



Edith Saunders and the British Association

The function of the British Association for the Advancement of Science [now the British Science Association] would today be described as 'outreach'. Its annual jamborees were held in a different location every year, with garden parties and dinners, as well as addresses and debates. After 1843, women could attend as delegates, and they often gave talks and demonstrations, rarely possible to such a degree with other scientific societies. Eventually a few women joined organising committees. Edith Saunders was nominated as a new member of the BAAS Council in 1913. Over the years she moved from the edge in group photos to a seat close to the centre, where she stolidly remains, clearly indicating her status. Unusually there tends to be a few women in all of the delegate groups after 1901; at least in Section K – Botany. Furthermore, we can see from Saunders' publications that she was considered important enough to receive BAAS funding for her own research, independently of Bateson.



On the left, a cropped area from the 1913 Section K group shows Edith Saunders next to Dorothea Pertz. In front is Ethel Sargent, first female Section President



On the right, the Illustrated London News feature 'Women's influence in science' 1919 shows how Edith Saunders achieved national prominence through her involvement with the BAAS



Edith Saunders first appears in a BAAS Section K photo in 1903, on the edge at right. The 5 women present may be celebrating the 'privilege' of being present by making it a gala hat day. [Bateson, for some reason, is missing]

Early years. William Bateson became a member of the BAAS in 1884, and Edith Saunders in 1903. She gave her first talk, 'Results of some Cross-breeding Experiments with Plants', that year; Bateson preceded her with 'New discoveries in heredity'. Their wide-ranging research was hard to place, but in 1903 they presented in Section K – Botany. In the early years, she tended to speak after Bateson, and as he was more commonly associated with Section D – Zoology, she often presented the intellectually challenging details of her plant research somewhat anomalously to zoologists. Published proceedings almost always include a Saunders paper, affording her a useful platform.

The 1904 meeting was held in Cambridge. Bateson used his Presidency of Section D as an opportunity for the Mendelians to gain the ascendancy over the biometricians. After Saunders presented her results with stocks, in which she significantly mentioned she had noticed the phenomenon later called 'linkage', Raphael Weldon and Karl Pearson accused Bateson, Saunders and others in the 'group' of lack of rigour. Pearson declared, 'At present their theories could not be grasped; they were always changing in form and definition'. The *Times* reported [20 Aug]: 'The attention of the section was absorbed today in a discussion of heredity raised by the address of Mr Bateson ... In anticipation of the encounter between the Mendelians ... and the Biometricians ... the section room was very crowded all day; and if undue heat among the disputants was avoided, the discussion was not lacking in elements of excitement, reflected by the audience in their demonstrations of partisanship so new to the serene abstraction of section D'.

1914 – Vice-President of Section K

The BAAS also afforded opportunities to travel, not just in the UK, but across the Commonwealth. We see Edith Saunders in group photos in Canada and South Africa. In 1914, she sailed with Bateson and his wife to Australia. He was overall President that year, and Saunders one of the Vice Presidents of Section K, giving a talk on 'The double stock, its history and behaviour'. She also enjoyed several opportunities to participate in escorted expeditions in 'motor cars' from several locations. Her report on these forays into a 'botanist's paradise' in *New Phytologist* demonstrates her enthusiasm, even straying close to the poetical - 'When the sunlight catches the red glands with their drops of transparent secretion the effect is of leaves strung with tiny garnets and diamonds'.



William Bateson, his wife Beatrice, and Edith Saunders during their BAAS visit to Australia – waiting for a train. By the time they returned to England, the world had changed – the Great War had broken out.

