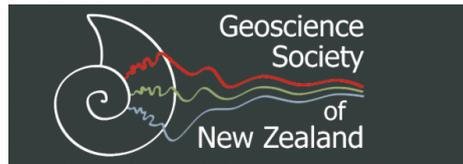




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Bay of Plenty Branch Presentation

Tuesday 8th December 2020
Te Manawaroa Space, Room 1.07
Waikato University Tauranga Campus
Durham Street, Tauranga
Light Refreshments from 5.30pm
Presentation 6-7pm

RSVP: james.griffiths@beca.com

The Transition from the CVZ to the TVZ

Presented by *Marlena Prentice, PhD Candidate, University of Waikato*



Abstract

The Tauranga and Kaimai volcanic centres were active from ~ 3-1.9 Ma and represents a traditional period when volcanism migrated from the previously active Coromandel Volcanic Zone (CVZ) to the now active Taupo Volcanic Zone (TVZ). The crystal-rich (42%) Waiteariki Ignimbrite is the most prominent volcanic deposit in the region and is a case study of an ongoing PhD project aiming to reconstruct the proximal record, ages and scale of volcanism of the Tauranga and Kaimai volcanic centres. The Hikuroa Pumice Member is an ignimbrite found in northern Hawkes Bay, and has been confirmed to be the distal deposits of the Waiteariki Ignimbrite. With an estimated eruptive volume of >800 km³ (DRE), the Waiteariki Ignimbrite it is the product of a caldera forming super-eruption which occurred at the dawn of TVZ. We propose the presence of a buried, composite caldera structure within the northern Mamaku Plateau, situated at the southern end of an asymmetrical rifted graben which lies between the Kaimai and Papamoa Ranges. Faulting has been episodic, and associated with periods of dome growth throughout the region. The western fault occurs along the Waihou River and has channelized pyroclastic density currents entering the Tauranga Region from the TVZ.

Biography

Marlena Prentice is a PhD student at the University of Waikato under the supervision of Dr Adrian Pittari, Prof. David Lowe and Dr Geoff Kilgour (GNS). Her current research investigates the deposits of explosive eruptions from the Tauranga and Kaimai volcanic centres to gain insight into the evolution and distribution of the volcanic deposits, the chemical composition of these rocks and minerals to understand the underlying magmatic processes and how volcanism evolves through time in response to fundamental changes at convergent plate margins.

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