

# Down to Earth

*Summarize yourself in the form of a title of a paper in Nature.*

Evidence for possible relic biogenic activity in a meteoriticist.

*What was your first experiment as a child?*

My elder sisters and I performed a series of psychological experiments on my younger sister, but I won't go into details for fear of re-opening old family wounds.

*What single scientific paper or talk changed your career path?*

When I was an undergraduate, Colin Pillinger gave a talk to my geology class on pre-solar grains and the origin of the Solar System. I knew nothing about planetary sciences before the lecture, and found it amazing that we could learn about things that happened before Earth had formed by looking at tiny grains of meteorites. After the talk I wrote to him and ended up as his PhD student.

*What gives you the most job satisfaction now?*

Seeing brand new data, and realizing I have found out something that no one knew before.

*What are your major frustrations?*

Meteorite dealers who understand only the financial value of meteorites, not their scientific worth, and omit or embroider important facts about their find locations and characteristics to make them worth more money. And instruments that are forever breaking down.

*What literary character would you employ as a postdoc?*

Hermione from the Harry Potter books, because as well as being very clever and studious, she could cast a spell to stop instruments breaking down (see above).

*What was the most memorable comment you ever received from a referee?*

On a grant proposal: that the work should not be a high priority for funding because the origin of the Solar System was already well understood — in fact, there is an entire research community devoted to this topic.

*Assuming the dead can be raised and/or time travel exists, who from the world outside science would you most like to have dinner with?*

Dorothy Parker. She would be a fascinating companion and know the best places in New York to spend the evening.

*Where and when would you most like to have lived or worked?*

In the sample-receiving lab of the Johnson Space Center, Houston, Texas, in 1969 and throughout the 1970s.

*What book is currently on your bedside table?*

*Protostars and Planets IV* (used as a lampstand).

*What music heads the playlist in your car or lab?*

Anything by They Might Be Giants.

*What's your favourite conference destination, and why?*

The best place would be the Antarctic plateau. It would provide a logistical challenge, but the scenery is stunningly beautiful; the delegates would not get distracted and stray from the conference; and the bracing air would keep everyone wide awake. The 24-hour daylight would mean that it would be possible to hunt for meteorites after the sessions were finished.

*What one thing would you rescue from your burning laboratory?*

My collection of CAIs (calcium-aluminium-rich inclusions). These are inclusions in meteorites that are among the first solids to have formed in the Solar System. They have many bizarre chemical and isotopic characteristics that are not well understood.

*What do you do to relax?*

Have a cup of Lapsang Souchong tea.

*What would you have become, if not a scientist?*

I really like cutting people's hair, when they let me, so hairdressing would be a possibility. Hairdressing is a very creative profession. My grandparents became farmers after they retired, and I might follow in their footsteps as a farmer or a shepherd, although the early mornings might prove too much for me.

*What overlooked or underrated discovery really changed the science in which you work?*

We now know that there are some grains in meteorites of minerals that formed around stars that were ancestors to our own Sun. These grains can tell us about the chemical evolution of our Galaxy, stellar nucleosynthesis and stellar mixing processes, and about processing of grains in the interstellar medium. Although widely accepted in the meteoritical community, I do not think these discoveries have had as big an impact on the astronomical community as they deserve.

*Do you have a burning ambition to do or learn something of no practical or immediate value? If so, what?*

To be a good watercolour artist and go on a voyage of exploration as the artist in residence.

*Under what conditions do you have your greatest and most inspired ideas?*

When I don't have a pen and paper to hand.



Sara Russell

Sara Russell is leader of the meteorites and micrometeorites research programme at the Natural History Museum, London, and lead editor of *The Meteoritical Bulletin*.

*What's the one thing about science that you wish the public understood better?*

That science and religion are not contradictory. Particularly that the study of the origin of Earth and of life is not anti-religious.

*You've just been told (in confidence) that the world will end tomorrow. What do you do next?*  
Last time this happened, I suggested to the guy who told me that he should recheck his orbital calculations.

*Which field in science deserves more funding?*  
Research into diseases that occur mainly in the developing world, such as malaria and river blindness.

*What's the most interesting thing in your fridge?*  
Chilli vodka, given to me by a friend in Kiev, which is excellent for making Bloody Marys.

*Why is physics so hard?*  
Partly because physicists insist on writing their own computer programs instead of using Windows like normal people.

*What would you change about Nature?*  
I would replace this Lifelines slot with a weekly cosmochemistry piece.

*Which actor would best portray you in a film?*  
Marilyn Monroe.

*What would be the title of your autobiography?*  
'Heavenly Body' (I wish...).

*What's just around the corner?*  
I am looking forward to finding out. ■