Obituary Notice

ISABELLA LEITCH

(1890–1980)

The death of Dr Isabella Leitch in Australia at the age of 90 terminated the career of a remarkable Scotswoman, who had a profound but often unacknowledged or unrecognized influence on nutritional science and scientists. Though a member of the Nutrition Society since its formation, she never held office except as an editor of the first three volumes of the *British Journal of Nutrition* and of the first five volumes of the *Proceedings*. She contributed several papers of notable originality to its meetings and in 1979 the Society paid tribute by electing her as an Honorary Member. She was Director of the Commonwealth Bureau of Nutrition in Aberdeen from 1945 until her retirement in 1960; and as a member of staff of the Bureau since its formation was the driving force behind *Nutrition Abstracts and Reviews* for over 30 years.

Isabella Leitch was one of a large family of sisters brought up frugally, and with traditional Scottish respect for scholastic achievement, in Peterhead. At Aberdeen University, she graduated MA with honours in Mathematics and Natural Philosophy (Physics) in 1911, and BSc in Zoology in 1914. In addition to her main subjects, she attended an unusual selection of additional courses, often as voluntary 'extras': Latin, Political Economy, Moral Philosophy, Botany, Plant Physiology, Human Physiology, and Embryology. At the same time, she was a vigorous member of the suffragette movement. She was said to have a close resemblance to one of Mrs Pankhurst's daughters, and was summoned to London on one occasion when the latter addressed a meeting at the Albert Hall, so that she could serve as a decoy if an attempt was made to arrest the speaker. She went, but her services were not needed. She remained a life-long and ardent feminist.

During the 1914–18 war, she worked in Copenhagen University as a Carnegie research student and Fellow, doing original research in genetics and plant physiology with Professor W. Johannsen, and on animal physiology with Professor A. Krogh, a Nobel Prizewinner in Medicine. Those years began a love-affair with Scandinavia which lasted throughout her life. During the war, she crossed the North Sea several times in Danish ships and to illustrate her pride in being Scottish she recounted that during her last voyage a U-boat stopped the ship. The German captain came aboard demanding to know if there were any English passengers. 'No,' said the Danish captain, 'No English'. Unexpected evidence of the breadth of her interests at that time was revealed 60 years later by some ancient slides on aerodynamics and aircraft, *circa* 1915; she had been asked to give a lecture in Copenhagen and chose that subject as likely to be of interest since aircraft were being used for the first time in war.

The quality of her work in Denmark was recognized in 1919 by the award of a DSc from Aberdeen University on the basis of published and unpublished papers. Yet despite her high qualifications and research experience she spent the next four years looking for a job and keeping the wolf from the door by doing translations. She acquired an excellent knowledge of French, German and the three main Scandinavian languages; an efficient reading knowledge of Dutch and Italian; and enough to get by in Spanish and Icelandic.

In 1923, a casual encounter with the Principal of Aberdeen University, George Adam Smith, led to her being recommended to Dr (later Sir John, then Lord) Boyd Orr, the

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Director of the recently-established Rowett Research Institute. There, she was given temporary appointments, first as Librarian and subsequently as Assistant in the physiology department and as Personal Assistant to the Director. When she asked Orr about the possibility of a permanent appointment she was told this might be available if she became indispensable to him. 'So', she told me, 'I made myself indispensable'. Her early years at the Rowett Institute can be described in her own laconic words:

'During the following six years [from 1923] I co-operated in some capacity in most of the main lines of work in the Physiology Department and was concerned especially with research on iodine in relation to plants, farm stock and the problem of goitre in man [Elsewhere, she noted that she was the first to use a micro-method for estimating iodine; and also that at an international conference on iodine she 'read a silly paper; not my fault, the penalty for clinical collaboration.] Throughout this period I continued the work I had begun as Librarian, of assisting the Director in the collection and digestion of information from the literature, in the drafting of reports on research, and in the preparation of papers for publication. The knowledge, technical and theoretical, thus acquired of the application of fundamental research to the solution of practical problems has since proved to be of the greatest value. I had, then, a record of eleven years' research in both fundamental aspects of physiology and of experimental nutrition, with an extensive knowledge of the literature, when I was transferred to the staff of the Bureau in 1929.'

To those of us who were subsequently privileged to work with her, Dr Leitch (she *was* never addressed by her first name, except by very old friends and within her family) was the Bureau. Her erudition was extraordinary, and she had an unrivalled ability to assemble, evaluate and extract the meaning and implications of data. Years later (1976*a*) she introduced a paper on the retrieval of nutritional information by quoting from a paper given by Lord Rayleigh to the British Association in 1884:

'If, as is sometimes supposed, science consisted in nothing but the laborious accumulation of facts, it would soon come to a standstill, crushed, as it were, under its own weight. The suggestion of a new idea, or the detection of a law, supersedes much that has previously been a burden on the memory, and by introducing order and coherence facilitates the retention of the remainder in an available form... Two processes are thus at work side by side, the reception of new material and the digestion and assimilation of the old; and as both are essential we may spare ourselves the discussion of their relative importance.'

