230th Anniversary of the Linnean Society: A Celebration of our First Female Fellows

Wednesday 21 March 2018

10:30–10.40: REGISTRATION

10:40–10:45: Welcome by Dr Sandy Knapp FLS, *Natural History Museum*
10.45–11.15: Professor Athene Donald FRS, *University of Cambridge* **(Keynote)**
11.20–11.40: Dr Rich Boden FLS, *University of Plymouth*
11.45–12.05: Dr Maria Vorontsova FLS, *Royal Botanical Gardens Kew*

12:10–13:10: LUNCH

13.15–13.35: Dr Erica McAlister, *Natural History Museum*
13.40–14.00: Dr Emily Grossman, *Science Communicator and STEM ambassador*

14:05–14:30: TEA BREAK

14.35–15.30: Q&A discussion with panel with Dr Sandy Knapp FLS
15.30–17.00: COCKTAIL RECEPTION

The LINNEAN SOCIETY of London

NATURAE DISCERE MORES

ABSTRACTS

"Why (Still) so Slow?"

Athene Donald | University of Cambridge **(keynote)**

Women have been attending universities and receiving education in the sciences for well over 100 years and yet still we find a great paucity of them in the top ranks: as Fellows of the Learned Societies, as Professors and Heads of Departments. Why? Is it the women holding themselves back, or is it the system? And, in either case, what can be done? The trouble is, despite the evidence covering both these aspects, progress is still glacially slow. Nevertheless, it is only by teasing the problems out into the open air – so that no one has any excuse for not appreciating what they are – is there any hope of reaching genuine equality of opportunity.

On the part of the individual, it is easy to say that if only they had a bit more confidence and a bit more determination there wouldn't be a problem (oh yes, and perhaps they shouldn't have children either). But study after study shows this 'Lean In' approach is insufficient because of the systemic problems. Unconscious bias is rife: in appointments and promotion panels; in the words used in letters of reference; in identifying power with male attributes and disliking women who behave in the same way; in dismissing women who take time off for caring responsibilities while praising men who occasionally meet children from school….The list goes on and on.

So, if we are to see an increasing number of women rising to the top, gaining Fellowships and contributing to the maximum of their potential, there is work for all of us to do.

"Vitrices scientiae of 1904 – the first women to be elected as Fellows of the Linnean Society of London"

Rich Boden FLS |University of Plymouth

In late 1904, 16 women presented Forms of Recommendation to the Society in the hope of being admitted as Fellows to the then men-only Society, after many years of campaigning. At a ballot of Fellows present on 15th December 1904, 15 were elected as Fellows. Whilst only 12 of the 15 ever presented themselves to the Society for Formal Admission and thus were technically Fellows sensu stricto whilst the remaining 3 were not. Their action was what opened the doors for women to join the Society, making the Linnean Society of London the first learned biology society that afforded Fellows of any gender equal rights. Women Members were already allowed at the Royal Entomological Society (1833), Zoological Society of London (1829) and Royal Microscopical Society (1884), but none

actually permitted female Members to attend meetings! It is worth noting that the Royal Society did not permit female Fellows until 1945.

In this talk, I will give a brief overview of each of the 15 women elected as Fellows in December 1904 (regardless of if they were formally admitted or not!), who included botanists, zoologists, mycologists, bacteriologists, horticulturalists, paleobotanists and so on. They came from working class to upper class backgrounds and included women with doctorates as well as women with no formal education. Some were clearly elected on their own merits, others because they were married to a Fellow of prominence – whilst nepotistic, the latter probably shows that some male Fellows encouraged their wives to apply to help equalise the Society.

"Women who collect and describe plants: a global analysis 1753 – 2018"

Maria Vorontsova | Royal Botanical Gardens Kew

Gender disparities in science are the subject of much current analysis using modern datasets. Female scientists productive more than 100 years ago are finally receiving media attention. But how do we see the broader picture of female contribution across time, changing with the gradual change in culture and society? Collecting plants and describing them is an area of science that has remained largely stable over the last 250 years. We find plants in the wild, we make herbarium specimens, we compare specimens to one another, and we describe species new to science.

I will present our analysis of species author gender in the International Plant Names Index, a resource that has remained consistent over this time. And the numbers are shocking! The female contribution to taxonomic botany is lower than that in physics and chemistry, and has been so since the early 20th century. Female authors make up 12% of the total, but they published only 3% of the species. The most productive male botanists have named thousands of species each, while the most productive women have named just hundreds. The current contribution is far from equal: only 12% of currently described species are published by female botanists. Is this an irrelevant statistical exercise? I hope that seeing ourselves in a broader context will help us understand our scientific legacy, and be prepared for perhaps a gradual future change, with the scientific tradition of taxonomy which is perhaps more retrospective than that of other disciplines.

"Knickers, knives and knowhow - my experience in the field."

Erica McAlister | Natural History Museum

I am lucky to work with one of the world's greatest natural history collections on the world's best species - flies. Not only do I work on the existing collections but I get to add new specimens to this all the time, and I have collected from across the globe in order to do this. From the cow sheds of Indonesia, to expanse of the Australian outback, from the mountains of Peru to the village homes in Tajikistan. I have been accosted by amorous animals, had monkeys eat my traps, dangled into sewage pits and have been bitten a lot by spiders whilst somehow avoiding the snakes. But I have also collected from the top of mountains, from along Caribbean shores and from the jungles of Vietnam. A job often devoid of glamour (drying underwear in your car or sharing your latrine with an owl) but high on unique experiences – made even more so by being a female, often solo, in the field. In this talk I will briefly introduce the fun of fieldwork as well as talking about the challenges of being a female in this environment.

"Too Sensitive for STEM?"

Emily Grossman | Science Communicator and STEM ambassador

At various points along her wide and varied career path as a scientist, actress, and science teacher, Emily felt that she didn't fit in. She was often confronted with the idea that perhaps she was "too creative, too emotional, or too sensitive for STEM" - a concern she has also heard expressed by many of the female students she has taught. Now working as a science communicator, in 2015 Emily was invited to take part in a debate on Sky News, during which she supported women in science and commented that it's OK for scientists to cry. Following the interview she received a barrage of sexist and misogynistic abuse on social media. Six months later she delivered a critically acclaimed TEDx talk at UCL "*Why Science Needs People Who Cry*" on the value of emotions in science. Today Emily shares the challenges she has faced as a woman in STEM - exploring the themes of confidence, fear of failure, changing path, resilience, imposter syndrome, unconscious bias, online abuse, self-care and personal growth - and discusses the need to dispel the outdated stereotype that all scientists are cold, hard and unemotional; a stereotype that prevents many young people, especially girls, from seeing a place for themselves in STEM. Emily discusses how, through her work as a STEM Ambassador, she hopes to change the perception of what it is to be a scientist, and to inspire more young people, especially girls, to study STEM subjects.
