Matouš Ptáček

Education

Period	**October 2015 —**
Degree	**MSci. in Earth Sciences**
Institution	**University of Cambridge** Cambridge, UK

Thus far, my master's course has revolved mostly around my independent research project (see below). In the second trimester, I intend to take courses covering Metamorphic Petrology, Geophysics, & an interdisciplinary paper on Materials, Electronics and Renewable Energy (given by the department of physics).

Period	**October 2012 — June 2015**
Degree	**BA Hons in Natural Sciences**
Rank	**2.i**
Institution	**University of Cambridge** Cambridge, UK

The Natural Sciences Tripos at Cambridge starts off extremely broad, then specialises over time. In my first year I read courses in Physics, Chemistry, Mathematics & Earth Sciences, then in the following year took the History & Philosophy of Science module alongside Geology. I then specialised in Geophysics, Continental Margins, and Volcanic Processes. The culmination of my third year was an independent field project.

Research Experience

Period	**June 2015 —**
Supervisor	**Prof. Andrew W. Woods** BP Institute
Title	*A New Dynamic Mechanism for Gas Retention & Escape in Porous Media, and some Applications thereof to Volcanic Systems*

Exsolved volatiles play a crucial role in magma chamber dynamics, and can determine whether a volcano will erupt. As the governing multiphase flow equations are intractable, an experimental approach was adopted, using a vacuum chamber to trigger exsolution of the gaseous phase. In spite of experimental difficulties, we have found a new mechanism for gas retention & escape, mostly controlled by the ambient pressure.

Period	**August 2014 — January 2015**
Supervisor	**Dr. Marie Edmonds** Earth Sciences Dept.
Title	*Disko in Abisko: A Bedrock Report concerning the Abisko Glacial Valley and Nuolja Mountain of the Swedish Lapland*

This project involved thirty six days of independent fieldwork in the Abisko national park, Sweden (200km inside the polar circle), followed by the production of a geological map & accompanying report synthesising my findings. I also had to organise the logistics and source sufficient funding for the fieldwork component. Pervasive high-degree metamorphism, and structures which we have never encountered in our lectures, made observations difficult; but it also made me appreciate the importance of grounding theories in geological fact.

Other Relevant Experience

Period	**May 2015 —**
Post	**Sedgwick Club committee (Talks Officer)**

I am organising a series of sixteen geological seminars, given by academics around the UK, for the members of our Club. This involves: Researching & contacting potential speakers; arranging the schedule to create an interesting, consistent and relevant programme; resolving last-minute crises; meeting our speakers on the day; and taking everyone to the pub afterward. I also edit, and write for, the weekly Sedgwick Club magazine.

Period	**October 2013 — October 2015**
Post	**'Timetruck' coordinator**

I organised (and participated in) geological outreach activities at the Sedgwick Museum and around Cambridgeshire, mostly aimed at primary-age children. This involved working alongside the museum and schools, recruiting and organising volunteers, sorting out transport, and planning the outreach activities themselves.

Skills & Interests

Asides from my academic activities, I have a keen interest in the philosophy of mind, self-modifying programming, and the problem of consciousness, with a special focus on the work of Prof. Douglas Hofstadter. I also program small computer games as a hobby, which has given me **a decade of practical experience with the C++, C# & Python programming languages**, and writing easily extensible, high-speed, multiplatform code.

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