

**Amy Bonnie**  
***Desert landscapes***

**Royal  
Geographical  
Society**  
with IBG

Advancing geography  
and geographical learning



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When I try to get across to friends and prospective students why geography is the best subject, I usually go along the lines of “it’s the whole world – literally, the WHOLE world!”. But it’s not just the whole world – it’s other worlds too.

As part of a third-year module **Desert Landscapes**, we explored the dunes of Titan, Mars and Venus, and how their different environmental factors – gravity, grain density, air pressure & temperature – affected sediment transport and therefore the type of dunes that formed. This understanding of planetary dune formation is pretty cool, and we can use that knowledge to help improve our understanding of these planetary bodies as a whole.

Mars is particularly cold, especially near the poles, and here we find frozen, inactive, dunes. Because we know that these features must have formed under warmer temperatures, they are actually evidence of past climate change. Understanding dunes on Mars is also useful for NASA. Ryan Ewing - an aeolian geomorphologist based at Texas A&M university - helped work on the Mars Curiosity rover, using his knowledge of aeolian geomorphology to help engineers navigate the terrain safely. When you study geography, the knowledge and skills you learn will allow you to tackle real world problems and help solve some of the biggest issues facing the planet over the coming years.

Geography then can take you many places – and who knows, perhaps even to the red planet itself!