Appendix A

The contents of this appendix are the data sheets provided in Moye (2002a) as his Appendix 1.

Kawai Nui Marsh Data Sheet 3: Sediment Sample Codes

Moye Data for Transects KWT-1, KWT-2, KWT-3, and KWT-4 (Moye Data Sheets 1 and 2 combined)

Table 3 – Organisms Identified from Open Marine Facies Sediments in the Kawai Nui Basin, Oahu

Moye Data: Distribution of Fossil Marine Biota in Transects KWT-1, KWT-2, KWT-3, and KWT-4 (Moye Data Sheets 4 and 5 combined)

Kawai Nui Marsh Data Sheet 7: Distribution of Fossil Seeds in Transect KWT-1

Kawai Nui Marsh Data Sheet 8: Distribution of Fossil Seeds in Transects KWT-2, 3, and 4

Kawai Nui Marsh Data Sheet 9: Summary Distribution of Fossil Seeds

Kawai Nui Sediment Sample Codes

Bottom Character
1 - solid rock
2 - loose rock
3 - marine sediments

Sediment Grain Size
1 - clay (<0.004 mm)
2 - silt (0.004- 0.0625 mm
3 - sand (0.0625-4 mm)
4 - pebble (4-64 mm)
5 - cobble (6.4-25.6 cm
6 - boulder (>25.6 cm)

Sample Color
1.0 - black
2.1 - light gray
2.2 - medium gray
2.3 - dark gray
3.1 - light brown
3.2 - medium brown
3.3 - dark brown
4.1 - light green
4.2 - medium green
4.3 - dark green
5.1 - light orange
5.2 - medium orange
5.3 - dark orange
6.1 - light red
6.2 - medium red
6.3 - dark red
7.1 - light white
7.2 - medium white
7.3 - dark white
8.1 - pale yellow
8.2 - yellow
8.3 - dark yellow

Sample Texture
1.1 - fine compact
1.2 - compact
2.1 - fine granular
2.2 - granular
2.3 - coarse granular
2.4 - fragmental
3.1 - fine matted
3.2 - matted
3.3 - coarse matted

Moisture
1 - dry
2 - moist
3 - saturated
4 - slurry
5 - liquid

Kawai Nui Sediment Sample Codes

Contact with Unit below
1 - abrupt
2 - gradational < 1 cm
3 - gradational 1-2 cm
4 - gradational 2-4 cm
5 - gradational > 4 cm
6 - EOH (end of hole)

Inclusions
0 - none
1 - rock fragments
2 - historical artifact
3 - prehistoric artifact
4 - paleobotanic remains
5 - paleomarine remains

Clay content est. %
1 - absent
2 – 1 to 10%
3 – 11 to 25%
4 – 26 to 50%
5 – 51 to 75%
6 – 76 to 95%
7 – 96 to 100%

Fe oxides est. %
0 - absent
1 - trace
2 – 1 to 2%
3 – 3 to 5% by volume
4 – 6 to 10% by volume
5 - +10% by volume

Estimated % organic
0 - absent
1 – trace to 3%
2 - 4 to 10%
3 – 11 to 25%
4 – 26 to 50%
5 – 51 to 75%
6 – 76 to 95%
7 – 96 to 100%

Type organics present in sample
1 - decomposed organic carbon
2 - moderate-strong decomposed
3 - moderately decomposed (peat)
4 - weakly decomposed
5 - undecomposed plant material

Kawai Nui Sediment Sample Codes

Organic content size
1 - microscopic
2 - fine (1 to 5 mm)
3 - medium (5 to 10 mm)
4 - medium large (1 to 2 cm)
5 - large (>2 cm)

Vegetation I.D.
1.1 - California grass
1.2 - cattail
1.3 - neke fern

Paleovegetation I.D.
2.1 - kukui nut
2.2 - seed 1
2.3 - seed 2
2.4 - seed 3

Estimated % carbonate
0 – absent
1 - trace to 2%
2 - 3 to 10%
3 - 11 to 50%
4 - 51 to 90%
5 - 91 to 100%

Carbonate type
1 - limy mud or clay
2 - calcareous nodules
3 - calcareous sand
4 - shells and fragments
5 - coral fragments
6 - marine encrustations

Clasts est. volume %
0 – absent
1 – 1 to 5%
2 – 6 to 10%
3 – 11 to 20%
4 – 21 to 50%
5 - +50%

Clast size
1 - sand
2 - pebble
3 - cobble
4 - boulder

Clast Type
1.1 - basalt strongly weathered
1.2 - basalt partly weathered
1.3 - basalt unweathered
2.1 - cultural artifact prehistoric
2.2 - cultural artifact historic

Clast angularity
1 - angular
2 - subangular
3 - subrounded
4 - rounded
5 - well rounded

Kawai Nui Sediment Sample Codes

Sample Facies

1 - terrestrial soil
2 - terrestrial wetland
3 - lagoon
4 - open marine

Sample Subfacies

1.0 - terrestrial soil O horizon
1.1 - terrestrial soil A horizon
1.2 - terrestrial soil B horizon
1.3 - terrestrial soil C horizon
2.0 - marsh plant mat
2.1 - water or water + mud slurry
2.2 - wetland soil undifferentiated
2.3 - peaty mud
2.4 - muddy peat
2.5 - peat
3.0 - lagoonal undifferentiated
3.1 - lagoonal terrestrial
3.2 - lagoonal marine
4.0 - open marine

