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## A tribute to Oliver Lathe Gilbert

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Oliver Gilbert was a pioneer, an outstanding field botanist and inspirational scientist. He worked in the broad fields of urban and lichen ecology and had almost 40 years of teaching and research experience within universities. Above all he was very approachable, an excellent teacher and fun to be with. Oliver was a leading figure in the British Lichen Society serving as BLS Bulletin Editor (1980-89 except 1987), President (1976-77) and was a frequent Council Member. He was elected an Honorary Member in 1997 and received the prestigious Ursula Duncan Award in January 2004. Oliver had an exceptional ability to find rare and interesting lichens and plant communities that others had overlooked and he constantly challenged conventional wisdom that particular habitats were uninteresting, especially urban habitats. His ecological 'field craft' skills were equally legendary. Passion for field work and British Lichen Society field meetings led him to organize a small grant awards scheme to stimulate others to attend field meetings and to submit their results for publication in the BLS Bulletin.

Oliver Gilbert's interest in natural history was kindled at the age of 4 during the war vears when evacuated to Borth y Gest in North Wales where he would collect caterpillars, butterflies and plants to identify. He was born in Lancaster in 1936, one hour and ten minutes earlier than his twin brother, Christopher, who became a world authority on Chippendale Furniture and was described on his death as the most outstanding furniture historian of his generation. His father, Frank Gilbert, was manager of Durham Chemicals. His mother, Mrs Ruth Gilbert (1908-1984), was a prolific authoress writing under the pen name of Ruth Ainsworth; she wrote a well-known series of children's books about Rufty Tufty Golliwog, and latterly, in the 1970s, authored such titles as 'Three's Company', 'The Mermaid's Tale' and 'The Little Yellow Taxi' as well as countless plays for children's TV and stories for 'Listen with Mother'. Oliver's younger brother, Richard, a former chemistry master at Ampleforth College has written eleven

books on mountaineering and hill walking including the now classic 'Big Walks', 'Classic Walks' and 'Wild Walks' and the award winning 'Exploring the Far North West of Scotland'. His uncle was the mycologist Geoffrey Ainsworth, a former Director of the (former) International Mycological Institute and author of several classic texts on mycology. Oliver's literary talents, following a fine family tradition, likewise later excelled.

After the war his family moved to Harpenden where he attended St Georges School. As St Georges did not offer 'A' level Biology, his parents sent him to Watford Grammar School. A botany degree at Exeter University was followed by a DIC in plant pathology at Imperial College London. His first job was as a deputy Warden at Malham Tarn Field Centre in Yorkshire where his passion for walking, fell running and climbing blossomed. After work he would go rock climbing or run effortlessly for hours over the fells. He joined Bingley Harriers Athletics Club and in 1961 was in their small team of 3 runners which won the Yorkshire Three Peaks Race; Oliver's time was an astonishing 3 hours 9 minutes. His winner's medal hangs on a nail in Winterscales Fold, his family's retreat on the slopes of Whernside. Oliver's athletic prowess later proved to be of tremendous value in his field-work.

Oliver joined the staff of Newcastle University as a demonstrator in 1963 and registered for a PhD. He was promoted to Senior Demonstrator in 1965. It was in Newcastle-upon-Tyne that he carried out his pioneering doctoral studies on Biological Indicators of Air Pollution (involving lichens, bryophytes, fungi, terrestrial algae, phanerogams and invertebrates) in which his detailed mapping studies of lichens and bryophytes, as they came under increasing pollution stress, led to the first zone scales which correlated with SO<sub>2</sub> levels. A forerunner of the famous Hawksworth & Rose scale, Oliver's research led to a deeper understanding of how to produce and interpret lichen-air pollution maps. A simplified scale he devised for use by school children was successfully used throughout the UK in a National Survey to map 'our mucky air'. Oliver was the first person to recognize that morphological changes in lichens resulting in thallus deformities and stunting are useful bioindicators of air pollution. He analysed native lichens, mosses and transplants (living and dead) for sulphur and fluoride concentrations along transects from point sources. The high contents he recorded near their inner distributional limits, led him to suggest accumulation efficiency as a factor responsible for the acute sensitivity of certain species. He was the first to highlight the importance of pH in modifying the toxicity of different sulphur species and to realize the role of shelter/exposure when interpreting distribution data. His studies of historical museum collections highlighted their value as indicators of previous environmental conditions. His doctoral research was presented at the first ever European Congress on the Influence of Air Pollution on Plants and Animals held in Wageningen in 1968 and in the same year was awarded his PhD. His interest in lichens continued to grow and his subsequent long term monitoring studies on Lobaria provided the first evidence for the effects of acid rain on UK lichens. In addition to his sulphur dioxide work, he carried out some of the first serious studies into the influence of fluorides and alkaline dust on lichen communities. All large cement manufacturers currently use his lichen scale to monitor dust in their local environment. He continued his interest in air pollution work studying lichen reinvasion during the period of decreasing sulphur dioxide emissions. He coined the term 'lichen dawdlers' for those species which were slow to reinvade on account of their poor dispersal ability.

