

Supplementary Information

Supp. Info. Table 1. Conventional and calibrated radiocarbon dates for Melo in northwestern Australian archaeological sites (conventional radiocarbon ages were calibrated using OxCal 4.4 (Bronk Ramsey, 2009) and the SHCal20 (Hogg et al., 2020) and Marine20 dataset (Heaton et al., 2020) with a ΔR of -82 ± 37 for the Kimberley samples and -60 ± 41 for the Carnarvon, Pilbara and Sandy Desert samples (Ulm et al., 2023).

Site	Region	Context	Age	Lab Code	95.4% Calibrated (cal BP)		m	Source
Widgingarri Shelter 1	Kimberley	SQAA XU17	28,060±600	R-11795	33,078	30,301	31,536	O'Connor, 1999; Norman et al., 2022
Widgingarri Shelter 1	Kimberley	SQAA XU17	27,448±144	S-ANU-62912	31,122	30,502	30,866	O'Connor, 1999; Norman et al., 2022
Mount Behn	Kimberley	SQ2 XU1	3050±35	ANU-32510	2956	2591	2770	Maloney et al., 2017
Brooking Gorge 1	Kimberley	SQ1 XU15	1910±60	OZD-599	1595	1214	1393	Maloney et al., 2018
MLP-EI010	Pilbara	Surface	4891±21	Wk-47204	5302	4927	5123	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	2490±20	Wk-43075	2289	1939	2102	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	2330±20	Wk-43077	2065	1724	1899	McDonald and Mulvaney, 2023
Petermarer Creek	Pilbara	Surface	2202±34	Wk35956	1921	1567	1745	Reynen and Morse, 2016
Wadjuru Rock Pool	Pilbara	Surface	1673±20	Wk-43068	1306	1028	1178	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1519±20	Wk-43083	1173	873	1013	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1460±20	Wk-43074	1103	790	953	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1376±20	Wk-43073	1011	712	861	McDonald and Mulvaney, 2023
Harding River Dam 1	Pilbara	Surface	1267±49	Wk11813	925	613	758	Williams et al., 2014
Wadjuru Rock Pool	Pilbara	Surface	1252±20	Wk-43070	895	625	741	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1235±20	Wk-43076	886	605	725	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1168±20	Wk-43084	793	532	665	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1122±20	Wk-43082	746	506	624	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	1107±20	Wk-43080	730	499	612	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	991±20	Wk-43072	650	409	527	McDonald and Mulvaney, 2023
MLP-EI010	Pilbara	Surface	847±22	Wk-47198	525	275	405	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	845±20	Wk-43079	521	272	403	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	823±20	Wk-43081	510	255	384	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	811±20	Wk-43067	506	247	375	McDonald and Mulvaney, 2023
Y97-28	Pilbara	Surface	810±80	Wk-5605	545	144	369	Williams et al., 2014
Wadjuru Rock Pool	Pilbara	Surface	765±20	Wk-43069	475	173	337	McDonald and Mulvaney, 2023
McPhee Creek 68-13A	Pilbara	Surface	642±27	Wk-38074	360	9	202	Reynen and Morse, 2016
Wadjuru Rock Pool	Pilbara	Surface	600±20	Wk-43071	285	-2	161	McDonald and Mulvaney, 2023
Wadjuru Rock Pool	Pilbara	Surface	592±20	Wk-43078	278	-2	153	McDonald and Mulvaney, 2023
Brockman-05	Pilbara	Surface	575±29	Wk-32134	269	-2	137	Williams et al., 2014
P4506	Pilbara	Surface	120±150	-	220	-17	26	Williams et al., 2014
Kurtarra Well #1	Sandy Desert	Surface	2710±280	Wk-5640	3098	1688	2386	Smith and Veth, 2004
Yurlpul	Sandy Desert	Surface	2270±60	Wk-5642	2046	1612	1828	Smith and Veth, 2004
Kurtarra Well #2	Sandy Desert	Surface	1220±90	Wk-5641	928	520	722	Smith and Veth, 2004
Kiriwirri #2	Sandy Desert	Surface	660±150	Wk-5639	479	-2	233	Smith and Veth, 2004
Kiriwirri #1	Sandy Desert	Surface	500±70	Wk-5638	252	-2	94	Smith and Veth, 2004