Moye Data for Transects KWT-1, KWT-2, KWT-3, and KWT-4

SAMPLE IDENTIFICATION							
Transect	Station No.	Latitude	Longitude	Total Depth	Bottom	Interval	Thickness
KWT-1	0 + 0N	N 21º 23.546'	W 157º 45.728'			0 – 12	12
						12 – 35	23
				42	1	35 – 42	7
KWT - 1	0 + 5N (a)	N 21º 23.547'	W 157º 45.723'			0 – 50	50
						50 – 70	20
						70 – 130	60
				140	2	130 – 140	10
KWT - 1	0 + 5N (b)	N 21º 23.547'	W 157º 45.723'			0 – 40	40
						40 – 70	30
						70 – 90	20
						90 – 130	40
				135	2	130 – 135	5
KWT - 1	0 + 15N	N 21º 23.551'	W 157º 45.720'			0-40	40
						40 – 70	30
						70 – 100	30
						100 – 130	30
				140	3	130 – 140	10
KWT - 1	0 + 20N	N 21º 23.550'	W 157º 45.717			0 – 40	40
						40 – 90	50
						90 – 140	50
				160	3	140 – 160	20
KWT - 1	0 + 30N	N 21º 23.553'	W 157º 45.711			0 – 40	40
						40 – 50	10
						50 – 90	40
						90 – 125	35
						125 – 145	20
				170	3	145 – 170	25
KWT - 1	0 + 50N	N 21º 23.560'	W 157º 45.703'			0 – 30	30
						30 – 70	40
						70 – 100	30
						100 – 120	20
						120 – 140	20
						140 – 170	30
				175	2	170 - 175	5
KWT - 1	0 + 55N	N 21º 23.562'	W 157º 45.702'			0 - 30	30
						30 - 80	50
						80 - 110	30
						110 - 130	20
						130 - 160	30
						160 - 175	15
				190	3	175 - 190	15
KWT - 1	0 + 95N	N 21º 23.578'	W 157º 45.702'			0 - 30	30
						30 - 80	50
						80 - 130	50
						130 - 170	40
						170 - 180	10
						180 - 190	10

				200	3	190 - 200	10

SAMPLE IDENTIFICATION

Transect	Station No.	Latitude	Longitude	Total Depth	Bottom	Interval	Thickness
KWT - 1	0 + 120N	N 21º 23.600'	W 157º 45.678'			0 - 35	35
						35 - 100	65
						100 - 120	20
						120 - 150	30
						150 - 180	30
						180 - 190	10
				210	3?	190 - 210	20
KWT - 1	0 + 150N	N 21º 23.612'	W 157º 45.667'			0 - 40	40
						40 - 245	205
						245 - 265	20
						265 - 280	15
				300	3	280 - 300	20
KWT - 2	0 + 5W	N 21º 23.176'	W 157º 45.361'			0 - 50	50
						50 - 90	40
				130	2	90 - 130	40
KWT - 2	0 + 10W	N 21º 23.171'	W 157º 45.364'			0 - 40	40
						40 - 100	60
				160	2	100 - 160	60
KWT - 2	0 + 20W	N 21º 23.171'	W 157º 45.368'			0 - 10	10
						10 - 50	40
						50 - 60	10
						60 - 120	60
						120 - 150	30
						150 - 160	10
				170	3	160 - 170	10
KWT - 2	0 + 50W	N 21º 23.181'	W 157º 45.379'			0 - 20	20
						20 - 60	40
						60 - 100	40
						100 - 140	40
						140 - 180	40
						180 - 182	2
				200	3	182 - 200	18
KWT-3	0+10E	N 21 23.876'	W 157 46.020'			0-20	20
						20-65	45
						65-200	135
						200-240	40
						240-270	30
						270-280	10
						280-300	20
				350	3	300-350	50
KWT-4	0+0E	N 21 23.821'	W 157 46.015'			0-30	30
						30-60	30
						60-70	10
				130	2	70-130	60

SAMPLE IDENTIFICATION							
Transect	Station No.	Latitude	Longitude	Total Depth	Bottom	Interval	Thickness
KWT-4	0+15E	N 21 23.820'	W 157 46.009'			0-40	40
						40-80	40
						80-140	60
						140-150	10
				160	3	150-160	10
KWT-4	0+30E	N 21 23.820'	W 157 46.000'			0-20	20
						20-40	20
						40-80	40
						80-160	80
						160-180	20
				190	3	180-190	10
KWT-4	0+60E	N 21 23.822'	W 157 45.983'			0-50	50
						50-60	10
						60-70	10
						70-150	80
						150-180	30
				220	3?	180-220	40
KWT-4	0+90E	N 21 23.817'	W 157 45.961'			0-70	70
						70-90	20
						90-120	30
						120-180	60
						180-185	5
						185-200	15
				210	3	200-210	10
KWT-4	0+120E	N 21 23.819'	W 157 45.943'			0-30	30
						30-60	30
						60-70	10
						70-75	5
						75-100	25
						100-150	50
						150-170	20
						170-180	10
				200	3	180-200	20

		SAMPLE CHARACTERISTICS					
Transect	Station No.	Color	Grain size	Texture	Moisture	Contacts	Inclusions
KWT-1	0 + 0N	1 + 3.3	N.A.	2.1	2	3	0
		2.1 + 4.1, 5.2	1	1.2 + 2.4	2	3	1
		2.1 + 4.1	1	1.2 + 2.4	3	3	1
KWT - 1	0 + 5N (a)	N.A.	N.A.	3.3	2	1	0
		N.A.	N.A.	N.A.	4	5	0
		2.1 + 4.1	1	1.1 + 2.4	3	4	1+4
		2.1 + 4.1	1	1.1 + 2.4	3	6	1+4
KWT - 1	0 + 5N (b)	N.A.	N.A.	3.3	1 + 3	1	0
		2.3, 2.2+4.2	1	1.2	3	3	0
		2.3, 4.3+1, 3.2+8.1	1 + 4	1.2 + 2.4	3	4	1
		2.3	1 + 4	1.2 + 2.4	3 + 4	3	1+4
		2.3	1 + 5	1.2 + 2.4	3	6	1+4+5
KWT - 1	0 + 15N	N.A.	N.A.	3.3	1+3	1	0
		N.A.	N.A.	N.A.	4	4	0
		2.3 + 3.1	1 + 4	1.2 + 2.4	3	3	1
		2.3, 2.2 + 3.2	1 + 3	1.2 + 2.3	3	1	1+4
		7.2	3 + 4	2.2 + 2.3	3	6	5
KWT - 1	0 + 20N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	5	3	0
		2.2 + 4.2	1	1.1	3	1	0
		7.2	3 + 4	2.2 + 2.3	3	6	5
KWT - 1	0 + 30N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	5	3	0
		2.3	1	1.2	3	5	0
		2.3	1	1.2	3	3	0
		2.3	1	1.1	3	1	0
		7.2	3 + 4	2.2 + 2.3	3	6	5
KWT - 1	0 + 50N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	4	5	0
		2.2 + 3.2	1	1.2	3	3	0
		2.3, 2.2 + 3.2	1	1.2 + 3.1	3	3	0
		3.3	1	3.2	2	4	0
		3.2, 3.2 + 6.2	1	3.2 + 2.4	2	1	1
		N.A.	N.A.	N.A.	N.A.	6	N.A.
KWT - 1	0 + 55N	N.A.	N.A.	3.3	1 + 3	1	0
		2.2 + 3.2	1	N.A.	4	4	0
		2.2, 2.2 + 3.2	1	1.2+3.1	3	4	0
		3.2, 3.2 + 2.2	1	1.2+3.2, 3.2	2	4	0
		2.3 + 3.2, 3.2 + 6.2	1	1.2+3.2, 3.3	2	4	0
		3.2, 3.2 + 6.2	1	3.3	2	1	0
		7.2	3 + 4	2.2+2.3	3	6	5
KWT - 1	0 + 95N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	5 +4	4	0
		2.3, 2.2+3.2	1	1.2	3	3	4
		2.2+3.2	1	1.2 + 3.2	3	2	1
		2.2+3.2	1	3.2	2	2	4
		2.1+4.1	1	1.1 + 2.1	2	1	4+5
		7.2	3+4	2.2 + 2.3	3	6	5

