

## Conference Programme for Tuesday 29 November

Memorial Hall			
0800-1730	Registration in Memorial Hall		
0830-0845	Welcome by Geological Society of New Zealand President <b>Dr M Johnston</b> Welcome by the Mayor of Kaikoura District Council - <b>Mr K Heays</b>		
0845-0925	<b>Plenary 1: Nathan S</b> – Geological Society of New Zealand voices from the past		
0925-1005	<b>Plenary 2: Carter L &amp; J Pettinga</b> – Uncovering the face of the eastern New Zealand Margin – a view from the ocean.		
1005-1010	Housekeeping and Marae introduction		
~1020-	Powhiri, the Takahanga Marae		
c.1130-1200	Poster session		
1200-1320	Lunch at Memorial Hall		
	Wharenui	Wharemoa	Wharekai
	<i>Crustal Geophysics</i> Chair: David Nobes	<i>Sedimentology, Basin Analysis and Paleo-oceanography I</i> Chair: Cam Nelson	<i>Symposium 1: 50 Years on in New Zealand Geology</i> Chair: Malcolm Laird
1320-1340	<b>Stratford W &amp; T Stern</b> – Crustal extension and the Moho in the Central Volcanic Region	<b>Waikari C et al.</b> – Paleooceanographic results from a marine sediment core near Lord Howe Island, Tasman Sea	<b>Suggate R</b> – Then and now - and quite a bit before and in between
1340-1400	<b>Benson A et al.</b> – Mantle or crust? first results from a detailed active-source seismic experiment across the Taupo Volcanic Zone	<b>Baggs R et al.</b> – Late Neogene barnacle-rich limestones, Matapiro-Omahu, Hawke's Bay: their life from deposition to uplift	<b>Kear D</b> – "cm/yr" is now available – what of the next 50 years?
1400-1420	<b>Toulmin S &amp; T Stern</b> – Tectonics of the Galatea Basin using geophysical techniques	<b>Crundwell M &amp; M Arnot</b> – "100 km per million years" A highly-dynamic depositional model for late Miocene rocks in Taranaki Basin	<b>Stirling M et al.</b> – Seismic hazard analysis in New Zealand during the lifetime of the Geological Society
1420-1440	<b>Wallace L et al.</b> – Balancing the plate motion budget in the South Island, New Zealand using GPS, geological and seismological data	<b>Nyman S et al.</b> – Tubular carbonate concretions as conduits for methane escape feeding seafloor cold seeps: some North Island examples	<b>Nicholson H</b> – Stacking the schists: problems in metamorphic stratigraphy 1865-1955

1440-1500	<b>Robertson D</b> – Palaeomagnetism of volcanic rocks in Waitakere and Coromandel, and Miocene reconstruction of New Zealand	<b>Lindqvist J &amp; D Lee</b> – High-resolution paleoclimate signal from early Miocene lacustrine diatomite near Middlemarch, central Otago, New Zealand	<b>Barrett P</b> – The development of Antarctic glacial history over the last fifty years
1500-1530	<b>Tea at Marae</b>		
	<i>Rheology and fluid flow in crustal deformation</i> Chair: <i>Andy Nicol</i>	<i>Sedimentology, Basin Analysis and Paleo-oceanography II</i> Chair: <i>K. Bassett</i>	<i>Symposium 1: 50 Years on in New Zealand Geology</i> Chair: <i>Malcolm Laird</i>
1530-1550	<b>Sibson R</b> – Active crustal fluid flow around the New Zealand plate boundary – a research focus for the 21 <sup>st</sup> Century	<b>Carter R</b> – The “so-called Marshall Paraconformity” historical significance of unconformities in the Kaikoura Synthem, eastern South Island since 24 MA	<b>Hocken A &amp; D Lee</b> – The establishment of James Hector in Otago
1550-1610	<b>Stern T et al.</b> - Geophysical exploration of the Alpine Fault Zone and evidence for high fluid pressure	<b>Nelson C &amp; R Nalin</b> – Rhodolith-bearing limestones as transgressive marker beds, some North Island examples	
1610-1630	<b>Toy V et al.</b> – Fabric transitions in the Alpine Fault mylonites: variation in the temperature of the brittle-plastic transition due to changes in strain rate	<b>Hollis C et al.</b> – The greenhouse behind the lab: what Kaikoura’s limestone tells us about the consequences of global warming	
1630-1650	<b>Wightman R &amp; T Little</b> – How strong is the Alpine Fault? Evidence from fluid flow and deformation partitioning in the Pacific Plate hanging-wall	<b>Schiøler P et al.</b> – Late Cretaceous eustasy and the East Coast Basin - the bad news!	
1650-1710	<b>Sibson R</b> – 3-D structural permeability in contractional settings	<b>Laird M &amp; P Schiøler</b> – Is the Late Cretaceous Ward coastal succession allochthonous?	
1710-1730	<b>Oliver N et al.</b> – Numerical modelling of the competition between extension and convection in hydrothermal systems	<b>Hikuroa D &amp; J Crampton</b> – Cretaceous oceanic red beds (CORB’s) in New Zealand: evidence for a global phenomenon?	
	<b>BBQ 7 pm</b>		

