

Mineralogical Society of Great Britain and Ireland Postgraduate Student Bursary
Student Report from IAVCEI 2008, Reykjavik, Iceland
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In August 2008, I attended the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) General Assembly in Reykjavik, Iceland, with the aid of a Mineralogical Society of Great Britain and Ireland Postgraduate Student Bursary. In the themed session on 'The transport and interactions of aqueous fluids and gases in magmatic-hydrothermal systems', I gave an oral and a poster presentation on my current PhD research at Trinity College Dublin. The primary aim of my research is to characterise the mineralogical and geochemical evolution of the volcanic and plutonic hydrothermal systems associated with the Miocene Tejeda Caldera, Gran Canaria, Canary Islands. My results show that low-temperature alteration of intra-caldera tuffs along the margin of the Tejeda caldera is associated with the near-surface, epithermal part of a larger, fault-controlled hydrothermal system linked to the intrusion of a shallow-level magma chamber beneath Gran Canaria at ~13Ma. The spectacular cone sheet swarm and hypabyssal syenite stocks of the Tejeda Intrusive Complex (12.5-7Ma) also sustained an active hydrothermal system during emplacement and cooling. Combined textural, mineralogical, and isotopic evidence indicates that the intrusive hydrothermal system was largely driven by the influx of low- $\delta^{18}\text{O}$ and low- δD meteoric waters into a shallow, degassing environment, facilitated by the relatively permeable nature of the surrounding intra-caldera volcanic deposits.

Attending IAVCEI 2008 provided me with a wonderful opportunity to present my results to the international volcanological community, and engage in stimulating discussion and debate with leading researchers in hydrothermal geochemistry from around the world. The feedback I received at the conference was invaluable, and has encouraged me to think more critically about my research, and consider my results from new and different perspectives. Furthermore, the week-long IAVCEI meeting, with its numerous themed sessions covering topics from caldera volcanism to magma chamber processes, was a highly beneficial learning experience. Not only did I have the chance to engage in discussions with students and academics researching different aspects of hydrothermal processes, but I also got the chance to learn about current theories and new lines of research in other sub-disciplines such as glaciovolcanism and geothermal energy utilisation.

I am most grateful to the Mineralogical Society for their financial support, without which I could not have attended this high-profile volcanology conference. In all, the chance to present my own research, attend seminars, and socialise with other researchers in such a spectacular geological

setting as Iceland made attending IAVCEI one of the most memorable experiences of my PhD – thanks Min Soc!

Eleanor Donoghue

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Me at Landmannalauger geothermal area, SW Iceland