Obituary

PERCY WRAGGE BRIAN, 1910–1979

The untimely death of P. W. Brian on 17 August 1979 at the age of 69, scarcely two years after his retirement from the Chair of Botany at Cambridge, was a sad blow to his many friends and colleagues, who, rejoicing for him in the increased leisure he had so well earned, looked forward to receiving the benefit of his great gifts and profound wisdom for many years to come. The personal loss to those who had the privilege of working most closely with him is made more poignant by the thought that an unfailing source of counsel and judgement is now gone, to which they were wont to refer difficulties and achievements alike, in the confident assurance of help and encouragement.

Percy Wragge Brian – always spoken of as ‘P. W.’ by his immediate colleagues, a designation I shall use, since it so accurately expresses the intense respect with which he was regarded – was one of the most distinguished botanists of our time. He gained a First in the Natural Sciences Tripos at Cambridge in 1931, was awarded the Frank Smart Studentship in Botany, and in 1936 gained the degree of Ph.D. for a thesis on the physiologic races of brown rust on species of Bromus. The results of this work were incorporated in an important joint paper in 1954 which effectively disproved the existence of the so-called ‘bridging hosts’ in the transmission of rusts.

After two years on the staff of Long Ashton Research Station, P.W. joined ICI, first at Jealott’s Hill Agricultural Research Station from 1936 to 1946, and then for seventeen years at the Akers Research Laboratories, Welwyn. This period of more than a quarter of a century was the most prolific of original scientific work of his career and brought many important and seminal research papers in botany and mycology.

This is not the place, nor would it be possible in brief compass, to attempt a review or assessment of P. W.’s contributions or of the theoretical and practical developments which flowed from them. I shall only recall a few that seem to me of particular significance. In approaching research P. W.’s attitude was never one of simple empiricism; he always started from a survey of the fundamental problems at issue and was skilful in choosing fruitful lines of investigation. At the same time he had an enviable capacity for discarding with prompt decision those likely to be diversionary or intractable. His earliest work stemmed from problems of soil fertility, and he was thus led to studies of the natural balance of fungi in the soil and of the possible soil-ecological rôle of fungal antibiotics. Many active substances (including viridin, gliotoxin and others) were isolated from the culture filtrates of soil fungi and their biological effects were studied. The demonstration by P.W. that strains of Penicillium from the soil of Wareham Heath produce gliotoxin, and may therefore be associated with the mycotoxic and other biotic effects of this soil, was a landmark in soil microbiology and unfolded perspectives of enquiry which have been widely followed up.

The isolation of ‘curling factor’ and the establishment of its identity with griseofulvin, previously isolated by Raistrick, was the starting point for diverse researches and developments, extending to the therapy of fungal diseases of animals. The key which opened many paths of investigation was P.W.’s realization that only fungi with chitinous walls were sensitive to griseofulvin and his surmise that its action depends on some involvement with chitin synthesis. The paper in the Annals of Botany, 1949, in which the culmination of several years’ work on griseofulvin was reported, can still be read with profit by research workers, both beginners and old hands, as a brilliant example of how to do it and how to write it up, even though the tentative conclusion – that griseofulvin is a true fungal growth-
substance was not sustained by subsequent work. The uptake of griseofulvin by plant roots and its movement to the leaves, shown by P.W. and co-workers in 1951, gave a powerful stimulus to the growing interest in systemic fungicides, which has developed into what is practically a new branch of plant physiology.

