

APPENDICES

Appendix 1: Radiocarbon dates: technical data

SITE	SQUARE	XU	DEPTH (cm)	LAB. NO.	SAMPLE	WEIGHT (g)	$\delta^{14}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	D14C (‰)	% MODERN	14C AGE
Agnes Beach Midden	-	-	-	Wk-10969	charcoal	1.6	-36.7±8.5	-27.1±0.2	-32.6±10.4	96.7±1.0	266±87
Agnes Beach Midden	-	-	-	Wk-11280	<i>D. deltoides</i>	35.0	-30.4±4.6	0.8±0.2	-80.4±5.4	92.0±0.5	674±47
Elliott Heads	-	-	-	Wk-6994	<i>D. deltoides</i>	19.6	-0.2±6.1	-0.6±0.2	-49.1±7.1	95.1±0.7	400±60
Eurimbula Creek 1	C	6	14.9-18.3	Wk-7680	charcoal	3.4	-29.9±5.6	-26.1±0.2	-27.7±6.9	97.2±0.7	230±60
Eurimbula Creek 2	A	6	13.1-16.3	Wk-7689	charcoal	2.8	-22.1±6.5	-25.7±0.2	-20.8±8.0	97.9±0.8	modern ^a
Eurimbula Site 1	1	5	9.5	Wk-5601	charcoal	2.5	-30.8±7.6	-27.0±0.2	-26.9±9.3	97.3±0.9	220±80
Eurimbula Site 1	1 (Sl)	10	35	Wk-3944	<i>A. trapezia</i>	71.1	-219.8±4.5	-0.8±0.2	-257.6±5.2	74.2±0.5	2390±60
Eurimbula Site 1	1 (Sl)	10	35	Wk-5215	charcoal	2.1	-181.3±12.7	-25.3±0.2	-180.8±15.5	81.9±1.5	1600±160
Eurimbula Site 1	2	9	50	Wk-3945	charcoal	10.3	-315.3±4.4	-26.5±0.2	-313.3±5.3	68.7±0.5	3020±70
Eurimbula Site 1	3	7	28.4-34.1	Wk-8553	<i>A. trapezia</i>	20.2	-158.5±5.1	-0.6±0.2	-199.5±6.0	80.1±0.6	1790±60
Eurimbula Site 1	4	4	15-20	Wk-8554	<i>A. trapezia</i>	19.9	-19.6±5.4	-0.9±0.2	-66.9±6.2	93.3±0.6	560±55
Eurimbula Site 1	near 7	surface	0	Wk-3946	<i>A. trapezia</i>	90.7	-17.7±4.8	0.0±0.2	-66.8±5.6	93.3±0.6	560±50
Eurimbula Site 1	7	5	18.8-24	Wk-8555	<i>A. trapezia</i>	21.0	-3.9±5.9	-0.4±0.2	-52.8±6.9	94.7±0.7	440±60
Eurimbula Site 1	A	5	9.7-12.4	Wk-10967	charcoal	1.2	-46.1±11.8	-25.0±0.2	-46.1±14.3	95.4±1.4	379±121
Eurimbula Site 1	A	17	43.7-46.6	Wk-7688	charcoal	4.6	-258.2±5.0	-25.5±0.2	-257.5±6.1	74.2±0.6	2390±70
Eurimbula Site 1	B	12	34.4-38	Wk-10968	charcoal	1.3	-242.8±9.6	-26.0±0.2	-241.3±11.8	75.9±1.2	2218±126
Eurimbula Site 1	D	15	45.4-47.9	Wk-7687	charcoal	2.8	-291.5±7.6	-24.7±0.2	-291.9±9.3	70.8±0.9	2770±110
Gladstone 1	-	-	-	Wk-8456	<i>A. trapezia</i>	11.5	-8.0±4.9	0.3±0.2	-58.2±5.7	94.2±0.6	480±50
Gladstone 2	-	-	-	NZA-12119 ^b	<i>A. trapezia</i>	4.6	4.6±6.8	-0.8±0.2	-44.0±6.5	95.6±0.6	360±60
Ironbark Site Complex	M	4	5.4-10.5	Wk-6359	charcoal	4.4	-81.0±5.2	-26.9±0.2	-77.5±6.4	92.3±0.6	650±60
Ironbark Site Complex	M	9	22.9-28.1	Wk-6360	charcoal	4.1	-161.0±5.0	-25.7±0.2	-159.9±6.1	84.0±0.6	1400±60
Ironbark Site Complex	M	17	60-69.3	Wk-6361	charcoal	1.8	-186.2±12.3	-26.2±0.2	-184.3±15.0	81.6±1.5	1640±150
Ironbark Site Complex	O	9a	27.4	Wk-8556	<i>A. trapezia</i>	16.7	-60.7±5.4	-0.5±0.2	-106.7±6.3	89.3±0.6	910±55
Ironbark Site Complex	P	7	16.3	Wk-8557	charcoal	1.0	-26.9±13.8	-26.0±0.2	-25.1±16.8	97.5±1.7	200±140
Ironbark Site Complex	P	7	17.6	Wk-8558	<i>A. trapezia</i>	20.1	-22.8±6.1	-0.3±0.2	-71.1±7.1	92.9±0.7	590±60
Ironbark Site Complex	R	9	17.5-20.4	Wk-10964	charcoal	1.3	-38.9±8.6	-26.8±0.2	-35.5±10.5	96.4±1.1	290±89
Ironbark Site Complex	core	-	25-30	OZD-756 ^b	organics	-	-	-25 ^d	-	97.4±0.6	215±55
Middle Island Sandblow Site	A	1	0	Wk-7679	<i>D. deltoides</i>	35.0	-66.5±4.8	1.1±0.2	-115.2±5.5	88.5±0.6	980±50
Middle Island Sandblow Site	B	1	0	Wk-10091	<i>D. deltoides</i>	32.3	-37±3.9	0.9±0.2	-86.8±4.5	91.3±0.5	730±39
Middle Island Sandblow Site	C	1	0	Wk-10092	<i>D. deltoides</i>	34.1	-63.4±3.8	1.2±0.2	-112.4±4.5	88.8±0.4	958±40
Middle Island Sandblow Site	D	1	0	Wk-10093	<i>D. deltoides</i>	34.2	-16.2±4.2	0.9±0.2	-67.2±4.9	93.3±0.5	559±42