		SAMPLE CHARACTERISTICS					
Transect	Station No.	Color	Grain size	Texture	Moisture	Contacts	Inclusions
KWT - 1	0 + 120N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	4	4	0
		2.2 + 3.2	1	1.2 + 3.1	3	3	0
		3.2 + 2.2	1	1.2 + 3.1	3	2	4
		3.2 + 6.2	1	3.3	2	3	4
		3.2, 6.3	1	3.3	2	3	3
		4.2 + 2.2	1	1.1 + 2.1	3	6	4+5
KWT - 1	0 + 150N	N.A.	N.A.	3.3	1 + 3	1	0
		N.A.	N.A.	N.A.	4	5	0
		3.2	1	3.3+1.2, 3.3	3 + 2	3	4
		4.1 + 2.1	1	1.1 + 2.1	3	3	4+5
		7.2	3 + 4	2.2 + 2.3	3	6	4+5
KWT - 2	0 + 5W	3.3	1+2	1.2	1	2	0
		2.2, 5.2+3.1	1	1.1	2	3	0
		2.3	1	1.1	3	6	1+6
KWT - 2	0 + 10W	3.3	1+2	1.2	1	2	1
		2.2, 5.2+3.1	1	1.1	2	3	0
		2.3	1	1.1	3	6	0
KWT - 2	0 + 20W	3.3	1+2	1.2	1	2	0
		2.2, 5.2+3.1	1	1.1	2	2	0
		2.3, 3.2	1+3	1.2+3.1	2	2	1+4
		2.3	1	1.1	3	3	0
		2.3, 2.3+3.3	1	1.1+3.1	2	2	4
		2.2	1	1.2+3.1	2	2	1+4
		7.3	2+3+4	2.3+2.4	3	6	5
KWT - 2	0 + 50W	3.3	1+2	1.2	1	3	0
		2.2, 5.2+3.1	1	1.1	2	2	0
		2.3	1	1.1	3	4	0
		2.3, 4.2+3.2	1+3	1.1+3.1	2	2	1+4
		2.2+3.2	1	1.1+3.1	2	2	4
		2.2+4.2	1+3	1.1+3.1	2	2	4
		7.3	2+3+4	2.3+2.4	3	6	5
KWT-3	0+10E	3.2	1+2	1.2	2	3	0
		3.1+5.1	1+2	1.2	2	3	0
		2.2	1	1.1	2	4	0
		1.0+2.2	1	1.1	3	2	0
		3.3	1	2.2	2	4	4
		3.3	1	2.2	2	4	4
		2.3+3.3	1+2+3	2.1	2	1	4
		2.1	2+3+4	2.3	3	6	5
KWT-4	0+0E	3.2	1+2	1.2	3	1	0
		1.0+(2.1+4.1)	1	1.1	3	3	0
		2.2+3.1	1	1.2	2	3	0
		3.3	1	2.1	2	6	1

	SAMPLE CHARACTERISTICS

Transect	Station No.	Color	Grain size	Texture	Moisture	Contacts	Inclusions
KWT-4	0+15E	1+(3.1+2.1)	1	3.2	3	2	0
		1+2.2	1	1.2	3+2	1	0
		3.3	1	1.1	2	3	0
		2.3+3.2	1	1.1	2	2	4
		2.1	2+3+4	2.3	3	6	5
KWT-4	0+30E	3.3	1	2.3	2	2	0
		3.3	1	1.2	3	3	0
		1+(2.1+4.1)	1	2.1	3	3	0
		3.3	1	1.2	2	2	0
		2.3	1	1.2	2	1	4+5
		2.1	3+4	2.3	3	6	5
KWT-4	0+60E	3.3	1	3.2+1.2	2	1	0
		1+2.1	1	1.2+3.2	3	3	0
		3.2+2.2	1	1.1	2	5	0
		3.3	1	2.2	3		0
		2.3	1	1.1	2	6	4, 5
KWT-4	0+90E	3.3	1	3.3	2	5	0
		1.0+3.3+2.3	1	1.2+3.2	3	2	0
		3.3	1	3.1	3	NA	0
		3.3	1	3.1	4	5	4
		3.2	1	3.3	2	2	4
		2.3	1	1.1	3	2	4+5
		2.1	2+3+4	2.2+2.3	3	6	5
KWT-4	0+120E	2.3+3.2	1	3.3	2-3	4	0
		3.1+3.2+3.3+8.1	1	3.3	3	1	0
		1.0+2.2	1	3.1	3	3	0
		2.2+3.1	1	1.2+1.1	2	2	0
		2.3+3.3	1	3.2	2	NA	4
		3.2+6.3+2.1	1	3.2	3+4	1	4
		2.2+4.1	1	1.1	2	2	5+1
		7.2	3+4	2.3	3	6	5

