

**PROGRAM**  
**GSA Earth Science Student Symposium – South Australia**

8:30	Registration opens
9:00	Acknowledgement of Country and opening address
9:10	Keynote: <b>Alice Clement:</b> The Late Devonian Gogo Formation Lagerstätte and its spectacularly-preserved 3D fossil fish fauna
	<b>SESSION 1: PALAEOONTOLOGY (CHAIR: KAILAH THORN)</b>
9:30	<b>Ray Chatterji:</b> A quantitative analysis of skull growth and evolution in sea turtles (Testudinata: Chelonoidea)
9:45	<b>Jacob van Zoelen:</b> Digitally reconstructing the skull of the extinct marsupial <i>Nototherium inerme</i> (Diprotodontidae) and inferring diet using multidisciplinary analyses
10:00	<b>Sam Arman:</b> Dietary diversity in Pleistocene Kangaroos of South-eastern Australia
10:15	<b>Amy Tschirn:</b> Palaeobiology of <i>Madakoala devisi</i> (Phascolarctidae) using novel specimens from Lake Pinpa, South Australia
10:30	<b>Diana Fusco:</b> Digging deep – the late Quaternary fossil fauna of Cathedral Cave, central eastern Australia
10:45	<b>Poster Presentations 1–6</b>
<b>10:50</b>	<b>Morning Tea</b>
	<b>SESSION 2: METAMORPHIC GEOLOGY (CHAIR: BRANDON ALESSIO)</b>
11:15	<b>Megan Williams:</b> Thorium distribution in the crust: outcrop and grain scale approaches
11:30	<b>Kieran Meaney:</b> The tectonic development of the Paleo-Mesoproterozoic Barossa Complex, Gawler Craton, South Australia
11:45	<b>Renee Tamblyn:</b> Metamorphic conditions of blueschist from mud volcanoes in the Mariana Trench
12:00	<b>Xiao-Fang He:</b> On the utility of mafic granulites to address the controversy over metamorphic p–t–t evolution of the Highland Complex, Sri Lanka
12:15	<b>Kiara Bockmann:</b> Thermochemical hotspots in the crust
12:30	<b>Poster Presentations 7–12</b>
<b>12:35</b>	<b>Lunch</b>
	<b>SESSION 3: GEOCHRONOLOGY AND GEOCHEMISTRY (CHAIR: SHEREE ARMISTEAD)</b>
13:30	<b>Jack Gillespie:</b> Beyond zircon: one billion years of tectonic history resolved by apatite double dating of the western Siberian margin
13:45	<b>Gilby Jepson:</b> Deciphering central Asian mountain building; a thermochronology approach
14:00	<b>Nicholas Fernie:</b> Apatite fission track thermal history of the Bole-Nangodi shear zone (northern Ghana, west African Craton): insights into equatorial Atlantic rifting
14:15	<b>Bradley Cave:</b> U-Pb Geochronology and Trace Element Analysis of Apatite and Calcite from the Ernest Henry Deposit, NW Queensland
14:30	<b>James Hewett:</b> Distribution of gold and the relationship to pyrite trace element geochemistry at the Ernest Henry Deposit, Queensland
14:45	<b>Poster Presentations 13–18</b>
<b>14:50</b>	<b>Afternoon Tea</b>
	<b>SESSION 4: PALAEOCLIMATE (CHAIR: SIAN HOWARD)</b>
15:15	<b>Haidee Cadd:</b> A multi-proxy assessment of millennial scale climate variability and environmental change in sub-tropical Australia
15:30	<b>Georgina Falster:</b> Environmental implications of oxygen isotopes in Australian land snail shells
15:45	<b>Christopher Kemp:</b> A new ~230,000 year Australian record: Fern Gully Wetland, north Stradbroke Island
	<b>SESSION 5: HYDROGEOLOGY (CHAIR: ROMANA DEW)</b>
16:00	<b>Chris Li:</b> Improving next-generation hydrogeological models with nuclear magnetic resonance and electromagnetics
16:15	<b>Kelsey Tarabini:</b> Assessing the use of temperature time series to quantify ground water recharge
16:30	<b>Nathan Teder:</b> Wind driven upwelling off the Gippsland coast
16:45	<b>Tom Anderson:</b> Hydrogeological sensitivity to drought conditions in a perennial creek system, Mt Lofty Ranges, South Australia
17:00	<b>Poster Presentations 19-22</b>
17:05	Closing remarks
17:10	Drinks and poster session
17:45	Awards presentation

