

## Obituaries

### KATHLEEN BEVER BLACKBURN

It was with great regret that her friends learned of the death of Dr Kathleen Bever Blackburn in August 1968.

Dr Blackburn graduated with honours in Botany at Bedford College, London, in 1913. From 1914 to 1918 she was Lecturer in Botany at Southlands Training College, Battersea, where she took her M.Sc. in 1916 for a thesis on plant anatomy. She was awarded the D.Sc. of London University in 1924 for her contributions to the investigations of sex in plants and in 1930 was awarded the Trail Medal of the Linnean Society. In 1918, she was appointed to a lectureship at Armstrong College (later King's College.) Newcastle-on-Tyne, and she remained there for the rest of her academic career. She became Reader in Cytology in 1947 and retired in 1957.

Perhaps her most important contributions to science were those which she made in collaboration with the late Professor J. W. Heslop Harrison. They were both remarkable people; and they combined a deep interest in flowering plants with an awareness of the importance of genetics and cytology in the interpretation of evolution and the clarification of taxonomy. In the period 1921-24 they produced papers on the cytotaxonomy of the Salicaceae, and the genus *Rosa*, which were amongst the first of their kind, and which laid the foundation for the tremendous advances in cytotaxonomy and biosystematics in later years. The cytological work in these studies was all done by Dr Blackburn. Incidentally, they produced the first reports of sex chromosomes in flowering plants (in *Populus*), and Dr Blackburn produced convincing evidence a little later in *Silene dioica* and *S. alba*. She continued to study the cytotaxonomy of the Caryophyllaceae; and she also inspired a long series of post-graduate students to undertake work of the same kind; her reputation was international. Towards the end of her career, she became interested in pollen analysis, and in this field, too, she made important contributions, carrying out investigations of peats both in the Hebrides and in the north of England.

This steady output of distinguished work was combined with a heavy teaching load. In particular, she was a pioneer in the teaching of practical plant cytology, and her course was famous. She spared no pains to make her classes as full and exact as possible, and her technique was excellent. She was in demand as a University tutor; and she was respected and liked by her pupils and, indeed, by all who came into contact with her.

To naturalists in the north-east of England she gave devoted service. Herself a skilled field botanist, she explored the countryside, often to collect material for her classes or for her research work. She was secretary of the Northern Naturalists' Union from 1940 to 1955, and served on the management committee of the Hancock Museum.

When I went to Durham in 1945, Dr Blackburn characteristically took time and trouble to introduce me to local people both inside and outside the University. She was a charming person, ever ready to help when it was needed, but never making a fuss. It was tragic that soon after her retirement she became seriously ill, and was unable to travel or, eventually, to work. Had she kept her health, she would have rejoiced in the vigorous growth of the Northumberland and Durham Naturalists' Trust and its activities in the counties which she had known and served so well.

#### PRINCIPAL PUBLICATIONS

1921

(With J. W. H. Harrison) The status of the British Rose forms as determined by their cytological behaviour. *Ann. bot.*, 35: 159-187.

1923

Sex chromosomes in plants. *Nature*, **112**: 687–688.

1924

The cytological aspect of the determination of sex in the dioecious forms of *Lychnis*. *J. exp. Biol.*, **1**: 413–430.

(With J. W. H. Harrison) Genetical and cytological studies in hybrid roses. 1. The origin of a fertile hexaploid form in the *pimpinellifoliae-villosae* crosses. *J. exp. Biol.*, **1**: 557–570.

(With J. W. H. Harrison) A preliminary account of the chromosomes and chromosome behaviour in the Salicaceae. *Ann. bot.*, **38**: 361–378.

1925

Chromosomes and classification in the genus *Rosa*. *Am. Nat.*, **59**: 200–205.

1927

Chromosomes and their relation to Rose problems. *Am. Rose A.*, **1925**: 54–58.

Polyploidy within a species (*Silene ciliata*). *Nature*, **120**: 157–158.

1928

Chromosome number in *Silene* and the neighbouring genera. *Zeitschr. Vererb., Suppl.*, **1**: 439–446.

1929

On the occurrence of sex chromosomes in flowering plants, with some suggestions as to their origin. *Proc. Int. Cong. Plant Sci.*, **1**: 299–306.

1930

Polyploidy within the species. *Internatl Cong. Bot.*, 5th, Cambridge. Abs. Commun. Pp. 145–146.

