

Derek Ratcliffe – obituary

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Derek Almey Ratcliffe, 1929-2005

With the sudden and unexpected death of Derek Ratcliffe at the age of 75, Britain lost the most outstanding field naturalist and conservationist of his generation. No one within Britain equalled his knowledge over so broad a range, from birds to butterflies, and from the ecology of montane and bog vegetation to the biogeography of mosses and ferns. His contribution to the study of natural history was matched by his record as a government scientist who made a major contribution to the policy and practice of nature conservation in Britain during the second half of the 20th century.

Derek Ratcliffe was born in London on 9 July 1929. His father was a cinema pianist (in the days of silent films), and his mother a teacher of French and English. His first encounters with wild creatures were in the parks and open spaces of London, and during holidays on his grandfather's farm near Cromer in Norfolk (as described in his memoir *In Search of Nature*, 2000). In 1938 the family moved to Carlisle, where Derek attended the local grammar school. As an intensely shy, usually silent boy, he joined the Carlisle Natural History Society, where he gained contact with a number of fine naturalists, notably Ernest Blezard, the curator of Natural History at the Tullie House Museum. Blezard was an all-round naturalist, with a deep knowledge of his home area, including the upland bird and plant communities which occupied so much of Derek's time in later life. In the role of mentor, Blezard taught the young Ratcliffe to make meticulous field notes, and also instilled in him a respect for the natural world, coupled with a strong sense of public duty. Especially in his early life, Ratcliffe was a quiet and shy person, but energetic and driven, with an insatiable hunger for knowledge and exploration of the natural world around him. He became an expert nest finder, with a special love of the upland birds that would occupy much of his later life.

In 1947, Derek won a scholarship to study zoology at the University of Sheffield. Soon bored by anatomy and dissections, he switched to botany, which under the influence of Professor Roy Clapham offered more scope for field study. After graduating with a first-class honours degree, he moved to the University of Wales at Bangor to study hill vegetation, under the tutelage of the like-minded Paul Richards. In 1956 he completed his PhD degree, and was offered a job with the Nature Conservancy to study and classify the hill vegetation of Scotland, along with Donald McVean. The results of this survey (*Plant Communities of the Scottish Highlands*, McVean & Ratcliffe 1962) made it possible for the first time to compare Scotland's montane and bog vegetation with that of Scandinavia and Central Europe. His more popular book *Highland Flora* (1977) provided a condensed, accessible account of plant life in the Highlands and Islands of Scotland. By then, Ratcliffe probably knew the mountains and moorlands of Britain better than anyone, and this remained true for the rest of his life. While his job had involved the study of vegetation, Ratcliffe never missed a chance to check the hills for birds, especially the Peregrines *Falco peregrinus* and Ravens *Corvus corax* that had fascinated him since boyhood.

In ornithology, he is perhaps known for his pioneering work on the effects of organo-chlorine pesticides on birds of prey, and as the discoverer of shell-thinning. Pigeon-fanciers had complained to the Home Office that Peregrines were ruining their sport, and wanted legal protection to remove them. The Home Office commissioned a survey by the British Trust for Ornithology, in order to assess the current status of the species. This survey, led by Derek, revealed that the Peregrine was in headlong decline, with fewer than half the known pre-war territories still occupied and large parts of the former range abandoned altogether. He had earlier noticed that Peregrines and other birds of prey often had broken eggs in their nests, and that clutches and broods were smaller than previously. On an idea attributed to Desmond Nethersole-Thompson and Joe Hickey, Derek began to examine the eggshells, comparing current with previously collected examples. He discovered that shells collected from the late 1940s were thinned, a timing that matched the introduction of DDT into widespread agricultural use. Residues of organo-chlorines had by then been detected in egg contents, as well as in the bodies of some birds. His paper describing shell-thinning in the Peregrine and others was published in *Nature* (1967), followed three years later by a much more detailed assessment, extending to a wider range of species, in the *Journal of Applied Ecology* (1970). Both papers quickly became what would now be called 'citation classics', stimulating much further work on eggshells around the world. The pioneering findings by Ratcliffe were thus replicated in region after region, wherever organo-chlorine pesticides had been used. However, from their introduction in the mid-1950s, the more toxic cyclodiene organo-chlorines, such as aldrin and dieldrin, were also killing birds outright, especially seed-eaters and their predators. So population decline in birds of prey seemed due to a combination of reduced reproduction (caused by DDT) and reduced survival (caused by aldrin, dieldrin and others). Despite every effort by the agricultural and agro-chemical lobbies to discredit the evidence, pressure to phase out the organo-chlorines gradually mounted, and in Britain their use gradually declined through progressive restrictions over the next 25 years. In the same period, eggshells and population levels of birds of prey gradually recovered, and by the 1990s the numbers of Peregrines, Sparrowhawks *Accipiter nisus* and other raptors in Britain were higher than at any time during that century, the intervening period having also seen large reductions in the scale of direct human persecution (in the interests of game rearing). From Ratcliffe's pioneering start, the pressure against the organo-chlorines soon became part of an international campaign. The European Union banned dieldrin from agricultural use in 1981 and DDT in 1986.