## Conference Programme for Wednesday 30 November

0830-1200		Mid-Conference Field Trips	
1200-1320	<b>Lunch at Memorial Hall</b>		
	<b>Wharenui</b>	<b>Wharemoa</b>	<b>Wharekai</b>
	<i>Crustal scale uplift, extension, magmatism and core complexes</i> <i>Chair: Dykstra Eusden</i>	<i>Symposium 2: Mountain to Abyss: The Passive and Active Margins of Eastern New Zealand I</i> <i>Chair: Lionel Carter</i>	<i>Fossil Record File special meeting</i> <i>Chair: Ian Raine</i>
1320-1340	<b>Allibone A</b> et al. – The granulite facies Western Fiordland Orthogneiss in southwest Fiordland	1320-1325 Introduction to Symposium: Lionel Carter & Jarg Pettinga <b>Pantin H</b> – Autosuspension: theory and experiment (Keynote Address)	
1340-1400	<b>Little T</b> et al. – A young metamorphic core complex on Normanby Island, D'Entrecasteaux Islands, PNG: comparison with the Alpine Fault and implications for crustal rheology during rifting		
1400-1420	<b>Peters K</b> et al. – High-temperature ductile extension preserved in the footwall of a low-angle normal fault, Misima Island, Papua New Guinea	<b>Carter R</b> – Canterbury drifts, SW Pacific Ocean record of intermediate depth water flows since 24 ma	
1420-1440	<b>Ring U</b> et al. – Some like it hot! Core complex formation in the central Aegean Sea, Greece, and possible implications for the Paparoa Core Complex in Buller, South Island, New Zealand	<b>Marsaglia K</b> et al. – Chasing bits and pieces of New Zealand from source to sink: preliminary results of sand provenance studies in the Bounty Fan and Waipaoa River sedimentary systems	
1440-1500	<b>Gollan M</b> et al. – Early Cretaceous upper crustal magmatism in southwest Fiordland: geochronological and geochemical highlights	<b>Orpin A</b> et al. – Spatial and temporal sedimentation patterns suggest rapid, margin-wide mud dispersal at Poverty Bay, New Zealand	
1500-1530	<b>Tea at Marae</b>		

	<i>Provenance and terrane history</i> <i>Chair: David Smale</i>	<i>Symposium 2: Mountain to Abyss: The Passive and Active Margins of Eastern New Zealand II</i> <i>Chair: Jarg Pettinga</i>	
1530-1550	<b>Tulloch A</b> et al. - Similarities between Early Cretaceous magmatic belts in Queensland and New Zealand	<b>Joanne C</b> et al. – Mechanical parameters and sediment rheology in the submarine Matakaoa avalanches, East Cape region	
1550-1610	<b>Handler M</b> et al. – Evolution of the Paleo-Pacific Gondwana margin: isotopic constraints from West Antarctic xenoliths	McConnico T, <b>K Bassett</b> & J Pettinga – Facies architecture of the Conway fan delta complex as it formed terraces along the uplifting Hawkswood Range.	
1610-1630	<b>Bradshaw J</b> et al. – The origin of New Zealand: Cambrian intra-oceanic arc accretion to the Gondwana margin constrains the location of proto-New Zealand	<b>Nicol A</b> & L Wallace – Temporal stability of regional deformation rates within the Hikurangi subduction margin	
1630-1650	<b>Adams C</b> et al. – Characterisation of New Zealand nephrite jade using its geological age and strontium isotopic composition	<b>Litchfield N</b> & K Wilson – Holocene tectonic fluvial terraces at Pakarae River mouth, Gisborne region	
1650-1710	<b>Waterhouse J</b> – Torlesse sequence stratigraphy and formations between the Rakaia and Waitaki Rivers	<b>Uruski C</b> et al. – Developments in the East Coast Basin, North Island, New Zealand.	
1710-1800	<b>GSNZ AGM</b>		
	<b>Conference Dinner 7 pm</b>		