	SAMPLE COMPOSTION			
		Fe	Sample Organic Content	Carbonate Content

Transect	Station No.	Clay Content	Oxide Content	Organics	Type	Size	Plant I.D.	Carb %	Type
KWT-1	0 + 0N	2	0	7	2	2	N.A.	0	
		6	2	2	1	1	N.A.	0	
		5	0	2	1	1	N.A.	0	
KWT - 1	0 + 5N (a)	1	0	6	4 + 5	5	1.1	0	
		1	0	0	N.A.	N.A.	N.A.	0	
		5	0	2	1	1	2.1	0	
		4	0	2	1	1	2.1	0	
KWT - 1	0 + 5N (b)	1	0	7	5 + 4	5	1.1	0	
		6	0	3	1	1		0	
		6	0	2	1	1		0	
		5	0	3	1 + 4	1 + 4	2.1	0	
		4	0	3	1 + 4	1 + 4	2.1	1	6
KWT - 1	0 + 15N	1	0	7	5+4	5	1.1	0	
		2	0	0	5 + 4	5		0	
		5	2	3	1	1		0	
		6	0	2	1 + 4	1 + 3	2.2, 2.4	0	
		1	0	1	4	2	2.2, 2.4, 2.5	5	3+4+5
KWT - 1	0 + 20N	1	0	7	5 + 4	5	1.1 + 1.2	0	
		2	0	N.A.	N.A.	N.A.	N.A.	0	
		6	0	1	1	1		0	
		1	0	0	N.A.	N.A.	N.A.	5	3+4+5
KWT - 1	0 + 30N	1	0	7	5 + 4	5	1.1	0	
		2	0	N.A.	N.A.	N.A.	N.A.	0	
		6	0	3	1	1		0	
		7	0	3	1	1		0	
		6	0	1	4	2	2.2, 2.4, 2.5	0	
		1	0	1	4	2	2.2, 2.4, 2.5	5	3+4+5
KWT - 1	0 + 50N	1	0	7	5 + 4	5	1.1 + 1.2	0	
		2	0	N.A.	N.A.	N.A.	N.A.	0	
		6	0	3	1	1		0	
		5	0	4	1 + 3	1 + 3		0	
		2	0	6	3	3 + 4		0	
		2	0	6	3	3 + 4		0	
		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
KWT - 1	0 + 55N	1	0	7	5 + 4	5	1.1 + 1.2	0	
		2	0	1	1 + 4 + 5	1 + 2 + 3		0	
		6	0	3	1 + 2	1 + 2		0	
		5	0	5	1 + 3	1 + 3		0	
		4	0	6	1 + 3	1 + 3		0	
		6	0	7	3	2 + 3 + 4	2.2, 2.3, 2.5	0	
		1	0	1	4	2	2.2, 2.3, 2.5	5	3+4+5
KWT - 1	0 + 95N	1	0	6	5	5	1.2	0	
		2	0	0				0	
		6	0	4	1	1		0	
		5	0	5	2	2		0	
		4	0	6	3	3	2.2, 2.3, 2.4, 2.5	0	
		6	0	1	1	1+2	2.2, 2.3, 2.5	3	1+4
		1	0	0			2.2, 2.3, 2.5	5	3+4+5
		SAMPLE COMPOSTION							
			Fe	Sample Organic Content				Carbonate Content	

Transect	Station No.	Clay Content	Oxide Content	Organics	Type	Size	Plant I.D.	Carb %	Type
KWT - 1	0 + 120N	1	0	6	5	5	1.3	0	
		2	0	0				0	
		6	0	3	1+3	2		0	
		5	0	4	1+3	3		0	
		2	0	6	3	4		0	
		2	0	7	3	5	2.2, 2.3, 2.4, 2.5	0	
		6	0	1	1	1+2	2.2, 2.4, 2.5	3	1+3+4
KWT - 1	0 + 150N	1	0	6	5	5	1.2	0	
		2	0	0				0	
		2	0	6	3	5		0	
		5	0	1	1	1	2.2, 2.5	3	1+3+5
		1	0	0			2.2	5	3+4+5
KWT - 2	0 + 5W	5	0	2	1+5	1+4	1.1	0	
		6	3	2	1	1		0	
		6	0	2	1	1		0	
KWT - 2	0 + 10W	5	0	2	1+5	1+4	1.1	0	
		6	3	2	1	1		0	
		6	0	2	1	1		0	
KWT - 2	0 + 20W	5	0	2	1+5	1+4	1.1	0	
		6	3	2	1	1		0	
		5	0	3	1+3	1+4		2	2 or 3
		6	0	2	1	1		0	
		4	0	4	1+3	1+3		0	
		6	0	3	1+3	1+3		2	2 or 3
		0	0	0			2.2, 2.4, 2.5	5	3+4+5
KWT - 2	0 + 50W	6	0	3	1+5	1+4	1.1	0	
		6	2	2	1+2	1+2		0	
		7	0	2	1+2	1+2		0	
		5	0	3	1+2+3	1+3		0	
		6	0	3	1+3	1+3		0	
		6	0	3	1+3	1+3		2	2 or 3
		0	0	0			2.2, 2.4, 2.5	5	3+4+5
KWT-3	0+10E	6	2	1	1, 5	1, 4	1.1	0	
		6	3	1	1	1		0	
			0		2	1		0	
			0	3	1, 2	1, 3		0	
		4	0	5	3	3		0	
		4	0	4	1,4	1, 3	2.2, 2.3, 2.5	0	
		5	0	3	1, 3, 4	1, 2, 3, 4	2.1, 2.2, 2.3, 2.4, 2.5, 2.6	1	1, 3, 5
		1	0	0			2.2, 2.5	5	1, 2, 3, 4, 5
KWT-4	0+0E	5	0	2	5, 4	3, 4		0	
		5	0	3	1	1		0	
		6	0	2	1	1		0	
		4	0	4	3	3		0	

	SAMPLE COMPOSTION			
		Fe	Sample Organic Content	Carbonate Content

Transect	Station No.	Clay Content	Oxide Content	Organics	Type	Size	Plant I.D.	Carb %	Type
KWT-4	0+15E	4	0	5	1, 4, 5	1, 4		0	
		4	0	4	1, 2	1, 2, 3		0	
		6	0	2	1	1		0	
		6	0	2	1	1		2	3, 5
		1	0	0			2.2, 2.4, 2.5	5	3, 4, 5
KWT-4	0+30E	1	0	7	2, 4, 5	2, 4		0	
		4	0	5	1, 4, 5	1, 4		0	
		4	0	5	1, 2	1, 4		0	
		3	0	5	3	2		0	
		5	0	2	1, 4	1	2.2, 2.3, 2.5	2	1, 3, 5
		1	0	0			2.2, 2.5	5	3, 4, 5
KWT-4	0+60E	4	0	4	1+5	1+4		0	
		4	0	3	1+2	1+4		0	
		5	0	2	1+2	1+3		0	
		3	0	5	3	3		0	
		6	0	2	1	1	2.2, 2.4, 2.5, 2.6	0	
KWT-4	0+90E	3	0	5	1+4+5	1+4		0	
		4-5	0	3	1+2+4	1+3+4		0	
		2	0	6	1+3	2+3		0	
		2	0	3	3	3		0	
		2	0	6	3	3+4	2.2, 2.3, 2.4, 2.5	0	3+4
		5	0	2	1+3	1+3	2.2, 2.3, 2.5	2	3+4+5
		1	0	0			2.2, 2.3, 2.4, 2.5	5	
KWT-4	0+120E	4	0	4	1+5	1+5		0	
		2	0	6	3+4	5		0	
		4	0	4	1+3	1+3		0	
		6	0	3	1	1+2		0	
		3	0	4	1+3	1+3		0	
		2	0	5	3	3		0	
		6	0	3	1	1	2.2, 2.3, 2.5	1	3+4
		1	0	0			2.2, 2.5	5	3+4+5