continued over

Appendix 1: continued

SITE	SQUARE	XU	DEPTH (cm)	LAB. NO.	SAMPLE	WEIGHT (g)	$\delta^{14}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	D ¹⁴ C (‰)	% MODERN	¹⁴ C AGE
Mort Creek Site Complex	A7	4	18-20	Wk-5602	<i>A. trapezia</i>	47.3	-0.3±0.2	-264.7±3.7	-301.0±4.3	69.9±0.4	2880±50
Mort Creek Site Complex	A7	6	22.6-26.7	Wk-3937	<i>A. trapezia</i>	75.2	0.1±0.2	-269.3±4.0	-305.9±4.7	69.4±0.5	2930±60
Mort Creek Site Complex	A7	9	32.4-37	Wk-3938	<i>A. trapezia</i>	81.2	0.1±0.2	-249.3±4.3	-286.9±5.0	71.3±0.5	2720±60
Mort Creek Site Complex	Granites	11C	45.5-52.1	Wk-3940	mixed shell ^c	66.7	0.7±0.2	-296.9±4.4	-333.1±5.1	66.7±0.5	3260±70
Mort Creek Site Complex	Granites	11M	45.5-52.1	Wk-3941	<i>A. trapezia</i>	71.3	-0.2±0.2	-246.4±4.5	-283.8±5.3	71.6±0.5	2680±60
Mort Creek Site Complex	WP	4	12.8-18.4	Wk-3942	<i>A. trapezia</i>	79.6	0.6±0.2	-222.2±5.7	-262.2±6.6	73.8±0.7	2440±80
Mort Creek Site Complex	WP	10	37.6-44.8	Wk-3943	<i>A. trapezia</i>	74.8	-0.5±0.2	-235.5±4.4	-273.4±5.1	72.7±0.5	2570±60
Mort Creek Site Complex	C	6	22	Wk-7458	charcoal	2.4	-219.7±6.4	-26.5±0.2	-217.5±7.8	78.3±0.8	1970±80
Mort Creek Site Complex	C	6	22	Wk-7836	<i>A. trapezia</i>	39.2	-1.4±0.2	-213.3±4.1	-250.4±4.8	75.0±0.5	2320±50
Mort Creek Site Complex	C	7	25	Wk-6987	<i>A. trapezia</i>	45.9	-1.5±0.2	-208.2±3.9	-245.3±4.6	75.5±0.5	2260±50
Mort Creek Site Complex	C	18	60	Wk-6988	<i>A. trapezia</i>	8.3	-1.1±0.2	-310.1±6.2	-343.1±7.1	65.7±0.7	3380±90
Mort Creek Site Complex	B	19-20	65	Wk-6986	<i>A. trapezia</i>	6.0	-1.6±0.2	-315.3±9.8	-347.3±11.3	65.3±1.1	3430±140
Pancake Creek Site Complex	A	9	14.3-18.6	Wk-7837	<i>A. trapezia</i>	35.6	-1.1±0.2	-34.3±5.2	-80.5±6.1	92.0±0.6	670±50
Pancake Creek Site Complex	E	7	25	Wk-6989	<i>A. trapezia</i>	5.4	-0.1±0.2	-55.0±12.1	-102.1±14.0	89.8±1.4	870±130
Pancake Creek Site Complex	F	6	25	Wk-6990	<i>A. trapezia</i>	13.9	-0.4±0.2	-27.8±6.3	-75.6±7.3	92.4±0.7	630±70
