

Jurassic Arc: Reconstructing the lost world of eastern Gondwana

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SUPPLEMENTARY PAPERS

Geology (2021)

SUPPLEMENTARY PAPERS

Supplementary file A. List of samples used for U-Pb geochronology in this study (PDF).

Supplementary file B. U-Pb geochronological datasets (Excel file).

Supplementary file C. List of samples used for Lu-Hf analysis in this study (PDF).

Supplementary file D. Lu-Hf isotope analytical datasets (Excel file).

Supplementary file E. Analytical setup and procedures used (PDF).

Supplementary file F. Crustal addition rate calculations (PDF).

Supplementary file G. Supplementary Figure 1. Plotted ϵHf data with isotopic evolution curves (PDF).

SUPPLEMENTARY DATA (# corresponds to number of analyses accepted and used in this study)

Sample Name	#	Coordinates (WGS84)		Sample Type		Well Name	Depth (m)	Basin	Formation	Reference
		Lat.	Long.	Core	Outcrop					
PGF01	89	20.335259° S	144.469013° E		X	-	-	Galilee Basin	Porcupine Gorge Formation	
H7B59	68	20.950001° S	144.183329° E	X		Hughenden 7	198.0	Eromanga Basin	Hooray Sandstone	
H7B66	73	20.950001° S	144.183329° E	X		Hughenden 7	230.0	Eromanga Basin	Injune Creek Group	
H7B55	86	20.950001° S	144.183329° E	X		Hughenden 7	184.0	Eromanga Basin	Gilbert River Formation	
MMD-19-001	135	23.629325° S	50.370667° E		X	-	-	Surat Basin	Razorback Beds	
QMF7882	52	24.470004° S	150.699994° E		X	-	-	Surat Basin	Evergreen Formation	Todd et al. (2019)
QMF1659	69	24.626003° S	149.742999° E		X	-	-	Surat Basin	Walloon Coal Measures	Todd et al. (2019)
MV1	100	25.740955° S	152.468957° E		X	-	-	Nambour Basin	Myrtle Creek Sandstone	
MV2	125	25.750250° S	152.368119° E		X	-	-	Nambour Basin	Myrtle Creek Sandstone	
NM2	97	26.546349° S	153.102650° E		X	-	-	Nambour Basin	Myrtle Creek Sandstone	
NM3	114	26.380030° S	153.099495° E		X	-	-	Nambour Basin	Myrtle Creek Sandstone	
NM5	79	26.671758° S	153.109686° E		X	-	-	Nambour Basin	Myrtle Creek Sandstone	
DINO_TRACK	119	20.143116° S	143.640990° E		X	-	-	Eromanga Basin	Blantyre Sandstone	
081018-6	102	14.893964° S	143.974568° E	X		Lakefield 1	389.5	Laura Basin	Gilbert River Formation	
101018-2	89	19.295442° S	140.381436° E	X		Dobbyn 1	35.3	Carpentaria Basin	Normanton Formation	
101018-4	84	14.535470° S	143.862274° E	X		Ebagoola 1	339.5	Laura Basin	Gilbert River Formation	
RP1-DZ-UGR	112	15.656832° S	141.856686° E	X		Rutland Plains 1	1005.5	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)