		SAMPLE COMPOSITION				CLASSIFICATION		NOTES
		Clast Identification				Sample Facies	Sample Subfacies	
Transect	Station No.	%	Size	Type	Angularity			

KWT-1	0 + 0N	0				1	1.0	humus with trace soil minerals
		2	2	1.3	2	1 + 2	1.1 + 1.2	streaky Feox around roots
		4	2 + 3	1.3	2	2	2.2	bottom in bedrock?
KWT - 1	0 + 5N (a)	0				2	2.0	spoil and CA grass + cattails mat
		0				2	2.1	
		1	2	1.3	2	2	2.2	fragment kukui nut near base
		3	3	1.3	2	2	2.2	4 kukui nuts, bottom in bedrock?
KWT - 1	0 + 5N (b)	0				2	2.0	spoil and CA grass + cattails mat
		0				2	2.2	
		1	2	1.3	2+3	2	2.2	streaky brown-yellow Feox
		3	2	1.3	1+2	2	2.1 + 2.2	compacted to 20 cm, kukui nuts
		4	3	1.3	1+2	2	2.2	5 cm clast with marine organisms
KWT - 1	0 + 15N	0				2	2.0	CA grass + cattails vegetation
		0				2	2.1	no recovery, water + clay slurry
		1	2	1.3	2+3	2	2.2	mottled tan Feox? shell frag?
		1	1	1.3	2+3	2	2.2	7x4x1 wood fragment
		4	3	1.2	1+2+3	4	4.0	
KWT - 1	0 + 20N	0				2	2.0	CA grass + cattails vegetation
		0				2	2.1	
		0				2	2.2	
		0				4	4.0	abrupt contact
KWT - 1	0 + 30N	0				2	2.0	largely CA grass vegetation mat
		0				2	2.1	
		0				2	2.2	organic-rich, reduced
		0				2	2.2	organic-rich, reduced
		0				2	2.2	
		0				4	4.0	
KWT - 1	0 + 50N	0				2	2.0	CA grass + cattail vegetation mat
		0				2	2.1	
		0				2	2.2	organic-rich, reduced
		0				2	2.3	oxidizes black in 2-3 minutes
		0				2	2.5	tough, compact, oxidizes black
		1	3	1.3	1	2	2.5	compact, dry peat, oxidizes black
		N.A.				N.A.	N.A.	grinding at bottom, no recovery
KWT - 1	0 + 55N	0				2	2.0	CA grass + cattail vegetation mat
		0				2	2.1 + 2.2	poor recovery
		0				2	2.2 + 2.3	oxidizes black in 2-3 minutes
		0				2	2.4 + 2.5	oxidizes black in 2-3 minutes
		0				2	2.4 + 2.5	red-brown, compact, dry peat
		0				2	2.5	red-brown, compact, dry peat
		0				4	4.0	abrupt contact
KWT - 1	0 + 95N	0				2	2.0	dominantly cattail vegetation mat
		0				2	2.1	abundant methane bubbling up
		0				2	2.2	abundant methane bubbling up
		1	2	1.2	4	2	2.3	50% peaty debris
		0				2	2.4	70% peaty debris
		0				3	3.2	10% small shells or fragments
		0				4	4.0	

		SAMPLE COMPOSITION				CLASSIFICATION		NOTES
		Clast Identification				Sample	Sample	
Transect	Station No.	%	Size	Type	Angularity	Facies	Subfacies	

KWT - 1	0 + 120N	0				2	2.0	neke fern vegetation mat
		0				2	2.1	no recovery
		0				2	2.2	abundant methane bubbling up
		0				2	2.2 + 2.3	abundant methane
		0				2	2.5	elongate leaves and stems
		0				2	2.5	brown to purplish-red peat
		0				3	3.2	10% small shells, grinding at end
KWT - 1	0 + 150N	0				2	2.0	cattail surface vegetation mat
		0				2	2.1	no recovery, abundant methane
		0				2	2.4 + 2.5	oxidizes to black in 2-3 minutes
		0				3	3.2	10% small shells or fragments
		0				4	4.0	
KWT - 2	0 + 5W	0				1	1.1	pasture, numerous roots+rootlets
		0				1+2	1.2+2.2	mottled areas of FeOx
		1	1+2	1.3	3	2	2.2	traces of charcoal, EOH on rock
KWT - 2	0 + 10W	2	2	1.2	3	1	1.1	compacted pasture, many roots
		0				1+2	1.2+2.2	mottled areas of FeOx
		0				2	2.2	EOH on rock
KWT - 2	0 + 20W	0				1	1.1	distrubed, compacted pasture
		0				1+2	1.2+2.2	mottled areas of FeOx
		0				2	2.2+2.3	<1mm calc nodules or sand grains
		0				2	2.2	dark gray tacky clay
		0				2	2.4	50% peaty debris
		0				2+3	2.3+3.1	<1mm nodules or sand grains
		0				4	4.0	coarse open marine seds
KWT - 2	0 + 50W	0				1	1.1	distrubed, compacted pasture
		0				1+2	1.2+2.2	orange-brown FeOx assc. w/ roots
		0				2	2.2	<5% carbonized plant debris
		2	1	1.3	3	2	2.3	fine brick red basalt clasts increasing w/ depth
		0				2	2.2	10% peaty plant debris
		0				3	3.1	10-20% calcareous sand and minor peaty debris
		0				4	4.0	
KWT-3	0+10E	0				1	1.1	Brown to 10 cm, turns ocher-orange
		0				1	1.2	uniform, gray streaks by 50 cm
		0				1	2.2	locally tan, some peaty veg. at 140 cm
		0				1	2.2	very organic-rich, plastic
		0				1	2.4	turns black on exposure to air
		0				1	2.4	numerous seeds
		0				3	3.1	kukui nut 1-2 cm above base section
		0				4	4.0	
KWT-4	0+0E	0				1	1.1	water table at 20 cm
		0				2	2.2	black, abund. part decomposed plant
		0				2	2.2	
		1	2	1.2	1	2	2.4	