Pancake Creek Site Complex	G	8	31	Wk-6991	<i>A. trapezia</i>	34.9	0.5±0.2	-38.9±5.1	-87.8±5.9	91.2±0.6	740±60
Pancake Creek Site Complex	H	8	26	Wk-6992	<i>A. trapezia</i>	7.2	-0.3±0.2	-47.2±7.4	-94.3±8.6	90.6±0.9	800±80
Pancake Creek Site Complex	H	8	26	Wk-6993	charcoal	1.2	-26.8±0.2	-86.8±12.2	-83.5±15.0	91.7±1.5	700±140
Port Curtis 1	-	-	-	Wk-8457	<i>V. singaporina</i>	8.8	0.3±0.2	-5.6±6.1	-56.0±7.1	94.4±0.7	460±60
Port Curtis 2	-	-	-	NZA-12120 ^b	<i>V. singaporina</i>	1.7	0.9±0.2	-16.9±6.7	-67.9±6.4	93.2±0.6	570±60
Round Hill Creek Mound	-	-	-	Wk-10090	<i>A. trapezia</i>	37.7	-0.3±0.2	-170.6±3.5	-211.6±4.1	78.8±0.4	1910±42
Seven Mile Creek Mound	A	4	6.8-10.4	NZA-12272 ^b	charcoal	<0.1	-26.0±0.2	-146.4±8.5	-144.7±8.5	85.5±0.9	1260±80
Seven Mile Creek Mound	A	4	7.14	Wk-8324	<i>A. trapezia</i>	17.5	-0.9±0.2	-323.6±5.5	-356.2±6.4	64.4±0.6	3540±80
Seven Mile Creek Mound	A	13	39-43.6	NZA-12117 ^b	charcoal	<0.1	-25.7±0.2	-354.2±4.5	-353.3±4.5	64.7±0.5	3500±60
Seven Mile Creek Mound	A	13	40.4	Wk-8326	<i>A. trapezia</i>	19.5	-0.8±0.2	-329.8±4.9	-363.3±5.7	63.8±0.6	3610±70
Seven Mile Creek Mound	A	20	67.8	Wk-8327	<i>A. trapezia</i>	40.7	-1.2±0.2	-344.2±3.8	-375.4±4.4	62.5±0.4	3780±60
Seven Mile Creek Mound	A	20	67.8-71.5	NZA-12273 ^b	charcoal	0.1	-23.4±0.2	-356.6±4.6	-358.7±4.6	64.1±0.5	3570±60
Seven Mile Creek Mound	A	26	88.2	Wk-8328	<i>A. trapezia</i>	33.0	-0.5±0.2	-340.3±3.8	-372.7±4.4	62.7±0.4	3750±60
Seven Mile Creek Mound	A	26	88.7-92.2	NZA-12118 ^b	charcoal	0.2	-27.8±0.2	-369.0±4.4	-365.5±4.4	63.4±0.4	3660±60
Tom's Creek Site Complex	D	3	3.3	Wk-7682	<i>A. trapezia</i>	19.7	-1.2±0.2	-28.1±4.9	-74.4±5.7	92.6±0.6	620±50
Tom's Creek Site Complex	D	3	3.9	Wk-7681	charcoal	11.4	-27.2±0.2	-9.6±4.8	-5.1±5.9	99.5±0.6	modern ^a
Tom's Creek Site Complex	D	8	22.2-25.5	Wk-10966	charcoal	1.1	-25.7±0.2	-34.3±12.3	-32.9±14.9	96.7±1.5	269±125