Site	Region	Context	Age	Lab Code	95.4% Calibrated (cal BP)		m	Source
Jansz Rockshelter	Carnarvon	SQ2 XU67	34,490±332 0	Wk-8921	51,719	33,366	39,688	Przywolnik, 2002
Jansz Rockshelter	Carnarvon	SQ2 XU73	35,230±450	Wk-8919	40,473	38,667	39,535	Przywolnik, 2002
Mandu Mandu Creek Rockshelter	Carnarvon	SQC1 XU18	34,200±105 0	Wk-1513	40,602	36,141	38,343	Morse, 1993
C99 Rockshelter	Carnarvon	SQ2 XU75	33,930±320	Wk-8925	38,997	37,158	38,064	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ3 XU81	33,480±310	Wk-8931	38,454	36,560	37,418	Przywolnik, 2002
Pilgonaman Creek Rockshelter	Carnarvon	SQD3 XU13	31,770±390	R-16098/1	36,283	34,631	35,499	Morse, 1993
C99 Rockshelter	Carnarvon	SQ2 XU67	31,570±250	Wk-8926	35,875	34,680	35,277	Przywolnik, 2002
Jansz Rockshelter	Carnarvon	SQ2 XU44	31,360±440	NZA-10566	36,023	34,273	3,5081	Przywolnik, 2002
Mandu Mandu Creek Rockshelter	Carnarvon	SQC1 XU19	30,000±850	Wk-1576	35,638	31,719	33,716	Morse, 1993
C99 Rockshelter	Carnarvon	SQ3 XU75	29,450±220	Wk-8932	33,810	32,453	33,182	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ2 XU54	28,050±220	NZA 10528	31,817	30,974	31,357	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ3 XU60	21,110±100	Wk-8933	24,856	24,134	24,477	Przywolnik, 2002
Mandu Mandu Creek Rockshelter	Carnarvon	SQC3 XU9	20,040±440	SUA-2614	24,330	22,335	23,310	Morse, 1993
Noala 1 SQ1	Carnarvon	XU12	12,440±110	Wk-3432	14,343	13,594	13,950	Veth et al., 2007
Pilgonaman Creek Rockshelter	Carnarvon	50-55cm bsl	12,100±620	Wk-2524	15,566	12,368	13,753	Morse, 1993
Pilgonaman Creek Rockshelter	Carnarvon	SQD3 XU9	10,150±66	R-16098/2	11,487	10,977	11,204	Morse, 1993
Pilgonaman Creek Rockshelter	Carnarvon	SQC2 XU12	9990±270	Wk-1520	11,798	10234	10,989	Morse, 1993
Jansz Rockshelter	Carnarvon	SQ2 XU27	9900±290	Wk-8922	11,773	10,104	10,872	Przywolnik, 2002
Haynes Cave SQ 4	Carnarvon	XU3	8090±70	Wk-2914	8741	8290	8489	Veth et al., 2007
C99 Rockshelter	Carnarvon	SQ2 XU24	8010±280	Wk-8927	9188	7824	8451	Przywolnik, 2002
Yardie Well Rockshelter	Carnarvon	50-55cm bsl	7290±110	Wk-1477	7917	7430	7667	Morse, 1993
Babarrimannos Midden 2	Carnarvon	Surface	5620±160	Wk-8466	6287	5560	5919	Przywolnik, 2002
Yardie Well Rockshelter	Carnarvon	30-35cm bsl	5530±80	Wk-1476	6050	5580	5812	Morse, 1993
Wobiri Rockshelter	Carnarvon	Spit 44	5160±70	Wk-8611	5624	5214	5422	Przywolnik, 2002
Low Point Midden	Carnarvon	Surface	4820±60	Wk-1430	5256	4819	5014	Morse, 1993
WS22 / AH040	Carnarvon	Surface	4115±32	Wk-35891	4295	3909	4103	Hook, 2014
AH089	Carnarvon	Surface	4017±23	Wk-35892	4149	3806	3972	Hook, 2014
WS19 / AH037 SQ19	Carnarvon	Surface	3992±31	Wk-35889	4131	3761	3939	Hook, 2014
Denham Site 9 Open Midden	Carnarvon	DIX-6, surface	3470±70	Beta-31497	3503	3049	3286	Veth, 1995
C99 Rockshelter	Carnarvon	SQ3 XU22	2430±130	Wk-8935	2355	1654	2014	Przywolnik, 2002
Jansz Rockshelter	Carnarvon	SQ1 XU44	2360±50	Wk-6321	2115	1726	1920	Przywolnik, 2002
Useless Inlet 2 Midden	Carnarvon	Surface	2300±50	Wk-2437	2077	1674	1863	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ2 XU9	2110±140	Wk-8930	1985	1295	1628	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ2 XU18	1980±140	Wk-8929	1837	1165	1485	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ3 XU11	1510±70	Wk-8937	1195	781	994	Przywolnik, 2002
Babarrimannos Midden 1	Carnarvon	Surface	960±50	Wk-8467	630	330	490	Przywolnik, 2002
Jansz Rockshelter	Carnarvon	SQ2 XU21	920±60	Wk-8924	611	291	453	Przywolnik, 2002
C99 Rockshelter	Carnarvon	SQ3 XU16	900±160	Wk-8936	726	83	428	Przywolnik, 2002
Jansz Rockshelter	Carnarvon	SQ2 XU8	710±140	Wk-8923	491	-2	261	Przywolnik, 2002

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C99 Rockshelter	Carnarvon	SQ2 XU15	650±100	Wk-8928	410	-2	201 Przywolnik, 2002
MP08-18 SQ 28	Carnarvon	Surface	626±25	Wk-33935	295	-2	173 Hook, 2014
WS19 / AH037 SQ20	Carnarvon	Surface	578±25	Wk-35890	256	-2	125 Hook, 2014
Denham Burial 1	Carnarvon	Surface	430±50	Wk-11813	197	-2	56 Przywolnik, 2002
WS24 / AH042	Carnarvon	Surface	369±25	Wk-35893	118	-2	38 Hook, 2014

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