## Conference Programme for Thursday 1 December

	Wharenui	Wharemoë	Wharekai
	<i>Igneous Geology and Geochemistry I</i> Chair: Ian Smith	<i>Geological Hazards, Tectonic Geomorphology &amp; Landscape Evolution I</i> Chair: Tim Davies	<i>Palaeontology I</i> Chair: Jack Grant-Mackie
0830-0850	Price R et al. – Deconvoluting mixing, fractionation and assimilation processes in andesites from Ruapehu volcano, New Zealand	Wilson K et al. – Tectonic and non-tectonic causes of early Holocene relative sea level change within a transgressive estuary on a subduction margin, Pakarae River, North Island, New Zealand	Cooper R et al. – How good is the fossil record? New Zealand might have the answer
0850-0910	Doyle L et al. – The volcanology and geochemistry of the 13.8 – 22.5 ka Rotoaira eruptive sequence, Tongariro Volcanic Centre, New Zealand	Dellow G et al. – A probabilistic landslide hazard model for New Zealand	Raine J et al. – GNS Paleontological Databases Programme
0910-0930	Smith V et al. – Volatile and trace element concentrations in melt inclusions and matrix glasses from post-25 ka Tarawera Rhyolites, Okataina Volcanic Centre	Prebble W – Reflections on dip slopes and landslides in north-east Marlborough and the Southern Alps	Crouch E et al. – Early Paleogene biostratigraphic record from the neritic mid-Waipara River section, North Canterbury
0930-0950	Robertson K et al. – Geochemical aspects of the Coromandel Volcanic Zone: trace element and rare earth element data	Rahiman T et al. – Numerical modelling of submarine landslide tsunami and the local tsunami hazard of Suva City, Fiji	Lee D & D MacFarlan – Terebratulide and rhynchonellide brachiopods in New Zealand – winners and losers of the Mesozoic marine revolution
0950-1010	Graham I et al. – Petrology of newly discovered submarine volcanic rocks from the Tonga-Kermadec arc: initial results	Ghissetti F – The surface image of an actively growing – inverted? – reverse fault: the Ostler Fault in the Mackenzie Basin (South Island, New Zealand)	Eagle M – Morphing in and out and round-about
1010-1040	<b>Tea at Marae</b>		
	<i>Igneous Geology and Geochemistry II</i> Chair: Richard Price	<i>Geological Hazards, Tectonic Geomorphology &amp; Landscape Evolution II, General</i> Chair: Tim Davies	<i>Palaeontology II</i> Chair: Roger Cooper
1040-1100	Wysoczanski R et al – Fingerprinting slab-derived aqueous fluids in the mantle sources of arc lavas: an example from the southern Kermadec arc	Nobes D et al. – 3D imaging of the fore- and backthrusts of the Glen Lyon segment of the Ostler Fault	Gaiger F & K Swanson – Mid-Pleistocene extinction of deep-sea ostracoda?
1100-1120	Smith I – Silicic magmas in subduction systems	Norris R et al. – The growth of anticlinal ranges in an active fold-thrust belt, Central Otago, New Zealand	Sabaa A et al. – Factors influencing the distribution of Subantarctic deep-sea benthic foraminifera, south-east of New Zealand
1120-1140	Turner S & R George – Mass transfer in subduction zones: an elemental and isotopic perspective	Spörli K & J Rowland – Transition from soft-sediment to weak rock deformation in turbidites of the Miocene Waitemata piggy-back basin, northern New Zealand	Campbell H & C Landis – Exploring constraints on antiquity of terrestrial life in New Zealand