continued over

Appendix 1: continued

SITE	SQUARE	XU	DEPTH (cm)	LAB. NO.	SAMPLE	WEIGHT (g)	$\delta^{14}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	D ¹⁴ C (‰)	% MODERN	¹⁴ C AGE
Tom's Creek Site Complex	D	15	50	Wk-7683	<i>A. trapezia</i>	26.7	-66.2±4.5	-1.2±0.2	-110.6±5.2	88.9±0.5	940±50
Tom's Creek Site Complex	D	17	55.7-60	Wk-7684	charcoal	3.2	-106.8±6.6	-26.8±0.2	-103.7±8.1	89.6±0.8	880±70
Tom's Creek Site Complex	D	18	59.5-64	Wk-7685	charcoal	3.3	-133.5±6.4	-27.5±0.2	-129.2±7.8	87.1±0.8	1110±70
Tom's Creek Site Complex	S	8	20.5-24	Wk-7686	charcoal	12.6	-65.1±3.9	-25.3±0.2	-64.5±4.8	93.5±0.5	540±50
Tom's Creek Site Complex	S	8	20.5-24	Wk-7838	<i>A. trapezia</i>	42.9	-29.1±5.3	-0.9±0.2	-75.9±6.1	92.4±0.6	630±50
Tom's Creek Site Complex	S	11	31.7-35	Wk-10965	charcoal	1.2	-127.1±10.2	-26.4±0.2	-124.7±12.4	87.5±1.2	1070±115
Tom's Creek Site Complex	S	-	62.5-67	NZA-13385 ^b	organics	30.69	-218±5.5	-26.2±0.2	-216.2±5.5	78.4±0.6	1956±57
Worthington Creek Midden	-	-	5	Wk-10089	<i>S. glomerata</i>	32.4	0.7±4.5	-3.4±0.2	-42.5±5.2	95.7±0.5	349±60

a The term 'modern' is applied for conventional radiocarbon ages of less than 200 years. Finite ages are problematic in this area of the radiocarbon time-scale owing to high levels of variability in radiocarbon activity in the atmosphere caused by the onset of the industrial revolution and atmospheric testing of thermonuclear devices. ¹⁴C ages between 0 and 200 could give ages anywhere from AD 1750 to AD 1950. After 1950, bomb ¹⁴C in the atmosphere causes a very rapid increase in sample ¹⁴C, peaking around 1965 (Alan Hogg, University of Waikato Radiocarbon Dating Laboratory, pers. comm., 1999).

b Accelerator Mass Spectrometry (AMS) determination. All other determinations were calculated using Liquid Scintillation Counting (LSC).

c Mixed shell consisting of *Saccostrea*, *Polynices*, *Nerita chamaeleon*, *Placamen calophyllum*, *Fragum hemisphaerium*, *Cymatium* sp., *Corbula* sp., *Antigona chemnitzii*, *Trisidos tortuosa*, *Tapes dorsatus*, *Meropesta* sp., *Pinctada* sp., *Trichomya hirsutus*, *Bembicium auratum*, *Calthalotia arruensis* and *Anadara trapezia*.

d Estimated value.