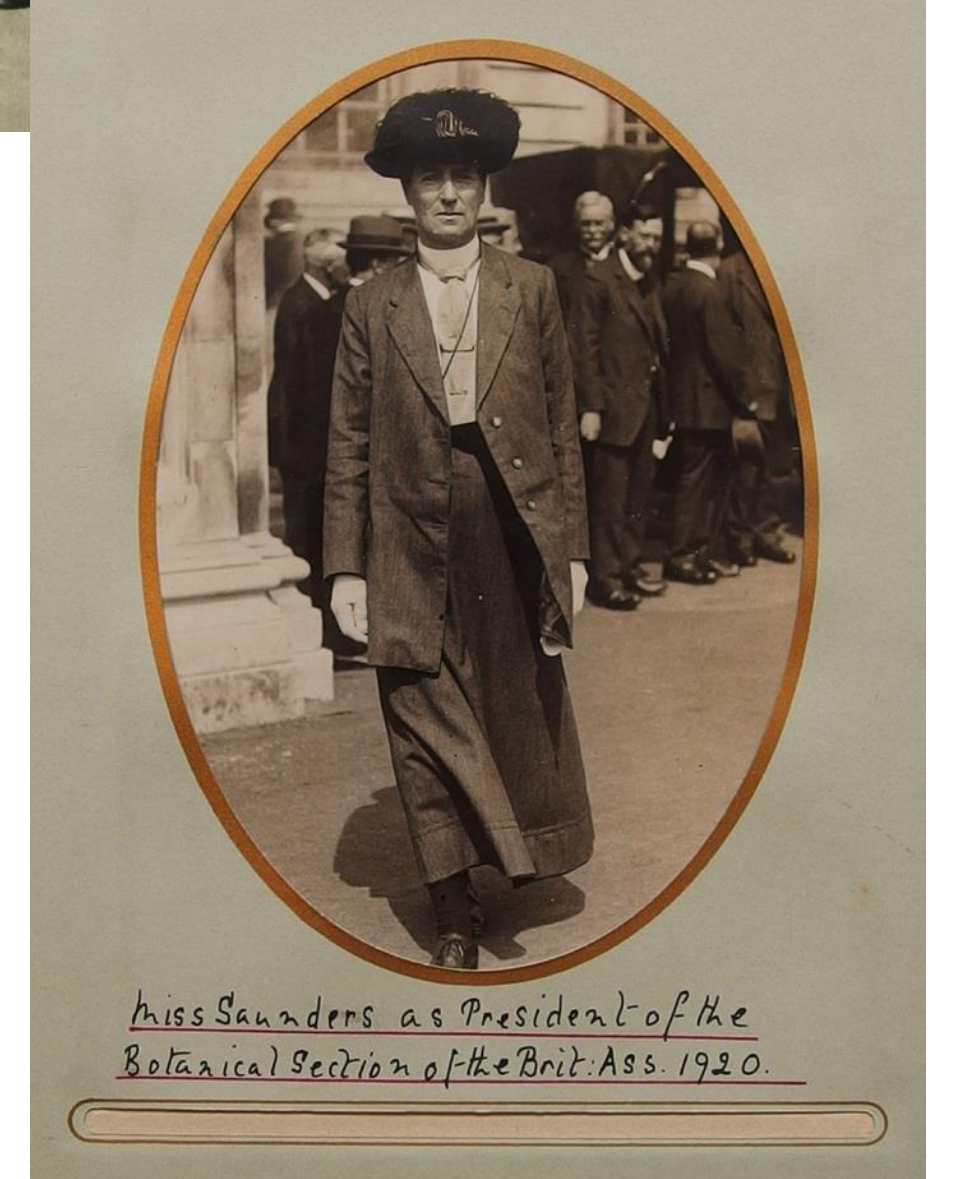
1921 - Section K President

For the 1920 Cardiff meeting, Edith Saunders was Section K President, which '... reflected her position as one of the country's leading figures in plant genetics' [Creese]. She was justifiably nominated because of the 20 papers she had written on complicated linkage problems. Her Presidential Address gave extensive consideration to T H Morgan's chromosome theories, which she accepted before Bateson came round to the idea. She ended her speech with a plea she often repeated:

'My appeal is for more organised co-operation in the experimental study of Genetics. It is a not uncommon attitude to look upon the subject of Genetics as a science apart. But the complex nature of the problems confronting us requires that the attacking force should be a composite one, representing all arms.'



Above, Edith Saunders poses with the other BAAS Section Presidents in 1920 – the only woman



On the right, an image in an album in Newnham College Archives captures her as she walks away from the group

The 1921 backlash

Edith Saunders was only the second woman to become Section K President – the first being Ethel Sargent in 1913, and the next Dame Helen Gwynne-Vaughan in 1928, although there was very nearly a female Section President the year after Saunders. Opposed by many as a 'lightweight' when she was nominated for 1920, and much resented by a number of male botanists, animosity towards Saunders resulted in action which impacted very unfairly on another woman scientist.

Agnes Arber was nominated as Section President for the 1921 Edinburgh BAAS meeting by Saunders, and ratified during a poorly-attended meeting. Saunders may have intended to give the recently-widowed Arber's career a necessary as well as deserved boost. Although Arber was at the time highly-regarded as a scientist, immediate action was taken to reverse the decision. The reason given was that a Scottish botanist should be honoured, and the Cambridge dominance of the Section reduced, but in addition to misogyny there were underlying rivalries between factions, such as old-style morphologists vs upcoming ecologists. It was declared inappropriate for a woman to be Section President 2 years in a row. One of the opposers to Arber was Professor of Botany at Cambridge, A C Seward, who later refused to allocate any lab space to her when she was forced to vacate the Balfour Lab when it closed. Another was Professor J B Farmer of Imperial College, who complained '... the feminists on the committee are running the show to death'.

Professor of Botany at Glasgow F O Bower was the main mover against the 'botanical gynocracy' [phrase thanks to Seward]. Bower accused Saunders of misleading the Council and blamed her '... infatuation, combined with absolute ignorance of the field in which she finds herself which has placed her friend in a thoroughly false position' [letter to Seward]. He asserted that this '... confirms that the female judgement is apt (at times but by no means always) to be unbalanced - and this example of it will not be forgotten', claiming the Section secretary should have guided Saunders....but perhaps she is unguidable. She has only herself to blame for her rebuff ... She neither knows nor cares nor ascertains general botanical opinion'.

The self-effacing Arber was taken aside by Seward and 'advised' to resign. In a letter to Bower, Seward said he had no intention of discussing all this with Miss Saunders, adding '...Some women as you say can be extraordinarily asinine.' Yet just as Bower's action against Arber clearly stems from animosity towards Saunders, so this may itself be related to his lack of respect for Bateson. For the 1914 BAAS meeting Bower was Section K President and Saunders a Vice-President, so they may have clashed at planning meetings. In a diary he kept of the trip to Australia, Bower reveals his impatience with Bateson's theories, and says there was considerable criticism of Bateson's conference speeches.

With knowledge of this background, it is fascinating to note a relatively relaxed Saunders in the 1921 group photo compared to her usual awkwardness - considering she is sitting next to Bower [Arber was absent]. Another image of a field trip to Ben Lawers related to the meeting shows a rare – possibly unique - broad and genuine smile on Saunders' face.



1921 was a bad year for women in other ways – The University of Cambridge refused to award them degrees once again, even though Oxford had conceded in 1920.