Oliver Gilbert's contribution to our knowledge of the ecology and taxonomy of UK lichens is unrivalled and encyclopaedic. In parallel to his pollution studies, he instigated pioneering work on the ecology of lichen communities in various parts of Britain. He first prepared, in the North of England, his lichen flora of Northumberland, later extending his interests to the Hebrides and Scottish Highlands. His modern accounts of the lichen flora of such internationally important sites such as Ben Lawers, Ben Nevis, the Cairngorm Plateau, Caenlochan, St Kilda and Upper Teesdale, were among the major ecological surveys of lichen vegetation to be carried out in the 20th century. There were few habitats he did not personally explore, though he is perhaps best known for his nationwide studies on the ecology of lichens growing on metalliferous spoil, urban wasteland, mountains, chalk grasslands, freshwater habitats and maritime sites. During this work he discovered 55 lichens new to Britain and he described several new taxa. These included Candelariella medians f. steepholmensis Gilbert, O.L. (1981), Lecanora campestris subsp. dolomitica Gilbert, O.L. (1984) and Caloplaca suaedae Gilbert, O.L. & Coppins (2001). His vast field experience helped him to recognize several lichens as ecological morphs unworthy of formal taxonomic revision, including Leucocarpopsis devensis G. Salisb, the genus being monospecific. During his last decade he undertook national surveys into the lichen flora of neglected habitats such as chalk grasslands, freshwater lakes and rivers and maritime soft cliffs. His work also highlighted the richness of man-made habitats, such as urban wasteland and disused airfields. He also compared the floras of churchyards with those of the villages in which they stand.

Thirty-five years of ecological work was engagingly summarized in his authoritative book 'Lichens', published in the prestigious New Naturalist series in 2000, the first modern account of the lichen ecology of British habitats, all of which had been studied personally. It has been compared by reviewers to Sir Arthur Tansley's classic work on higher plants The British Islands and their Vegetation. An invaluable reference work for both professionals and amateurs, it was a huge success as it sold out within a few months. Oliver wrote more than 150 papers on lichenology and was a major contributor to The Lichen Flora of Great Britain and Ireland, drawing on his vast personal experience. He is also co-author of the Lichen Red

Data Book for Britain. In 2004 his final book was published: The Lichen Hunters. This is an account of his lichen exploration experiences, in which his enthusiasm for lichens, field-work and love of life shines through every page.

In 1968 Oliver moved to a lectureship in the Department of Landscape Architecture at the University of Sheffield, the first ecologist to be appointed to a Landscape Architecture Department in the country. He was appointed a Reader in Landscape Ecology in 1986, a post he held until his retirement in 1993, then continuing to teach part time until 2000. Throughout his career, Oliver had a heavy teaching load, latterly sharing the running of the Department and playing a leading role in Sheffield University's Environmental Consultancy. He supervised several PhD students (e.g. Alan Fryday: montane lichens) and stimulated a great many others, through his encyclopaedic knowledge, enthusiasm and great patience; he particularly enjoyed encouraging amateurs. Oliver's lichenological achievements are all the more remarkable as all his lichen research was carried out alongside a university job that involved expertise in a quite different field i.e. landscape science and management. In this area Oliver's approach was to base investigations on long-term observations. He initially focussed on the creation and management of species-rich grassland and the ecology of sown swards in general. He undertook some of the first experimental work on the establishment of flower-rich grassland and provided a scientific framework for the technique that is still valid. He made in-depth studies of other urban habitats such as woodland, walls, construction sites, wasteland and plants growing along the River Don in Sheffield. He discovered 70-year old wild figs growing by water of the Don previously warmed by Sheffield's Bessemer steel furnaces and in 1993 published a fascinating account of how the 'urban common' varies from city to city, depending on climate, geography, and economic and social history. As many landscape architects prefer information to be passed on through lectures and seminars, he wrote up much of this research in a succinct form: as a book entitled The Ecology of Urban Habitats published by Chapman and Hall in 1989. This was extremely well received both in the UK and abroad. Reprinted as a paperback in 1992, it was translated into German in 1994; a Chinese edition is planned. A further book, Habitat Creation and Repair (Oxford University Press) co-authored by Penny Anderson is a definitive guide including discussion of ethics, theory and general principles along with practical details of designing habitats for wildlife. Oliver also carried out major studies on the autecology of *Juniperus* communis and Dryopteris villarii as well as comprehensive botanical surveys of remote islands.

Oliver was a cornerstone of the British Lichen Society and was especially welcoming to beginners. As editor of the Bulletin he introduced its readership to numerous fascinating topics. Oliver was especially proud that he had led more field meetings than anyone for the British Lichen Society. The field meeting he organized on the Lizard Peninsula with its unusual serpentine flora was a highlight. True to his style, Oliver wasted no time in speedily working through samples, sending the more unusual to specialists in particular groups and rapidly writing up an account for publication in the Lichenologist. He particularly enjoyed organizing small groups of 'adventure lichenologists', employing 'expedition tactics' to explore new or remote sites. He once arranged for a helicopter to drop a team on the top of Ben Nevis. Field meetings with him were always fun and memorable. His latest book, The Lichen Hunters, which is almost an autobiography, gave him great pleasure during a period of failing health which would have killed anyone with a less robust constitution. Even before his book went to press, Oliver had dedicated himself to the revision of The Lichen Flora of Great Britain and Ireland and his death is a severe loss to those who have been working with him on the project. Its timely publication would be a fitting tribute to his scholarship and contribution to British lichenology.

David Galloway, in a recent book review, described Oliver as 'a gifted and enthralling writer. An author who has the ability and erudition to present a dazzling array of facts in a lively, readable and often memorable form.' Oliver himself had the last word on lichen hunting: "You go to look for lichens and find in addition familiarity, beauty, companionship, laughter and the warmth of friends".

Oliver is survived by his three loving daughters, Tasha, Kate and Emma.

I warmly thank Oliver for his inspiration and for assisting me in my career, his esteemed friendship and for providing me with a list of publications and research summary in March 2002. I am grateful to his brother Richard Gilbert, his daughters and his friends and colleagues Peter Crittenden, Brian Coppins and Vince Giavarini for their helpful comments on drafts and Mark Seaward for comments on the proof.

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- Landscape science and management
- General botany and ecology

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