Early in the 1950s P.W. began the study of gibberellic acid, which extended into the recognition of gibberellins as plant hormones and wide-ranging investigations of their biological activities. It would be inconsistent with P.W.'s memory not to point out, as he never failed to acknowledge and emphasize, that the advances in understanding the biology of fungal antibiotics and of the gibberellins resulted from the combined efforts of several groups of colleagues on the biological side, and were dependent on the parallel work and brilliant chemical investigations of J. F. Grove and his colleagues of the Organic Chemistry Section of the Akers Laboratories. P.W. repeatedly stressed the priority of the Japanese work on gibberellins, but this does not detract from the value and originality of the many contributions made by him and his co-workers to a field of research in which he became one of the leaders, and which has transformed our views of plant hormones. I would single out just two examples which seem to me to epitomize the special illumination that P.W. brought to bear on complex questions. He was I think the first to discover the effect of gibberellic acid in counteracting genetic dwarfness in a number of plants, and certainly he at once seized on the essential significance of the observation: that gibberellic acid, or something very like it, must be a true plant hormone and not a fortuitous disturber of higher plant metabolism. At the other end of the scale, as it were, P.W.'s general reviews of gibberellin research (Transactions of the Linnean Society, 1959; Biological Reviews, 1959; Tenth International Botanical Congress, 1964) were scientific works in their own right, isolating the vital aspects of a mass of data and exercising a major creative influence on the direction of future research.

In P.W. the highest scientific ability was united with an exceptional capacity to lead and concert collective research, whether of large or quite small groups, and to secure the willing cooperation of often very diverse people that springs only from conviction and mutual respect. The secret was a real concern and scrupulous regard for each member of the group as a human being, irrespective of job or formal status. In spite of a curious shyness and a deep protective reserve sometimes amounting almost to taciturnity, P.W. was in truth always accessible, and active in response, to personal needs and problems, and principled, but humane, in his decisions; this attitude was at the root of the loyalty of his colleagues and his unquestioned personal authority. In his relations with other workers in his field of interest, P.W.'s reserve and lack of loquacity never prevented him from answering requests for information or collaboration with open and unstinted generosity, sometimes, I may add, when he was aware that his frankness was not being reciprocated.

In recognition of his achievements in science P.W. was elected a Fellow of the Royal Society in 1958, having been awarded the Sc.D. of Cambridge University a little earlier.

In 1962 P.W. was appointed Regius Professor of Botany in the University of Glasgow. Here, in addition to coping with the multifarious problems of university administration and teaching, he successfully directed his administrative tact and flair to encouraging, with equal and impartial support, all the existing lines of research pursued in the department, believing that a varied and balanced research programme was the best foundation and accompaniment for the teaching of modern botany. Characteristically P.W. did not push his own earlier interests but turned instead to the study of the relations between obligate fungal parasites and their plant hosts, a question which he had long had in mind. With the help of the Agricultural Research Council he was able to set up a small unit for this work, and on his accepting the invitation to the Chair of Botany in Cambridge in 1968, the unit was transferred thither and merged with the ARC Unit of Developmental Botany, the activities of which he continued to direct until his retirement in 1977.
Obituary: P. W. Brian

P. W. BRIAN, F.R.S.
On the occasion of receiving an Honorary D.Sc. at the University of Hull on 15 December 1978.

P. W. never considered that his responsibilities were circumscribed by his immediate tasks, and he gave devoted service to the scientific community as a whole. For many years he was active in the leadership and as Chairman of the Association of Scientific Workers. He served as a member of the Agricultural Research Council, was twice President of the British Mycological Society, President of the Society for General Microbiology, President of the Cambridge Philosophical Society, and President of the Association of Applied Biologists. His presidential addresses to these societies, and his Leeuwenhoek Lecture to the Royal Society in 1966, are masterpieces of critical survey, of permanent value and interest. P. W. was pre-eminently a man 'integer vitae' who took seriously his right and duty as a citizen to promote causes which to the end he believed in with passionate sincerity. It is a measure of his stature that his civic activity never interfered with his cordial relations with colleagues, fellow-scientists or even 'those in authority'. When, in 1975, he was honoured with the C.B.E. for scientific services it was a source of quiet gratification to all who knew him.

I believe that many of us will remember P. W. above all for his exalted conception of science – as an intellectual striving for truth of the most demanding order, and as one of the noblest human activities when pursued for the well-being and concord of mankind. He lived his life very fully in the spirit of this principle, so that we also can say, in our day, 'Great men have been among us'.

A. G. MORTON