		SAMPLE COMPOSITION				CLASSIFICATION		NOTES
		Clast Identification				Sample	Sample	
Transect	Station No.	%	Size	Type	Angularity	Facies	Subfacies	
KWT-4	0+15E	0				2	2.0	water table at 5 cm

		0				2	2.2	abund. black plant debris to 1 cm
		0				2	2.3	increasingly peaty with depth
		0				3	3.1	abundant seeds, wood frags. at base
		0				4	4.0	
KWT-4	0+30E	0				2	2.0	water table at 20 cm
		0				2	2.0	
		0				2	2.2	
		0				2	2.4	woody fragments, seeds at base
		0				3	3.1	woody fragments and seeds
		0				4	4.0	
KWT-4	0+60E	0				2	2.0	
		0				2	2.2	abund. coarse black plant remains
		0				2	2.2	5-10% coase plant remains
								unconsolidated slurry, no sample
		0				2	2.4	grinding at 180 cm, difficult recovery, mixing
		0				3	3.1	poor recovery, mixing of intervals
KWT-4	0+90E	0				2	2.0	Difficult recovery of mat
		0				2	2.0+2.2	broad transition, abund. roots decrease with depth
		0				2	2.4	abrupt contact, increasingly peaty with depth
		0				2	2.1+2.2	auger grinding at 120 cm, poor recovery of interval
		0				2	2.5	
		0				3	3.1	auger mixing of peat and lagoonal, seeds lagoonal
		0				4	4.0	abundant trochus intextus
KWT-4	0+120E	0				2	2.0	fewer roots with depth, abund. gas bubbling up
		0				2	2.0	2nd plant mat, >75% roots and stems
		0				2	2.2	black, abund. decomp. plant remains, gas
		0				2	2.2	rapid transition to compact clay-rich interval
		0				2	2.4	darker peat interval
						2	2.1	No recovery, slurry
		0				2	2.5	
		2	3	1.3	2	3	3.2	grinding at 180 cm, large odd clast, 1 mm black seeds
		0				4	4.0	

Table "3" - Organisms Identified from Open Marine Facies sediments in the Kawai Nui Basin, Oahu

	CODE
Phylum MOLLUSCA	
Class GASTROPODA	
Order Archaeogastropoda (Diocardia)	
Fissurelloidea	
Fissurellidae	
Diodorinae	
Diodora granifera (Pease, 1861)	1
Trochoidea	
Trochinae	
Trochus intextus Kiener, 1850	2
Superorder Caenogastropoda	
Order Neotaenioglossa	
Cerithoidea	
Cerithiidae	
Cerithium Boeticum Pease, 1860	3
Dialidae	
Diala semistriata (Phillippi, 1849): Ponder & de-Keyzer, 1992	4
Stromboidea	
Stromidae	
Strombus maculatus Sowerby, 1842	5
Vanikorioidea	
Hiponnicidaea	
Hipponix (Antisabia) foliaceus (Quoy and Gaimard, 1835)	6
Hipponix (Cochlear) imbricatus Gould, 1846	7
Hipponix australis Lamarck, 1819: Knudsen, 1991	8
Cypraeoidea	
Cypraeidae	
Cypraea sp.	9
Naticoidea	
Naticidae	
Naticinae	
Natica gualteriana Récluz, 1844	10
Suborder Ptenoglossa	
Triphoroidea	
Triphoridae	
Mastoniinae	
Viriola sp.	11
Triphorinae	
Triphora sp.	12
Janthinoidea	
Epitoniidae	
Epitonium sp.	13

Order Neogastropoda	CODE	
Muricoidea		
Muricidae		
Muricodrupa funiculusa (Wood, 1828)		14
Columellidae		
Euplica varians (Sowerby, 1832)		15
Mitrella sp.cf. *loyaltensis* (Hervier, 1900): Sleurs, 1987	16	
Nassariidae		
Nassarius hirtus (Kiener, 1834)		17
Fasciolariidae		
Peristernia chlorostoma (Sowerby, 1825)		18
Conoidea (=Toxoglossa)		
Suborder Ptenoglossa		
Turridae		
Mitroluminninae		
Mitrolumna sp.cf. *metula* (Hinds, 1843)	19	
Bulloidea		
Atyidae		
Atys debilis Pease, 1860	20	
Atys semistriata Pease, 1860		21
Class BIVALVIA		
Arcoidea		
Arcidae		
Barbatia sp.?		22
Mytiloidea		
Mytilidae		
Brachidontes crebristriatus (Conrad, 1837)		23
Pterioidea		
Pteriidae		
Pinctada sp.		24
Isognomidae		
Isognomon californicum (Conrad, 1837)	25	
Chamoidea		
Chamidae		
Chama fibula Reeve, 1846		26
Lucinoidea		
Lucinidae		
Codakia sp.?		27
Cardioidea		
Cardiidae		
Trachycardium orbita (Sowerby, 1833)		28
Tellinacae		
Tellinidae		
Tellina sp.		29
Tellina (Quidnipagus) palatam Iredale, 1929		30
Semelidae		
Semelangulus sp.		31
Semelangulus crebrimaculatus Sowerby, 1867		32

