Q&A Jenny Collier

Jenny Collier, marine geophysicist and President of the BGA, explains why she is addicted to science.



What got you interested in science?
I have always been curious about how things work and have a desire to organize facts and ideas. When you understand something in science, the "complicating clutter" drops away and, during my school days, the reverse seemed to be true of other disciplines. I still find the simplification process of scientific understanding thrilling and beautiful – addictive even.

What drew you to marine geophysics?
I was always a "team player" and this, coupled with the adventure and exploration aspects, were irresistible. During any marine experiment there are always technical and logistical puzzles to solve. You have to work with what you have on the ship, which breeds astonishing ingenuity when things get challenging. You get to work with some amazing people that you would otherwise rarely meet.

"If you have a career in science, you have a vocation not a job – a precious gift"

What are you working on at the moment?
We are about to start looking at the solid-Earth water cycle at the Lesser Antilles subduction zone – where the North American plate sinks beneath the Caribbean Plate. Until recently, the solid-Earth water cycle has been pretty much ignored and yet small amounts of water have a disproportionate effect on how the Earth's interior works. Also, the interior is huge and no-one knows how much of the total planet's budget it contains. We will put on the seabed the largest array of seismometers ever deployed from a UK research vessel. After 15 months, we will invert the data to determine where the water that comes into the system with the North American plate goes.

What do you hope to achieve as President of the BGA?
I am committed to promoting geophysics at all levels and hope to raise the profile of the association and better represent geophysicists. The BGA has an important role because geophysics is a wide discipline and historically more industrial geophysicists have tended to join the Geological Society, while deep-Earth geophysicists have gone to the RAS. Our collective message sometimes gets lost. Geophysics offers solid scientific training, rewarding careers and potential solutions to a lot of pressing problems.

Who has been the biggest influence on your career?
My father. In any career there are times when things don't go your way and you have to be patient and tenacious. He installed the belief in me that if I was sincere and worked hard, my reward would come.

What is your greatest achievement so far?
On a personal level, I am proud that I have retained scientific curiosity – this has led me to work on many different projects with some great people from other disciplines. However, increasingly my role is nurturing talent, so my internal measure of achievement is transferring to others. Sometimes, sitting in the audience when one of my students is giving a talk and does well, I could almost burst with pride.

What is your biggest mistake?
Dropping O-level chemistry in favour of cookery. My pastry skills are quite good, but it has proven hard to incorporate these into my professional life.

What are you looking forward to in the next 10 years?
Marine geophysics is evolving rapidly: partly as so little of the world's ocean has been explored and partly as it is technology-driven. There are many discoveries to be made. On a broader level I look forward to learning which of the long-held assumptions we have about how the Earth works were, frankly, wrong. Only 15 years ago, for example, we discovered a new mechanism to create the ocean floor, which we now realize forms around half of it!

What keeps you awake at night?
The reversal of social mobility. Grade inflation handicaps bright children from ordinary backgrounds. It is by no means clear to me that if I was starting out today I would achieve what I have.

Why should children study science?
Studying science trains the mind in critical thinking and problem-solving, which can be transferred to almost all other life activities. It also develops a sense of complete awe of the natural world, which I think will become increasingly important in the modern world. Having science qualifications on your CV will always open doors, even if you don't use the skills directly. However, if you are good at it and lucky enough to go on and have a career in science, you will have a vocation not a job – a precious gift. ●

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