W1-DZ-UGR	129	12.785066° S	142.404824° E	X		Weipa 1	429.6	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
101018-34	91	17.715162° S	141.034461° E	X		Normanton 1	94.8	Carpentaria Basin	Normanton Formation	
081018-12	96	14.737267° S	143.919729° E	X		Breeza Plains 1	495.0	Laura Basin	Dalrymple Sandstone	
Top Middle Loth	103	19.742728° S	143.630618° E		X	-	-	Carpentaria Basin	Loth Formation	
McKinlay-02	63	21.592507° S	142.259717° E	X		McKinlay-1	9.3	Eromanga Basin	Winton Formation	Tucker et al. (2016)
McKinlay-16	63	21.592507° S	142.259717° E	X		McKinlay-1	54.0	Eromanga Basin	Winton Formation	Tucker et al. (2016)
HadesHill	40	23.016288° S	142.411865° E		X	-	-	Eromanga Basin	Winton Formation	Tucker et al. (2016)
ERU	73	23.016288° S	142.411865° E		X	-	-	Eromanga Basin	Winton Formation	Tucker et al. (2016)
BBD4	81	22.514825° S	143.038857° E		X	-	-	Eromanga Basin	Winton Formation	Tucker et al. (2016)
Blackall-02	61	24.162590° S	144.223606° E	X		Blackall 2	27.0	Eromanga Basin	Winton Formation	Tucker et al. (2016)
ERO1	92	26.614710° S	143.880111° E	X		Eromanga 1	20.0	Eromanga Basin	Winton Formation	Tucker et al. (2016)
ISIS	60	24.259307° S	144.441483° E		X	-	-	Eromanga Basin	Winton Formation	Tucker et al. (2016)
Longmac1	64	23.111931° S	144.599555° E	X		Longreach 1	27.0	Eromanga Basin	Mackunda Formation	Tucker et al. (2016)
Maneroo-331	82	23.385865° S	144.467891° E	X		Maneroo 1	343.0	Eromanga Basin	Mackunda Formation	Tucker et al. (2016)
MV6	85	25.925457° S	152.432065° E		X	-	-	Nambour Basin	Tiaro Coal Measures	
MV4	120	25.556158° S	152.460068° E		X	-	-	Nambour Basin	Tiaro Coal Measures	
MV15	5	25.551132° S	152.509764° E		X	-	-	Maryborough Basin	Grahams Creek Formation	
MV16	77	25.551491° S	152.509175° E		X	-	-	Maryborough Basin	Grahams Creek Formation	
MV17	59	25.559521° S	152.598749° E		X	-	-	Maryborough Basin	Grahams Creek Formation	
2550367	55	28.044004° S	141.961701° E	X		Zeus 7	1667.5	Eromanga Basin	Birkhead Formation	Wainman et al. (2018)
2550364	57	28.044004° S	141.961701° E	X		Zeus 7	1659.3	Eromanga Basin	Birkhead Formation	Wainman et al. (2018)
Base Hampstead	102	19.885314° S	143.602908° E		X	-	-	Carpentaria Basin	Hampstead Sandstone	Foley et al. (2020)
Base Upper Loth	114	19.742728° S	143.630618° E		X	-	-	Carpentaria Basin	Loth Formation	Foley et al. (2020)
Base Yappar	113	19.845448° S	143.646430° E		X	-	-	Carpentaria Basin	Gilbert River Formation	Foley et al. (2020)