Distribution of Fossil Marine Biota in Transects KWT-1, KWT-2, KWT-3, and KWT-4

Sample Location				Classification		Phylum Cnidaria	Phylum Mollusca		
						Family Poritidae	Class Gastropoda		
Transect No.	Station No.	Interval	Thickness	Sample Facies	Sample Subfacies	Porites compressa	Diodora granifera	Trochus intextus	Cerithium boeticum
KWT-1	0 + 0N	0 - 12	12	1	1.0				
		12 - 35	23	1 + 2	1.1 + 1.2				
		35 - 42	7	2	2.2				
KWT - 1	0 + 5N (a)	0 - 50	50	2	2.0				
		50 - 70	20	2	2.1				
		70 - 130	60	2	2.2				
		130 - 140	10	2	2.2				
KWT - 1	0 + 5N (b)	0 - 40	40	2	2.0				
		40 - 70	30	2	2.2				
		70 - 90	20	2	2.2				
		90 - 130	40	2	2.1 + 2.2				
		130 - 135	5	2	2.2				
KWT - 1	0 + 15N	0 - 70	70	2	2.0 + 2.1				
		70 - 100	30	2	2.2				
		100 - 130	30	2	2.2				
		130 - 140	10	4	4.0	A		N	N
KWT - 1	0 + 20N	0 - 40	40	2	2.0				
		40 - 90	50	2	2.1				
		90 - 140	50	2	2.2				
		140 - 160	20	4	4.0	A		C	P
KWT - 1	0 + 30N	0 - 40	40	2	2.0				
		40 - 50	10	2	2.1				
		50 - 90	40	2	2.2				
		90 - 125	35	2	2.2				
		125 - 145	20						
		145 - 170	25	4	4.0	A		N	N
KWT - 1	0 + 50N	0 - 30	30	2	2.0				
		30 - 70	40	2	2.1				
		70 - 100	30	2	2.2				
		100 - 120	20	2	2.3				
		120 - 140	20	2	2.5				
		140 - 170	30	2	2.5				
		170 - 175	5	N.A.	N.A.				
KWT - 1	0 + 55N	0 - 30	30	2	2.0				
		30 - 80	50	2	2.1 + 2.2				
		80 - 110	30	2	2.2 + 2.3				
		110 - 130	20	2	2.4 + 2.5				
		130 - 160	30	2	2.4 + 2.5				
		160 - 175	15	2	2.5				
		175 - 190	15	4	4.0	A		P	

Distribution of Fossil Marine Biota in Transects KWT-1, KWT-2, KWT-3, and KWT-4

Sample Location				Classification		Phylum Cnidaria	Phylum Mollusca		
						Family Poritidae	Class Gastropoda		
Transect No.	Station No.	Interval	Thickness	Sample Facies	Sample Subfacies	Porites compressa	Diodora granifera	Trochus intextus	Cerithium boeticum
KWT – 1	0 + 95N	0 - 30	30	2	2.0				
		30 - 80	50	2	2.1				
		80 - 130	50	2	2.2				
		130 - 170	40	2	2.3				
		170 - 180	10	2	2.4				
		180 - 190	10	3	3.2	P		P	P
		190 - 200	10	4	4.0	A		N	
KWT - 1	0 + 120N	0 - 35	35	2	2.0				
		35 - 100	65	2	2.1				
		100 - 120	20	2	2.2				
		120 - 150	30	2	2.2 + 2.3				
		150 - 180	30	2	2.5				
		180 - 190	10	2	2.5	C		P	C
		190 - 210	20	3	3.2	A		N	C
KWT - 1	0 + 150N	0 - 40	40	2	2.0				
		40 - 245	205	2	2.1				
		245 - 265	20	2	2.4 + 2.5				
		265 - 280	15	3	3.2	P		P	P
		280 - 300	20	4	4.0	A		N	P
KWT - 2	0 + 5W	0 - 50	50	1	1.1				
		50 - 90	40	1+2	1.2+2.2				
		90 - 130	40	2	2.2				
KWT - 2	0 + 10W	0 - 40	40	1	1.1				
		40 - 100	60	1+2	1.2+2.2				
		100 - 160	60	2	2.2				
KWT - 2	0 + 20W	0 - 10	10	1	1.1				
		10 - 50	40	1+2	1.2+2.2				
		50 - 60	10	2	2.2+2.3				
		60 - 120	60	2	2.2				
		120 - 150	30	2	2.3				
		150 - 160	10	3	3.1+2.3				
		160 - 170	10	4	4.0	A		P	C
KWT - 2	0 + 50W	0 - 20	20	1	1.1				
		20 - 60	40	1+2	1.2+2.2				
		60 - 100	40	2	2.2				
		100 - 140	40	2	2.3				
		140 - 180	40	2	2.2				
		180 - 182	2	3	3.1				
		182 - 200	18	4	4.0	A		P	N

Distribution of Fossil Marine Biota in Transects KWT-1, KWT-2, KWT-3, and KWT-4

Sample Location				Classification		Phylum Cnidaria	Phylum Mollusca		
						Family Poritidae	Class Gastropoda		
Transect No.	Station No.	Interval	Thickness	Sample Facies	Sample Subfacies	Porites compressa	Diodora granifera	Trochus intextus	Cerithium boeticum
KWT-3	0+10E	0-20	20	1	1.1				
		20-65	45	1	1.2				
		65-200	135	1	2.2				
		200-240	40	1	2.2				
		240-270	30	1	2.4				
		270-280	10	1	2.4				
		280-300	20	3	3.1	A		C	N
		300-350	50	4	4.0	A		C	N
KWT-4	0+0E	0-30	30	1	1.1				
		30-60	30	2	2.2				
		60-70	10	2	2.2				
		70-130	60	2	2.4				
KWT-4	0+15E	0-40	40	2	2.0				
		40-80	40	2	2.2				
		80-140	60	2	2.3				
		140-150	10	3	3.1				
		150-160	10	4	4.0	A		N	N
KWT-4	0+30E	0-20	20	2	2.0				
		20-40	20	2	2.0				
		40-80	40	2	2.2				
		80-160	80	2	2.4				
		160-180	20	3	3.1				
		180-190	10	4	4.0	A		C	N
KWT-4	0+60E	0-50	50	2	2.0				
		50-60	10	2	2.2				
		60-70	10	2	2.2				
		70-150	80						
		150-180	30	2	2.4				
		180-220	40	3	3.1	A		N	N
KWT-4	0+90E	0-70	70	2	2.0				
		70-90	20	2	2.0+2.2				
		90-120	30	2	2.4				
		120-180	60	2	2.1+2.2				
		180-185	5	2	2.5				
		185-200	15	3	3.1				
		200-210	10	4	4.0	A	P	A	A

Distribution of Fossil Marine Biota in Transects KWT-1, KWT-2, KWT-3, and KWT-4

Sample Location				Classification		Phylum Cnidaria	Phylum Mollusca		
						Family Poritidae	Class Gastropoda		
				Sample	Sample	*Porites*	*Diodora*	*Trochus*	*Cerithium*
Transect No.	Station No.	Interval	Thickness	Facies	Subfacies	*compressa*	*granifera*	*intextus*	*boeticum*
KWT-4	0+120E	0-30	30	2	2.0				
		30-60	30	2	2.0				
		60-70	10	2	2.2				
		70-75	5	2	2.2				
		75-100	25	2	2.4				
		100-150	50	2	2.1				
		150-170	20	2	2.5				
		170-180	10	3	3.2				
		180-200	20	4	4.0	A		N	N

A - abundant (>50% by volume)
N - numerous (8-12 specimens)
C - common (4-7 specimens)
P - present (1-3 specimens)

On the above three pages, all transects, stations, and intervals are provided. For the remainder of this table (following two pages), only intervals with fossil material are listed.