In the same paper, she went on to describe the idea of a 'research review', which should not only assemble the data on some problem or subject of controversy (she had no patience with 'mere catalogues'), but should also attempt to achieve a synthesis and to formulate a solution. Elsewhere, she wrote of the 'highest and rarest' type of creative review, which 'takes data from more than one field and shows that they are related and what the relation is'. No problem daunted her or found her at a loss. An enquiry from Somaliland resulted in 'The feeding of camels' (1940), a report which, she wrote, 'was received with gratitude by the officer who asked for advice, and with amusement by his camelmen who thought it funny that advice should come from a remote armchair in a country where camels exist only in zoological gardens'. Colleagues and visitors from all over the world came to her office, and discussions ranged from esoteric details of basic sciences through animal feeding and growth, to human vital statistics, physiology and behaviour. Facts and ideas were to be scrutinized in historical perspective, with a proper appreciation of technical limitations, and used to develop more fertile ideas and better techniques. Thus, she insisted that I should read the original literature of the 19th-century sanitary revolution in Britain, in the course of which the first dietary surveys were undertaken and primitive ideas of nutrient requirements were advanced; and so I was led to a better appreciation of the uses and limitations of present-day survey techniques, and to thinking more clearly about the

tortuous philosophy behind current 'dietary standards' and 'recommended allowances'. Her papers on 'The evolution of dietary standards' (1942) and on 'Technique and interpretation of dietary surveys' (1950) can still be read with profit. Always tolerant towards those who wished to learn from her, especially if they could argue back coherently, she could be merciless towards unconfessed ignorance or sloppy thinking. Words and language were to be used as precision instruments. Her own speech and writing were notable for their clarity, and many of us had our literary styles improved by her ruthless blue-pencil.

Some of her publications may be regarded as classics: for example, 'The determination of the calcium requirements of man' (1936–37) which utilized a new method of analysing balance data in order to estimate the maintenance requirement of adults. A good idea of the originality and scope of her mind is also given by two papers read to the Nutrition Society: on 'Growth and health' (1951) and on 'Changing concepts in the nutritional physiology of human pregnancy' (1957). Those papers provided the theoretical base upon which much of the work of my own research team was built; and the latter led to the publication by Hytten & Leitch (1965, 1971) of *The physiology of human pregnancy* which is still regarded as an essential source-book, of concepts as well as of facts.

I have written elsewhere (Thomson, 1978) of her role in the early work on milk for which Sir John Orr became famous; it not only helped to resolve the economic problem of surplus milk production, but also did much to improve the nutritional status of British school-children. Subsequently, she played an important part in the evolution and publication of Orr's classic *Food, health and income* (1936), which laid the foundation of Britain's successful food policy during the Second World War. During that war, she directly or indirectly gave much information and advice to the Government, and when it was over she participated in the international discussions which led to the formation of WHO and FAO. Those of us who knew what had gone on behind the scenes took special pleasure from the fact that her merits were at last publicly recognized by the award of an OBE in 1949, and by an Honorary LlD from Aberdeen University in 1965.

Physically slight and seemingly frail (she claimed that she had been malnourished as a child), Dr Leitch had an apparently unlimited capacity for work, stimulated by her conviction that good nutrition is of the greatest importance to human welfare. Her contributions to the science and politics of nutrition might have received earlier and wider recognition if she had held a paramount position during the most productive years of her life; but for most of the time she worked behind and for people who occupied the front of the stage. This may have been for the best (though some of us thought that her name should have appeared on more of the publications to which she contributed so much), for the diplomacy needed by those in the forefront of nutritional politics did not come easily to one who was notable for outspoken directness. She also relished iconoclasm, and wrote with reference to Claude Bernard's well-known aphorism on the fixity of the *milieu intérieur* that 'Famous dicta of famous men, if repeated often enough, have the unfortunate effect of sterilizing thought instead of enlivening it.' Her respect was not readily earned; and she was more wayward in her reactions to people than to ideas. Her swans usually continued to be regarded as swans, but her geese were seen as without merit, and to be chastened. But though her judgement of people sometimes seemed to be idiosyncratic, she insisted continually that merit (the ability to do a job competently, honestly and with imagination) was one of the greatest of virtues.

Her retirement did not lead to idleness: she continued to write abstracts and reviews when in her late 80s. Her review, 'Change in shape of the human body' (1976*b*), written when she was 85, gives a masterly and imaginative account of one of her life-long interests, growth and form; and in its attack on Medawar's mathematical treatment of growth illustrates her undiminished relish for controversy. Years after she had retired, her room at home

contained stacks of scientific journals and papers of work in progress. Calling on her without notice, I would be regaled with tea (often a choice of China or Indian, with the option of Glen Grant malt whisky) plus superb home-baking, usually by her sister Rebecca, though Dr Leitch herself was no mean cook. The conversation would range freely over politics, personalities, scientific affairs, music (Mozart yes, Beethoven no), books (she was an avid reader of detective stories and, more remarkably, of the Regency romances of Georgette Heyer, which she insisted were historically well-researched, especially after she wrote to the author about a reference to 'low diet' prescribed during pregnancy) and much else. She was unfailingly interested in the families, progress and problems of those she regarded as her acolytes, and had the invaluable gift of being able to simplify a difficult situation, often in an unexpected way; or, if that was impossible, of renewing the strength needed to confront it.

After the death of her sister, her stoicism did not reconcile her to living alone at an advanced age. In 1978, she cut her roots, not without pain, by going to Washington D.C. and subsequently to Australia, to live with her daughter. At our last meeting, I asked her how she would cross the Atlantic. Her reply was characteristic in its brevity and bravura: 'By Concorde, of course.'

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