Base Lower Loth	100	19.857875° S	143.643210° E		X	-	-	Carpentaria Basin	Loth Formation	Foley et al. (2020)
Base Middle Loth	72	19.742553° S	143.622213° E		X	-	-	Carpentaria Basin	Loth Formation	Foley et al. (2020)
D1-DZ-GR	80	19.295442° S	140.381436° E	X		Dobbyn 1	589.5	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
031019-3	96	15.656832° S	141.856686° E	X		Rutland Plains 1	1088.0	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
031019-6	118	12.785066° S	142.404824° E	X		Weipa 1	519.9	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
031019-7	99	12.785066° S	142.404824° E	X		Weipa 1	568.6	Carpentaria Basin	Garraway Sandstone	Foley et al. (2021)
031019-13	57	19.295442° S	140.381436° E	X		Dobbyn 1	44.7	Carpentaria Basin	Normanton Formation	
041019-1	84	15.656832° S	141.856686° E	X		Rutland Plains 1	351.1	Carpentaria Basin	Normanton Formation	
041019-4	88	15.656832° S	141.856686° E	X		Rutland Plains 1	270.4	Carpentaria Basin	Normanton Formation	
041019-6	100	19.295442° S	140.381436° E	X		Dobbyn 1	580.7	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
041019-8	99	19.295442° S	140.381436° E	X		Dobbyn 1	559.1	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
041019-9	92	19.295442° S	140.381436° E	X		Dobbyn 1	550.8	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
081018-2	56	16.485452° S	139.520874° E	X		Mornington 1	139.6	Carpentaria Basin	Normanton Formation	
081018-1	85	14.893964° S	143.974568° E	X		Lakefield 1	566.9	Laura Basin	Dalrymple Sandstone	
081019-3	27	17.715162° S	141.034461° E	X		Normanton 1	630.5	Carpentaria Basin	Gilbert River Formation	
081019-5	48	17.715162° S	141.034461° E	X		Normanton 1	606.5	Carpentaria Basin	Gilbert River Formation	
091019-1	8	17.715162° S	141.034461° E	X		Normanton 1	114.3	Carpentaria Basin	Normanton Formation	
091019-3	91	17.715162° S	141.034461° E	X		Normanton 1	22.2	Carpentaria Basin	Normanton Formation	
101018-14	91	14.535470° S	143.862274° E	X		Ebagoola 1	896.2	Laura Basin	Dalrymple Sandstone	
101018-27	64	15.656832° S	141.856686° E	X		Rutland Plains 1	1078.1	Carpentaria Basin	Gilbert River Formation	Foley et al. (2021)
101018-36	68	14.634593° S	143.876096° E	X		Marina 1	187.5	Laura Basin	Rolling Downs Group	
121018-1	44	12.785066° S	142.404824° E	X		Weipa 1	581.4	Carpentaria Basin	Garraway Sandstone	Foley et al. (2021)
121018-7	131	12.785066° S	142.404824° E	X		Weipa 1	392.3	Carpentaria Basin	Rolling Downs Group	Foley et al. (2021)
Top Hampstead	100	19.857875° S	143.643210° E		X	-	-	Carpentaria Basin	Hampstead Sandstone	Foley et al. (2020)

Top Upper Loth	139	19.845448° S	143.646430° E		X	-	-	Carpentaria Basin	Loth Formation	Foley et al. (2020)
Top Lower Loth	128	19.742553° S	143.622213° E		X	-	-	Carpentaria Basin	Loth Formation	Foley et al. (2020)
W1-DZ-LGS	90	12.785066° S	142.404824° E	X		Weipa 1	573.6	Carpentaria Basin	Garraway Sandstone	Foley et al. (2021)
BGR	94	20.403973° S	144.437436° E		X	-	-	Eromanga Basin	Blantyre Sandstone	
BSS-2004	87	20.374497° S	144.454432° E		X	-	-	Eromanga Basin	Blantyre Sandstone	
Dalrymple Hons	117	15.288330° S	145.215559° E		X	-	-	Laura Basin	Dalrymple Sandstone	
GRF01	79	20.408712° S	144.436754° E		X	-	-	Eromanga Basin	Blantyre Sandstone	
H5B5	52	20.633335° S	144.399996° E	X		Hughenden 5	53.5	Eromanga Basin	Blantyre Sandstone	
H5B21	83	20.633335° S	144.399996° E	X		Hughenden 5	105.0	Eromanga Basin	Blantyre Sandstone	
H6B8	90	20.346885° S	144.53219° E	X		Hughenden 6	41.0	Eromanga Basin	Blantyre Sandstone	
H6B26	68	20.346885° S	144.53219° E	X		Hughenden 6	120.0	Galilee Basin	Warang Sandstone	
H6B38	22	20.346885° S	144.53219° E	X		Hughenden 6	169.0	Galilee Basin	Warang Sandstone	
H6B47	92	20.346885° S	144.53219° E	X		Hughenden 6	199.0	Galilee Basin	Porcupine Gorge Formation	
H7B101	93	20.950001° S	144.183329° E	X		Hughenden 7	341.0	Eromanga Basin	Hutton Sandstone	
Wall 1	77	20.408701° S	144.436611° E		X	-	-	Eromanga Basin	Gilbert River Formation	
WSS-Top	81	20.351433° S	144.466663° E		X	-	-	Galilee Basin	Warang Sandstone	
WSS-0409	93	20.335468° S	144.469125° E		X	-	-	Galilee Basin	Warang Sandstone	
WSS-2908	94	20.335350° S	144.469088° E		X	-	-	Galilee Basin	Warang Sandstone	

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