(With J. J. Boulton) The status of the genus *Saponaria* and its near allies considered in the light of their cytology. *Proc. Univ. Durham phil. Soc.*, **8**: 260–266.

1933

Notes on the chromosomes of the duckweeds (Lemnaceae) introducing the question of chromosome size. *Proc. Univ. Durham phil. Soc.*, **9**: 84–90.

1934

Wasting disease of *Zostera marina*. *Nature*, **134**: 738.

1936

Notes on Valerians. *Vasculum*, **22**: 52–55.

1938

On the occurrence of a hermaphrodite plant of *Empetrum nigrum* L. *J. bot.*, **76**: 306–307.

1939

The Crowberry. *Vasculum*, **25**: 12–24.

The *Limosella* plants of Glamorgan. Part 2. Chromosomes and species. *J. bot.*, **77**: 67–71.

1946

On a peat from the Island of Barra, Outer Hebrides. *New Phytol.*, **45**: 44–49.

1949

Chromosomes and classification in *Rosa*. In Wilmott, A. J. (ed.), *British Flowering Plants and Modern Systematic Methods*, pp. 53–57. London.

1952

The dating of a deposit containing an elk skeleton found at Neasham, near Darlington, County Durham. *New Phytol.*, **51**: 364–377.

1953

Notes on modern research methods in taxonomy. *Rep. Trans. Soc. Guernés.*, **15**: 169–170. (With A. W. Adams) Cytology in *Herniaria*. *Proc. bot. Soc. Br. Isl.*, **1**: 380.

1957

(With J. K. Morton) The incidence of polyploidy in the Caryophyllaceae of Britain and Portugal. *New Phytol.*, **56**: 344–351.

D. H. VALENTINE.

HUMPHREY GILBERT-CARTER  
(1884-1969)

*Address delivered at the Memorial Service in Trinity College Chapel, Cambridge,  
1st March, 1969.*

In 1909 there entered Trinity College a young man of 25 who, having gained a medical qualification in the University of Edinburgh, and taken subsequent clinical study in Marburg, had relinquished medicine for botany, and had come to work as an advanced student under C. E. Moss, then Curator of the Herbarium in the Cambridge Botany School. It was a decision of moment both for Humphrey Gilbert-Carter and for botany in Cambridge, for, after serving for the years between 1913 and 1921 as economic botanist to the Botanical Survey of India, he was recalled to the newly-created Directorship of the University Botanic Garden, a post which he held, in association first with curatorship of the Herbarium, and later with a University Lectureship, until retirement in 1950.

I little realised in 1921, as a callow and intense student beginning Part II of the Tripos, that Humphrey and I were being launched side by side into a period of close and rewarding friendship ended only now.

In the Botanic Garden he was essentially the scholar-director rather than the executive director. His *Guide to the University Botanic Garden* and his *Descriptive labels for Botanic Gardens*, both published within three years of his appointment, were lucid, erudite and original. These qualities, together with his intense capacity for friendliness, attracted from all quarters a general sympathy for and interest in the Garden, not least from Reginald Cory, who having already subsidised the *Guide* and the Director's House, finally left to the University his munificent Cory Bequest.

Humphrey was charged at his appointment "to teach Systematic Botany in the Garden" and indeed he always exhibited a strong aversion from formal lecture-room courses designed for force-feeding data into notebooks and minds, infinitely preferring the role of informal teacher, setting alight the imagination of his pupils so that they hastened off to do for themselves the work of garnering and consideration. Who will dispute that this ancient practice is in fact the very heart of education?

Most of all it was in his frequent and gladly attended field excursions that Humphrey displayed his outstanding quality as a teacher. In the words of his pupil and successor to the Curatorship of the Herbarium, Dr S. M. Walters, "He practised naturally and without strain that fundamental technique of the gifted teacher: his pupils were instructed in the delightful game of learning by an enthusiast who could not prevent his interest in people, or his love of botany, from shining through, however dull the day or tedious the text-book." Those who, like himself, had the perfectly retentive mind of the taxonomist, would follow at his heels, gathering now and then an explicit exposé of a taxonomic problem to which the text-books yielded no clue whatever: these gleanings came to light or had their undisclosed importance in the work of taxonomists and naturalists for decades afterwards.

