Charles W. D. Gibson 1952 - 2008

C Hambler

Charlie Gibson died of leukaemia on 6th October 2008. He was 56, and his death is a significant blow to ecology and conservation in the Thames counties, in Britain and beyond.

Charles William Donald Gibson was the only child of Vice-Admiral Sir Donald Gibson and Lady Gibson. His father had been Captain of the Ark Royal, and held senior posts in the Fleet Air Arm, but Charlie was drawn to the land, not the sea. He grew up in a number of British counties, and in Canada. He had particularly formative childhood experiences with wildlife such as butterflies in the woodlands in Dorset, and these insects remained amongst his favourites.

He studied Zoology as an undergraduate in Oxford, where he also did a doctorate on competition between grassland bugs in Wytham Woods, exploring the very subtle features that permitted similar species to co-exist in an area. His interest in travelling was fostered on university expeditions to the Sierra Nevada de Santa Marta Mountains in Colombia; he retained a lifetime longing to go back there but was prevented by the instability of the region. He married fellow Zoologist Julie Hamilton, completed his thesis, and went to live on Aldabra in the Seychelles, all within a few days. He and Julie remained on Aldabra for three years, in extremely rugged conditions, which left him a legacy of infection he never entirely shook off.

As a Royal Society Research Scientist he collaborated with Julie Hamilton on giant tortoise dynamics and nutrition, and produced a vegetation map. Aldabra supports about 100,000 tortoises, and few people other than Charlie knew how to find and weigh their eggs without damaging them. He showed competition between these large herbivores on this semi-arid grassland and scrubland, something that can be difficult to do in more disturbed African savannahs. This work has high relevance to controversies ranging from the impacts of Maasai livestock on game reserves to the impacts of elephants in southern Africa.

On Aldabra he also studied the process of succession (directional replacement of species through time) and proved that the frequency with which one plant species is replaced by another depends on the past history of the site, and varies from year to year, making predictions of the eventual species mix problematic. He was also amongst the first ecologists to be computer literate, and used this to classify and map the vegetation types of Aldabra using multivariate statistics. Such tools were revolutionary then, and following refinements, are now used widely in applied ecology, such as the National Vegetation Classification of Britain.

From 1979-1985, he was a Demonstrator in the Zoology department in Oxford, and over the years also became a Lecturer at four Oxford colleges. In 1981, he helped organise the 22nd British Ecological Society annual symposium in Oxford, resulting in a book, *Nitrogen as an Ecological Factor*. He was a good and dedicated teacher, committed to the tutorial system. His beloved and overly-friendly dog Nelson (often lying under his desk) could be almost as intimidating to students as the long pregnant pauses as he waited for an answer; he did not let you off the hook easily!

In 1981 Charlie took Clive Hambler, Philip Sterling and Tim Guilford to Aldabra, for further work on the tortoises. This awesome experience led all three students into careers involving conservation, and there are countless others he has inspired and helped in this way.

Charlie was a member of the council of the Berkshire, Buckinghamshire and Oxfordshire Naturalists' (now Wildlife) Trust (BBONT), active from 1983 until 1988.

Charlie was a friend of Charles Elton, the founder of modern ecology, and Elton gave him use of his room in the University of Oxford Zoology Department, where he worked amongst records and specimens of the Wytham Ecological Survey which was (and may still be) the most comprehensive inventory of any sizeable site in the world. Sir Richard Southwood also had great respect for Charlie, regarding him as one of the foremost field ecologists in the world.

Charlie and Julie Hamilton lived in Wytham from 1981-1992, acting as Warden, before moving to Wolvercote in north Oxford with their two children, Colin and Anna.

Working with Valerie Brown at Imperial College, London, from 1985-1990, and funded by the Nuffield Foundation, JNCC and NERC, Charlie established the Upper Seeds experiment at Wytham Woods, Oxfordshire. The project investigates the restoration of arable land to species-rich calcareous grassland. Virtually single-handed, he put up kilometres of sheep fencing on a former arable field, a remarkable effort drawing on his boyhood experience as a farm labourer. In over 20 plots he included replicated areas of different grazing, timing and intensity, looking for the most efficient way to gain interesting floristic and animal diversity. Ancient grasslands in the woods served as reference sites, target communities. He was amongst the first to recognise the importance of nutrient-stripping in promotion of plant richness, and amongst the first to test the method of planting a crop, without fertilizer, to draw nutrients from the soil in order to prime it for restoration.

Upper Seeds has generated a long string of publications, relevant to many habitats and cited in many contexts, and is amongst the most important grassland experiments in the world. However, its future now depends on finding resources to maintain fencing and grazing treatments and monitoring, in a context of long-term science being under-resourced. Charlie's second wife, also called Julie, is attempting to carry this work forward, with Simon Mortimer, Valerie Brown, ourselves and others. A helpful grant from the Ecological Continuity Trust helped ensure monitoring has continued uninterrupted since Charlie's death. Before decay set in and they were lost, Charlie's 120 quadrats have been permanently marked and mapped, permitting people other than Charlie (with his phenomenal memory) to find them. The project was linked to studies with Butterfly Conservation and others in the south of Britain, including comparisons of the effects of different grazing animals.

In his spare time, Charlie scoured Wytham for plants (and moths), and showed that ancient woodland "indicator" plants are not totally reliable in identifying ancient woodland soils. He showed their abundance at a site was more helpful than their presence, and he delighted in pointing out the bluebells on the Upper Seeds grassland.

Charlie left academia to become a founder of the ecological consultancy Bioscan (UK) Ltd., of which he later became Managing Director. He was one of the more formidable expert witnesses at Public Inquiries dealing with grassland, and had great professional integrity. A true, holistic, field ecologist, he worked on many types of organism, being as adept at finding newts or bats as he was at finding giant tortoise nests. He was a founder of the Institute of Ecology and Environmental Management, and worked generally to apply rigorous ecology to conservation. He imparted the need for replicated, controlled and statistically valid experimental design, and unbiased sampling methods, all too often lacking in site comparison, management, translocation and restoration experiments for conservation. As a volunteer, Charlie was a member of Council of the Berkshire, Buckinghamshire and Oxfordshire Naturalists' Trust for six years, from the 25th January 1983 to the 6th December 1988, and a lifelong supporter of the Dorset Trust for Nature Conservation.

Charlie's health deteriorated rapidly, leaving much unfinished work which friends and colleagues are attempting to continue. He has chapters in *Wytham Woods: Oxford's Ecological Laboratory* edited by Peter Savill and colleagues and published in 2010. In a thoughtful gesture by the university, Wytham Woods are now entered through Gibson's Gate

A somewhat private man, Charlie was noted for occasional loud eruptions when seriously annoyed, but also for his kindness, hospitality and great sense of humour. Few have his combination of practical and technical skills, mathematical and computing ability, and superb perception in natural history. He loved living in Wytham and Wolvercote, a regular sight in the pubs and in a surprisingly large number of vigorously-tended allotments.

There are many people who wished they had been able to spend more time with Charlie after his diagnosis of cancer, but the risk of infection meant he was not easy to visit. However, many people will therefore remember him at his lively best, an influential figure in many fields and many minds, with a legacy far greater than his lifespan.

Clive Hambler
clive.hambler@zoo.ox.ac.uk