now classic, study of birds in Kaingaroa pine forest (*Proc. NZ Ecol. Soc.* 8: 1961). Legend has it he declared that if "they" thought he was going to study rabbits for very long they should think again. In fact, he was to spend the next ten years doing detailed and penetrating work that redefined predator-prey-food relationships and their management implications in this country (*NZ J. Sci.* 12 (3): 1969).

Whether his eyes dwelt on birds or mammals, making a seemingly mundane observation or a deep study, John was intrigued by a quite profound question: Why were there as many or as few as there were, and what governed the size of their populations? This scientific fascination is captured in his papers from 1968 (*Proc. NZ Ecol. Soc.* 15) and 1981 (*NZ J. Ecol.* 4), and the practical application of it in his monumental analysis of the autopsy of 17 000 rabbits from rabbit board operations (*NZ J. Ecol.* 8: 1985). These studies, and his advocacy in forums such as the Agricultural Pests Destruction Council, were instrumental in

changing conventional thinking from “extermination” to the managed and quantified control that prevails today for many pest species.

Science eventually gave way to management and in 1965 John became the Director of Animal Ecology Division. He quickly eliminated “Animal” from the title and established the Freshwater Section at Taupo, and the Orongorongo Valley Project, where a team of people would conduct integrated ecological studies of an entire forest ecosystem. He set out on a determined recruiting drive that included young, trained ecologists from overseas at a time when local universities taught ecology only as a small subset of botany and zoology. His staff became one of his most important legacies as they moved on into the wider Public Service and academic posts. The work done by the teams in the Orongorongo Valley, Hawkes Bay, Taupo and Nelson exemplified much of John’s scientific philosophy and management style. He was a great advocate of long-term studies that could give quantitative meaning to such casual terms as “normal”, “high” and “low” for populations; and to “severe”, “wetter”, or “colder” for environmental influences. His rationale was essentially simple: Unless you understand what is happening you cannot intervene sensibly to manage it. His own contribution to the Orongorongo work was a study of the sparse rabbit population in the catastrophe-dominated river bed. He defended the work of his so-called “gentlemen (and women) ecologists” against all comers and gradually had the satisfaction of seeing the fruits of such fundamental work applied by other agencies in environmental management in many ecosystems. Not least among the mechanisms to achieve that were the hundreds of critiques by his staff of environmental impact reports, management plans and legislation.

It is quite instructive in these days of constrained and competitive science programmes to look back on John’s management style. He believed in giving his staff freedom to explore within flexible boundaries. With that freedom went his expectation that what they did should be of the highest standard. His winnowing processes, through publications and seminars, were severe. Many an ego was bruised by his legendary red pen and incisive questions. He was not a prolific publisher himself but each of his fifty or so papers was crafted with great care. They may still be read as models of scientific insight and succinct prose. Unfortunately, his high standards and somewhat austere manner of speech belied a wit, humour and consideration that many, including his own staff, hardly knew.

Although John would talk and dispute about research till the cows came home, he was always self-effacing about his own considerable achievements. He never joined the touring international conference

set and he spent the overseas travel budgets on his staff rather than on himself. He did not solicit honours and received fewer than were merited by his talents and his contribution to ecology and to New Zealand science in particular. Not long after retiring, a debilitating illness began to cruelly deprive his lively, enquiring mind the opportunity to enjoy asking more questions about his beloved birds. However, it did not stop him analysing and writing-up accumulated work into his eighties.

John Gibb leaves two considerable legacies to New Zealand ecology: He fostered the infant discipline at a crucial juncture of science and environmental management; and he both demonstrated, and cultivated in others, the highest standards for the study and presentation of good science.

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## Papers cited

1960: Populations of tits and goldcrests and their food supply in pine plantations. *Ibis* 102(2): 163-208.

1961: Ecology of the birds of Kaingaroa Forest. *Proceedings of the New Zealand Ecological Society* 8: 29-38.

1968: The evolution of reproductive rates: are there no rules? *Proceedings of the New Zealand Ecological Society*. 15: 1-6.

1969: (with Ward, G.D. and Ward, C.P.). An experiment in the control of a sparse population of wild rabbits (*Oryctolagus c. cuniculus* in New Zealand. *New Zealand Journal of Science* 12 (3): 509-534.

1981: What determines the numbers of small herbivorous mammals? *New Zealand Journal of Ecology* 4: 73-77.

1985: (with White, A.J. and Ward, C.P.). Population ecology of rabbits in the Wairarapa, New Zealand. *New Zealand Journal of Ecology* 8: 55-82.