Among ornithologists, Ratcliffe's name is inextricably linked with the Peregrine Falcon. His lifetime's experience of this species was condensed into his book *The Peregrine Falcon* (1980, revised 1993). His book on *The Raven* (1997) is in similar vein, and just as well researched and thorough. Four aspects stand out in my mind as important general contributions resulting from his raptor work. He was the first to attempt a national survey of a relatively widespread species (under the aegis of the BTO Peregrine survey of 1962); the first to use nearest-neighbour distances as a measure of nest spacing and density, providing an easy way of comparing nest densities in different regions; and he was one of the first to think seriously about the role of nest-sites in limiting bird of prey breeding densities, and also about the presence and implications of surplus (non-breeding) adults in populations.

He also wrote other books, including *Birdlife of Mountain and Upland* (1990), *Lakeland* (2002), and just before his death he had completed two more, on *Galloway and the Borders* (in press) and *Lapland: a Natural History* (2005). In retirement, Derek and his wife, Jeannette (née Chan-Mo), set off each May to Lapland to study and photograph breeding birds. In conversation, he showed tremendous affection for the northern landscapes, and for the birds and plants he had found there. His earlier exploratory spirit seemed to have been re-kindled. After a dozen seasons spent near the Arctic Circle, he felt ready to commit himself to print, and had just set off for another northward expedition when he suffered a fatal heart attack on 23 May 2005.

In the 1970s, Ratcliffe masterminded a grand inventory of Britain's semi-natural habitats. To justify its programme of nature reserve acquisition, the Nature Conservancy was asked by Government to list and justify the places that were needed in order to complete a representative series of Britain's remaining habitats. Ratcliffe used this opportunity for further exploration of little known parts of Britain, developing methods for comparing disparate places with one another and evaluating their importance, using criteria such as size (area), naturalness, diversity and fragility. The resulting publication, *A Nature Conservation Review* (1977), was the most thorough survey of Britain's wild places ever made. It became the cornerstone of the Nature Conservancy's policy of site selection, and set a standard for nature conservation philosophy.

Ratcliffe made his reputation in the 1960s and 1970s with his contribution to pesticide research and the *Nature Conservation Review*. His promotion to Deputy Scientific Director at the age of 40 reflected his immense contribution and his versatility as a field ecologist. Three years later, after the break-up of the Nature Conservancy, Ratcliffe became Chief Scientist of a reorganized and now administrative Nature Conservancy Council (NCC). His job was to oversee a programme of commissioned research with the help of a team of specialists (mostly former colleagues). More importantly, however, in this position he had a say in policy, and his major influence was in getting NCC to take on the vested interests, including other government departments, who, through their policies, were rapidly destroying Britain's remaining wild places. He loathed commercial forestry, which, favoured by a system of tax breaks, was rapidly spreading over precious upland habitats. He helped to precipitate a crucial battle with the powerful forestry lobby in the 1980s, his arguments persuading politicians to compromise over the afforestation of the Flow Country, the largest area of blanket bog in Europe, before it was totally destroyed. Taxpayers, he thought, deserved better than to see their money spent on uneconomic tree planting programmes that destroyed priceless parts of our natural heritage. But apart from his early efforts over the use of organo-chlorine pesticides, he did not take on state-subsidized agriculture, possibly because its most devastating effects were only just becoming apparent by the time of his retirement in 1989. Moreover, his personal interests had always lain in the uplands, rather than in the more cultivated lowlands.

Derek Ratcliffe received numerous national and international awards, including the 'Order of the Golden Ark', presented by Prince Bernhard of the Netherlands (1983). But he was never honoured by the State. Possibly his outspokenness against government land-

use policy over so many years was held against him. Nevertheless, The Times newspaper included him in a list of the 20th century's most influential voices, mainly on the strength of his work on pesticides and habitat evaluation. This recognition pleased him greatly.

In the 45 years that I knew Derek Ratcliffe, he retained his shy and unassuming manner. He was at his most relaxed in the field, and in the evening, after a good day, he could become a most entertaining raconteur, mimicking the accent and mannerisms of almost anyone who popped into the conversation. He had an enormous range of contacts, for he sought out kindred spirits, and valued friendships. Under this diffident exterior, however, lay an enormous authority, an unmatched breadth of understanding, an unrivalled knowledge of every corner of wild Britain, and a steely determination to see the best of it protected. His main impact, perhaps, was through his highly persuasive writing, which was articulate, clear and evocative. This was reflected in memos and personal letters, as well as in his scientific and conservation writing. His life in the civil service, and battles for conservation, gave him a rare and uncanny understanding of human nature. He had a wry sense of humour, and in an instant could deflate confident political operators and sniff out vested interests in the most unexpected places. He remained uncompromising, passionate, sceptical and irreverent to the end, and will be greatly missed by all who knew him.

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