Above all, his former students will recall the heart-warming friendliness of the Sunday tea-parties that he and Dorine gave at Cory Lodge, ably abetted by their beautiful and unselfconscious daughters, a function so generally popular that double-ranking round the table was the rule. The ice was broken by Humphrey's mischievous medical-school jocularly and the prim were often disconcerted to find, deposited in their lap, a shaggy and affectionate Old English sheep-dog whose warm breath was alleged to have strong therapeutic value. 'Grace' and 'Grasshopper', 'Lightning' and 'The Little One' . . . how could students thus addressed feel out of the warmth of the family circle that enlarged so much as the years went by and that has so many of its members come here today?

Humphrey Gilbert-Carter was a man of formidable accomplishments and wide knowledge. His own disavowal of any claim to be a scientist sprang largely from a

modesty that undervalued his own capacity and from his own high personal integrity of thought. It was these qualities that enabled Humphrey without effort to establish and retain the friendship of many great scholars in this and other Universities. Only one class of friendship would I prefer to this: I mean the quick and unreserved friendship of small children and young people, folk who respond instinctively to gentleness and assurance: Humphrey also had this abundantly.

Humphrey had tremendous facility for languages and the great Oxford lexicographer, C. T. Onions, said of him that, outside the ranks of the professionals, Humphrey was the best-informed philologist he had ever met. This facility was constantly at the disposal of students and friends: there were German and Scandinavian reading classes and sessions to initiate or revive contact with the beauties of the Georgics. He translated a large part of the life-work of Raunkaier from the Danish, embellished his Guide to the Garden with terms in Sanskrit, Arabic and Hindustani, and could take up conversation in their own language with the surprised lascars on a P. & O. liner. Small wonder that his *Glossary of the British Flora*, which went through three editions, was so authoritative and so welcome. We may recall with a smile what he wrote in *Catkin-bearing plants* concerning the right use of words: "It is the duty of the teacher to check the facility with which students learn words of whose meaning they are entirely ignorant, a process comparable to swallowing flints, which are not only entirely indigestible, but which because of their relentlessness will set up lasting internal mischief."

I shall, I trust, have made it clear that Humphrey Gilbert-Carter was a *broad man*. He would undoubtedly have approved Bacon's view that "Travel in the younger sort is a part of education; in the elder a part of experience." He travelled widely himself and always shunned a parochial attitude, aiming to bring Cambridge botany into close touch with that of other countries. It is a habit of contact that has happily continued, and the success of that current and massive undertaking, *Flora Europaea* owes no small debt to it. Nor was Humphrey's own approach to the practice of taxonomy in the least narrow: he would have us smell and taste a plant, view it whole in the field and have full regard to its favoured ecological situations and biological responses. He exhibited sympathy with, though not participation in, the movement of younger taxonomists, many his old students, into fields of experimentation and even into enquiry as to the basic purposes and processes of taxonomy itself.

Humphrey was one of the least self-seeking of men, rejecting personal ambition in favour of devotion to the interests of his students, who have repaid him through the years with a warmth of affection and gratitude rare even in this home of dedicated teachers. He will be remembered not only in his own considerable published work but in the larger volume that he inspired in his pupils. His modest view of his own memorial can fittingly close my remarks. At his first meeting with the Old Botanic Garden Syndicate in May, 1921, he recommended the planting of widely-set and well-grown specimen trees, and urged . . . "Let us look ahead and think of those who will take our places. Neither shall we ourselves die altogether if the coming generation of students remember us when they study the great trees on the lawn, or the elders of the University and town bless our memories as they rest beneath their shade."

H. GODWIN.

I would like to add a few personal recollections of Humphrey Gilbert-Carter to Professor Godwin's excellent appreciation of him. I do so in the hope that they will be of interest to those who did not know him; those who did will have many happy memories of their own, but they may like to be reminded of the existence of Fragments of a Botany School Excursion Pantomime (*Tea Phytologist*, 4/3 $\pi$ r<sup>3</sup>, 8-9 (1950)).

I first met Humphrey at the beginning of the Long Vacation Term in 1928, at the end of my first year in Cambridge, a year in which one thing had become clear to me: that whatever I ultimately did, it would not be Botany. Long before the end of the 6-week term I had learnt that Botany is a special way of life linking the Arts and

Sciences. My earlier decision was soon reversed and I had no second thoughts about it. Every excursion, whether a short one after tea to Coe Fen or the railway ballast pits at Chesterton or a whole day at Wicken or on the Breckland, was not only full of interest but also an adventure. Humphrey's older friends sometimes came on these excursions and consequently our outlook was widened by meeting perhaps a Consul from a remote part of Asia or a distinguished chemist. So, without our realizing it, he made us aware of the interdependence of all kinds of knowledge and of the richness of the world.