1140-1200	<b>George R</b> et al. – Tracking crustal differentiation and assimilation processes at arc volcanoes: a uranium series isotope perspective	<b>Cave M</b> & S Love – A long time coming: will Niagara 1 be the South Island's first commercial oil well?	<b>NZ INTIMATE</b> Group Meeting At the Memorial Hall annex
1200-1320	<b>Lunch at Memorial Hall</b>		
	<i>Volcanic Processes and Hazards I</i> Chair: <i>Vern Manville</i>	<i>Paleoseismicity and Fault Dynamics I</i> Chair: <i>Kelvin Berryman</i>	<i>Palaeontology I</i> Chair: <i>Hamish Campbell</i>
1320-1340	<b>Neall V</b> et al. – Twin Peaks: the pre-Mangere Formation sequence on Mangere Island, Chatham Islands	<b>González Á</b> et al. – Empirical scaling relations for seismic faults	Marshall B & <b>P Maxwell</b> – Chinks in the curtain – advances in our knowledge of New Zealand Cenozoic non-marine molluscs
1340-1400	<b>McClintock M</b> – Volcanology of a composite crater-complex marking the onset of Karoo flood basalt volcanism, South Africa	<b>Bull W</b> – Recent Alpine Fault earthquakes	<b>McDowall R</b> – New Zealand's freshwater fish: fossils in the context of the extant fauna
1400-1420	<b>Cronin S</b> & K Németh – Where are the giant tuff cone and ignimbrites of Amrbym? A more conventional story of mafic volcanism at Amrbym Volcano, Vanuatu	<b>Wells A</b> & J Goff – Coastal dune ridge systems as chronological markers of Paleoseismic activity – a 600 year record from southwest New Zealand	<b>Wood J</b> – Taphonomy of a Holocene moa fen deposit, Styx Valley, Central Otago
1420-1440	<b>Németh K</b> & S Cronin – Was the AD1435 Kuwae event (Vanuatu) really the largest explosive eruption in the SW Pacific in the last 1000 years? Implications for regional hazard and global climate	<b>Barrell D</b> et al. – Late Quaternary displacements on the Waitangi Fault, Aviemore Dam, South Island, New Zealand	<b>Bannister J</b> & D Lee – Fish, frustules, fruits, a flower - and lots of leaves: an investigation into the biota of an early Miocene maar lake
1440-1500	<b>Shane P</b> et al. – Marine tephrostratigraphy, northern New Zealand: implications for Taupo Volcanic Zone, Mayor Island and White Island volcanoes		<b>Grenfell H</b> et al. – Increased freshwater runoff from the growth of urban Auckland – the greatest cause of estuarine faunal change
1500-1530	<b>Tea at Marae</b>		

	<i>Volcanic Processes and Hazards I</i> Chair: Ian Graham	<i>Paleoseismicity and Fault Dynamics I</i> Chair: David Barrell	<i>Palaeontology, Quaternary Geology, Paleo-climates and Antarctica</i> Chair: Brent Alloway
1530-1550	<b>Zernack A</b> et al. – Cyclic growth and destruction of stratovolcanoes	<b>Langridge R</b> et al. – Using tree colonisation to investigate the age of the most recent earthquake along the western Hope Fault	<b>Crampton J</b> et al. - Late Cretaceous eustasy and the East Coast Basin - the good news!
1550-1610	<b>Platz T</b> et al. – Explosive vs. Effusive – the Jekyll and Hyde nature of Taranaki andesites	<b>Nodder S</b> et al. – Active faulting and paleoseismicity of the offshore Kapiti-Manawatu Fault system, southern North Island, New Zealand	<b>Marx S</b> et al. – Dust as a proxy for climate change: A record of Australian dust deposition in New Zealand during the Holocene
1610-1630	<b>Procter J</b> et al. – Forecasting hazards from Mount Taranaki using titan2d	<b>Lamarche G</b> & P Barnes – Fault characterisation and earthquake source identification in the offshore Bay of Plenty	<b>Holt K</b> – Quaternary tephra beds preserved on Chatham Island: their identification and significance in interpreting associated deposits and paleovegetation
1630-1650	<b>Crimp R</b> et al. – Chronic health impact of fluoride due to volcanic degassing on Ambrym, Vanuatu	<b>Mouslopoulou V</b> et al. – Late Quaternary paleoearthquakes on the northern North Island Fault System, New Zealand	<b>Marra M</b> et al. – Paleoenvironmental reconstruction of a well-preserved Stage 7 forest sequence catastrophically buried by basaltic eruptive deposits, northern New Zealand
1650-1710	<b>Manville V</b> & K Kataoka – Intracaldera lake break-out floods: geomorphic signals, mechanisms, and hazards	<b>Hayward B</b> et al. – Microfossil record of seven large earthquakes in the past 7500 cal. yrs in southern Hawke's Bay	<b>McKay R</b> et al. – A preliminary sedimentation model for beneath the McMurdo Ice Shelf
1710-1730	<b>Conference Closing and Student Awards</b>		