TURNING POINT
Molly Brown

Molly Brown has spent a decade carving out a research field combining geography and economics. Using satellite images to trace how environmental factors affect food security, she helps government-aid agencies to pick priorities. On 29 October, Brown, an Earth scientist at NASA's Goddard Space Flight Center in Greenbelt, Maryland, got an achievement award from the professional-development group Women in Aerospace.

How did your education shape your career?
I did a degree in biology at Tufts University in Medford, Massachusetts, and I did not like it very much. I hated memorizing names of things and found lab work isolating, but what bummed me out most was male teachers telling me about discoveries by great male scientists. With no mention of women, I almost couldn't see myself as a scientist. What got me excited was environmental science, an area in which many discoveries were yet to be made.

You also volunteered for the US Peace Corps. How did that set you on your career path?
I told the Peace Corps that they could send me anywhere they wanted. I ended up in Senegal, with few expectations. I come from a family of dairy farmers, but I knew nothing about subsistence farming. Over three years, I saw how the environment affects market dynamics. I watched grain rot in Senegal during a rainy, productive year because the region lacks a suitable transport system. A drought results in farmers losing their income source, and losing access to food as prices go up. When I got back to the United States, I decided to study geography because it combined my interests in people and the biophysical world.

What was your PhD research about?
While doing my PhD, I got a job at Goddard, helping to map a long-term remote-sensing record of when and where vegetation grows. The data were used by the Famine Early Warning Systems Network, a project of the US Agency for International Development (USAID) that informs distribution of monetary assistance. I decided to see if I could combine remote-sensing data with economic models to investigate how regional environmental conditions affect food-price dynamics, and to predict shocks to the markets.

How was that work received?
It made no impact whatsoever. I was creating a brand-new thing. Economists said I couldn't take this approach that looked beyond market forces to satellite data. Geographers didn't understand it. It was very unpopular. A decade later I am finally getting traction.

How so?
In 2008 I published a book, *Famine Early Warning Systems and Remote Sensing Data* (Springer), so that I could place my innovation in the context of early-warning systems. My thesis had provided a method, but I needed to explain in detail how my approach could be used to predict crises. The book is much more widely cited than the academic publications from my thesis. I consider it a turning point. I have started working with high-calibre economists to move the idea forward, and I have another book due out in the spring.

How did the book help you to gain traction?
It let me explain who should care about my ideas and why it was essential to move them forward. You can do brilliant work, but if you are selling it to the wrong people, they won't buy it. I needed to target policy-makers, not just Earth scientists — I had to explain how the data could be used in decision-making. Now I am collaborating with USAID and the UN World Food Programme to propagate the idea of economists using spatial data.

What has been your best career strategy?
I approach academic pursuits as an entrepreneur. I am strategic about how to spend my time. I get the bulk of my funding from NASA, but I also develop research with collaborators to get extra grant funding. I have learned how to talk to people in a way that gets them to commit to projects. You have to be tough and claim ownership of your ideas to get people to fund them. ■

INTERVIEW BY VIRGINIA GEWIN

Retraction ripple effect

Journal-initiated retractions can reduce the number of citations of the author's earlier publications, a study finds (S. F. Lu *et al. Sci. Rep.* **3,** 3146; 2013). The authors analysed the effects of 667 retractions — mostly in the sciences and dating mainly from 2000 onwards — on citations of the author's earlier work. When a journal initiated the retraction, the number of annual citations of earlier papers fell by 6.9% on average. But author-initiated retractions had no such effect. The scientific community rewards honesty, says study co-author Ben Jones, an economist at Northwestern University in Evanston, Illinois. Self-reporting indicates that "you really care about getting it right", he says.

Environment PhDs

The UK Natural Environment Research Council (NERC) is recruiting 1,200 PhD students in environmental sciences. Grants of about £82,000 (US$130,000) will be paid over 3 or 4 years from 2014, as part of a £100-million government investment. Students will train with businesses, policy-makers or non-profit groups that might offer use of facilities or specialist training, or provide volunteer thesis examiners. One-third of recipients will conduct non-academic research, which could include working for an oil and gas company to find environmentally sustainable ways to extract resources, says Kirsty Grainger, NERC's head of skills and careers. "The student gets first-hand experience in the real world," she says.

Shutdown suffering

The 16-day US government shutdown that started on 1 October had serious effects on researchers, says a report by the US Office of Management and Budget (see go.nature.com/le3tcd). Some 98% of US National Science Foundation employees, two-thirds of employees of the US Centers for Disease Control and Prevention and three-quarters of US National Institutes of Health (NIH) employees were placed on mandatory leave, it says. Many NIH researchers could not enter their labs in Bethesda, Maryland. For early-career scientists, a few weeks' lost work "is a substantial percentage of their research experience", says Michael Gottesman, NIH deputy director for intramural research.