On short suburban excursions, usually between tea and opening time, we not only looked at weeds and garden escapes but were shown the gardens of his friends or even of total strangers. If Humphrey saw some unusual plant or exceptionally fine tree in someone's garden, he would go up to the door, knock, and after a short conversation with the owner, be invited to bring his class in to see the garden.

He was always kind and considerate; the most severe reproof that I ever heard him administer was "that was very incurious of you". During his period as President of the Botanical Section of the Cambridge Natural History Society he encouraged the, usually young and inexperienced, speakers by the way in which he opened the discussion. On one occasion when a paper had been given with which he completely disagreed he started by saying "Of course there are two sides to everything except . . ." (then there was a pause long enough for everyone to wonder what was coming) . . . "Cambridge station". This, I am sure, helped greatly to make the ensuing discussion less acrimonious than it would otherwise have been.

Humphrey, though no mean performer on the 'penny whistle', was not really interested in music. One summer evening after a concert to which we had been, Mrs Gilbert-Carter asked some of us to go home with her for a cup of tea. The night was fine, so naturally we strayed from the kitchen into the garden to look for the hedgehogs which frequented it. Before long an unmistakable voice from the darkness above said, "I am observing the satellites of Jupiter; come and join me". We went upstairs and found Humphrey with a small telescope, anxious to share his enjoyment with us.

On a winter afternoon shortly after the war we walked together through Trumpington to Grantchester and, as we were about to come back across Grantchester Meadows, he suggested that we might see if Tansley was in. He was, and on his own, so he asked us to stay for tea. Over tea Tansley asked me to write a British Flora. I had never thought of such an undertaking, but before we left plans had been drawn up and were speedily put into action. So Humphrey not only instructed the three of us in field and herbarium, but was a vital link in the chain which led to the production of the *Flora*.

At the lunch given to celebrate his 80th birthday he said "Our search is a search for beauty; those who go into the field and observe, like those who ascend the spiral staircase whose treads are made of DNA, are seeking for the same thing". I have to quote from memory and so may not have worded it as well as he did.

I count myself fortunate indeed in having had such a teacher and friend for over 40 years.

T. G. TUTIN.

#### BIOGRAPHICAL NOTE

Humphrey Gilbert-Carter was born on 19th October 1884, the second son of Sir Gilbert Thomas Gilbert-Carter, K.C.M.G. He was educated at Tonbridge School and the Universities of Edinburgh, Marburg and Cambridge. He was Economic Botanist to the Botanical Survey of India from 1913 to 1921 and married in 1914, having four daughters. From 1921 until his retirement in 1950 he was Director of the Cambridge University Botanic Garden and, from 1930, University Lecturer in Botany. He was an Honorary Associate of the Linnean Society of London. He died on January 4th, 1969.

## BIBLIOGRAPHY

1913

*Genera of British Plants*. Cambridge.

1917

*Report on the Industrial Section of the Indian Museum for the year 1916-17*. Calcutta.

1921

(With D. N. Carter) Useful Plants of the District of Lakhimpur in Assam. *Records of the Botanical Survey of India*, 6 (9): 353-420.

1922

*A Guide to the University Botanic Garden*. 1st ed. Cambridge.

1924

*Descriptive Labels for Botanic Gardens*. Cambridge.

1930

*Our Catkin-bearing Plants*. 1st ed. Oxford, 2nd ed. Oxford (1932).

1934

Translations of C. C. Raunkiaer, *The Life Forms of Plants* and *Statistical Plant Geography*.

1936

*British Trees and Shrubs*. Oxford.

1937

Translation of C. C. Raunkiaer, *Plant Life Forms*.

1947

*A Guide to the University Botanic Garden*. 2nd ed. Cambridge.

1950

*Glossary of the British Flora*. 1st ed. Cambridge, 2nd ed. Cambridge (1955), 3rd ed. Cambridge (1964).He also contributed the botanical entries to the *Cambridge Italian Dictionary*. General Editor, Barbara Reynolds. Vol. 1, 1962; vol. 2, (in the press).

T. G. TUTIN.