**POSTERS**

<b>Name</b>	<b>Title</b>	<b>Presentation number</b>
<b>Brandon Alessio</b>	ON YODERITE: USING CALCULATED PHASE EQUILIBRIA TO INVESTIGATE ITS RARITY IN THE GEOLOGICAL RECORD OF WHITESCHISTS	1
<b>Rachel Atkins</b>	THE GEOCHRONOLOGY OF THE BOUCAUT VOLCANICS	2
<b>Jacob Blokland</b>	PIECES OF THE PENGUIN PUZZLE: INSIGHTS FROM A NOVEL BASAL PALEOCENE PENGUIN, CHATHAM ISLAND, NEW ZEALAND	3
<b>Larissa Collins</b>	COLD SUBDUCTION ON THE AVALONIAN MARGIN	4
<b>Natalie Debenham</b>	THE INFLUENCE OF REVERSE-REACTIVATED NORMAL FAULTS ON NATURAL FRACTURE GEOMETRIES AND CHRONOLOGIES IN SANDSTONES: A CASE STUDY AT CASTLE COVE, OTWAY BASIN	5
<b>Heather Duff</b>	DEVELOPING NEW TOOLS FOR PALEOECOLOGICAL FOREST RECONSTRUCTIONS	6
<b>James Hall</b>	TWO BILLION YEARS OF THERMAL EVOLUTION IN THE NORTHERN GAWLER CRATON, SOUTH AUSTRALIA	7
<b>Daniel Howlett</b>	120 MYR OF EPISODIC MID-CRUSTAL METAMORPHISM AND FLUID-ROCK INTERACTION DURING THE ALICE SPRINGS OROGENY; THE STRANGWAYS RANGE, CENTRAL AUSTRALIA	8
<b>Christopher Kemp</b>	PRECIPITATION IN AUSTRALIA DURING MIS3: AN ANALYSIS OF PUBLISHED PALAEOCLIMATE DATASETS	9
<b>Ellen Mather</b>	FLIGHTLESS RAILS (AVES: RALLIDAE) FROM THE EARLY MIOCENE ST BATHANS FAUNA, OTAGO, NEW ZEALAND	10
<b>Claire Murphy</b>	RECONSTRUCTION OF LATE PLEISTOCENE TO HOLOCENE PALAEOENVIRONMENTAL CHANGE AT BASIN LAKE, FRASER ISLAND	11
<b>Alicia Pollett</b>	USING NEW GEOPHYSICAL DATA TO CONSTRAIN THE LITHOSPHERIC RELATIONSHIP BETWEEN THE GAWLER CRATON AND MUSGRAVE PROVINCE	12
<b>Lily Reid</b>	CHARACTERISTICS OF A JUVENILE POPULATION OF <i>DICKINSONIA COSTATA</i> FROM THE FLINDERS RANGES	13
<b>Lachlan Richards</b>	BRITTLE VS DUCTILE DEFORMATION IN SALT DETACHMENTS: AN EXAMPLE FROM THE SALT RANGE, PAKISTAN	14
<b>Yuexiao Shao</b>	CALCIUM AND STRONTIUM ISOTOPE CYCLING IN COASTAL LAGOON-ESTUARINE ENVIRONMENTS, SOUTH AUSTRALIA: IMPLICATIONS FOR WATER MIXING, CARBONATE FLUXES AND FISH MIGRATION	15
<b>Alastair Stark</b>	RAMIFICATIONS FOR STRUCTURAL PERMEABILITY WITHIN THE PERTH BASIN: ANALYSIS OF CALCITE TWIN DATA & IN-SITU STRESSES.	16
<b>Kailah Thorn</b>	DATING AUSTRALIAN SKINK DIVERSIFICATION: FOSSIL SPHENOMORPHUS AND EGERNIA GROUP SKINKS FROM RIVERSLEIGH WORLD HERITAGE AREA (QUEENSLAND, AUSTRALIA)	17
<b>Jessie-Briar Treloar</b>	BASELINES FROM SUBFOSSILS: WHAT SMALL MAMMALS ROAMED THE FLINDERS RANGES BEFORE EUROPEAN SETTLEMENT OF AUSTRALIA?	18
<b>Naomi Tucker</b>	A TRIPARTITE APPROACH TO UNEARTHING THE DURATION OF HIGH TEMPERATURE CONDITIONS VERSUS PEAK METAMORPHISM: AN EXAMPLE FROM THE BUNGER HILLS, EAST ANTARCTICA	19
<b>Jan Varga</b>	THE ROLE OF FLUID-ROCK INTERACTION AND MELT PRODUCTION IN INTRAPLATE MOUNTAIN BUILDING: THE HARTS RANGE, CENTRAL AUSTRALIA	20
<b>Georgina Virgo</b>	THE ELATINA FORMATION, PICHICHI: IMPLICATIONS FOR SNOWBALL EARTH	21
<b>Bo Yang</b>	SPATIAL AND TEMPORAL VARIATION IN DETRITAL ZIRCON AGE PROVENANCE OF THE HYDROCARBON-BEARING UPPER ROPER GROUP, BEETALOO SUB-BASIN, NORTHERN TERRITORY, AUSTRALIA	22