

Further Reading List for London Lecture: Deadly volcanic flows – understanding pyroclastic density currents

Rebecca Williams, University of Hull

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The reading list can also be found at <https://www.geolsoc.org.uk/DeadlyFlows16>

Popular Articles and Resources

1. Background Information and Resources

- a. The Geological Society – Geology for Society Online Portal – Background materials on Geohazards.

<https://www.geolsoc.org.uk/geohazards>

- b. The Conversation – Scientists at work: the lava lovers who flock to volcanoes on land and at sea

<http://theconversation.com/scientists-at-work-the-lava-lovers-who-flock-to-volcanoes-on-land-and-at-sea-22426>

- c. Geoscientist Feature – Under the volcano, eruptions on Montserrat

<https://www.geolsoc.org.uk/Geoscientist/Archive/February-2014/Feature-Under-the-volcano>

2. What are Pyroclastic Density Currents (PDCs)?

- a. Planet Earth Online – Scientists show how deadly volcanic phenomenon moves

<http://planetearth.nerc.ac.uk/news/story.aspx?id=1582&cookieConsent=A>

- b. USGS – Volcanic Hazards program – Pyroclastic flows move fast and destroy everything in their path!

http://volcanoes.usgs.gov/vhp/pyroclastic_flows.html

- c. Wired – Extraordinary video of pyroclastic flows from the eruption of Mount Sinabung, Indonesia.

<http://www.wired.com/2014/01/extraordinary-video-pyroclastic-flows-eruption-sinabung/>

3. What can past Pyroclastic Density Currents deposits tell us about their behaviour and eruption style?

- a. Imperial College Rock Library – Glossary: Pyroclastic Rock

<https://www.imperial.ac.uk/earthscienceandengineering/rocklibrary/viewglossrecord.php?Term=pyroclastic%20rock>

- b. Rebecca Williams – Understanding how pyroclastic density currents behave through space and time

<http://gees-talk.blogspot.co.uk/2014/02/whats-that-coming-over-hill.html>

- c. Geoscientist Feature – Tambora volcano – the eruption that created the ‘year without a summer’.

<https://www.geolsoc.org.uk/Geoscientist/Archive/April-2015/Tambora-two-centuries-on>

4. Pyroclastic Deposits in the UK

- a. 100 Great Geosite winner Cwm Idwal & Darwin’s Boulders

<https://www.geolsoc.org.uk/GeositesCwmIdwal>

- b. 100 Great Geosite winner Borrowdale Volcanics and Crinkle Crags – Lake District

<https://www.geolsoc.org.uk/GeositesBorrowdaleCrinkleCrags>

Journal Articles and Books

1. Branney, M. and Kokelaar, B.P., 2002. Sedimentation of ignimbrites from pyroclastic density currents. *Memoir of the Geological Society of London*, 27, p.150.
2. Ongaro, T.E., Neri, A., Menconi, G., Vitturi, M.D.M., Marianelli, P., Cavazzoni, C., Erbacci, G. and Baxter, P.J., 2008. Transient 3D numerical simulations of column collapse and pyroclastic density current scenarios at Vesuvius. *Journal of Volcanology and Geothermal Research*, 178(3), pp.378-396. 10.1016/j.jvolgeores.2008.06.036
3. Rowley, P.J., Roche, O., Druitt, T. and Cas, R. (2014) Experimental study of dense pyroclastic density currents using sustained, gas-fluidized granular flows. *Bulletin of Volcanology*, 76. pp. 855-869. 10.1007/s00445-014-0855-1
4. Williams, R, Branney, M.J., Barry, T.L., (2014). Temporal and spatial evolution of a waxing then waning catastrophic density current revealed by chemical mapping. *Geology*, 42, 2, 107-110. 10.1130/G34830.1