Distribution of Fossil Marine Biota			Phylum Mollusca						
			Class Gastropoda						
Sample Location			*Diala*	*Strombus*	*Hipponix*	*Hipponix*	*Hipponix*	*Cypraea*	*Natica*
Transect No.	Station No.	Interval	*semistriata*	*maculatus*	*foliaceus*	*imbricatus*	*australis*	species	*gualteriana*
KWT - 1	0 + 15N	130 - 140	P		P				
KWT - 1	0 + 20N	140 - 160			P				
KWT - 1	0 + 30N	145 - 170	N		P	P		P	P
KWT - 1	0 + 55N	175 - 190	C		P		P		
KWT – 1	0 + 95N	180 - 190							
		190 - 200	C	P	P	P			
KWT - 1	0 + 120N	180 - 190							
		190 - 210	A		P	P			
KWT - 1	0 + 150N	265 - 280	P						
		280 - 300	C						
KWT - 2	0 + 20W	160 - 170			P	P			
KWT - 2	0 + 50W	182 - 200			C	C			
KWT - 3	0+10E	280-300				P			
		300-350	N		P				
KWT - 4	0+15E	150-160							N
KWT - 4	0+30E	180-190			N				
KWT - 4	0+60E	180-220							
KWT - 4	0+90E	200-210	A		C				P
KWT - 4	0+120E	150-170			P	P	P		

Transect No.	Station No.	Interval	*Viriola* species	*Triphora* species	*Epitonium* species	*Muricodrupa funiculusa*	*Euplica varians*	*Mitrella loyaltensis*	*Nassarius hirtus*
KWT - 1	0 + 15N	130 - 140						P	
KWT - 1	0 + 20N	140 - 160					C		
KWT - 1	0 + 30N	145 - 170						P	P
KWT - 1	0 + 55N	160 - 175		P					
		175 - 190							
KWT – 1	0 + 95N	180 - 190							
		190 - 200							
KWT - 1	0 + 120N	180 - 190						P	
		190 - 210							
KWT - 1	0 + 150N	265 - 280							
		280 - 300				P		P	
KWT - 2	0 + 20W	160 - 170							
KWT - 2	0 + 50W	182 - 200							
KWT - 3	0+10E	280-300							
		300-350					P		
KWT - 4	0+15E	150-160							
KWT - 4	0+30E	180-190			P		P		
KWT - 4	0+60E	180-220							
KWT - 4	0+90E	200-210		P					
KWT - 4	0+120E	150-170							

Distribution of Fossil Marine Biota			Phylum Mollusca						
			Class Gastropoda				Class Bivalvia		
Sample Location			*Peristernia*	*Mitrolumna*	*Atys*	*Atys*	*Barbatia*	*Brachidontes*	*Pinctada*
Transect No.	Station No.	Interval	*chlorostoma*	*metula*	*debilis*	*semistriata*	species.	*crebristriatus*	species
KWT - 1	0 + 15N	130 - 140						P	
KWT - 1	0 + 20N	140 - 160					P	C	
KWT - 1	0 + 30N	145 - 170						C	
KWT - 1	0 + 55N	175 - 190	P					A	
KWT – 1	0 + 95N	180 - 190						P	
		190 - 200		P				P	
KWT - 1	0 + 120N	180 - 190						P	
		190 - 210						C	
KWT - 1	0 + 150N	265 - 280						P	
		280 - 300						P	
KWT - 2	0 + 20W	160 - 170							
KWT - 2	0 + 50W	182 - 200						C	
KWT - 3	0+10E	280-300						P	
		300-350							
KWT - 4	0+15E	150-160							
KWT - 4	0+30E	180-190				P			
KWT - 4	0+60E	180-220						C	
KWT - 4	0+90E	200-210						C	
KWT - 4	0+120E	150-170						C	

			Class Bivalvia						
Transect No.	Station No.	Interval	*Isognomon californicum*	*Chama fibula*	*Codakia* species	*Trachycardium orbita*	*Tellina palatam*	*Semelangulus* species	*Semelangulus crebrimaculatus*
KWT - 1	0 + 15N	130 - 140					P		
KWT - 1	0 + 20N	140 - 160			C		P	P	
KWT - 1	0 + 30N	145 - 170			P		P		
KWT - 1	0 + 55N	160 - 175							
		175 - 190		P	P	P			
KWT – 1	0 + 95N	180 - 190							
		190 - 200							
KWT - 1	0 + 120N	180 - 190							
		190 - 210		C					
KWT - 1	0 + 150N	265 - 280		P					
		280 - 300		P	P				
KWT - 2	0 + 20W	160 - 170		C			P		
KWT - 2	0 + 50W	182 - 200		C	P				
KWT - 3	0+10E	280-300							
		300-350							
KWT - 4	0+15E	150-160					P		
KWT - 4	0+30E	180-190							
KWT - 4	0+60E	180-220							
KWT - 4	0+90E	200-210			C				
KWT - 4	0+120E	150-170			P				

Kawai Nui Marsh Data Sheet 7: Distribution of Fossil Seeds by Sample Interval for Transect KWT-1

Sample I.D.				Classification		Fossil Seed Identification					
				Sample	Sample	Ruppia	Potamogeton	Schoenoplectus	Unknown	Aleurites	Cucurbitacene
Transect No.	Station No.	Interval	Thickness	Facies	Subfacies	maritima	foliosus	lacustris	species	moluccana	species
KWT-1	0 + 0N	0 - 12	12	1	1.0						
		12 - 35	23	1 + 2	1.1 + 1.2						
		35 - 42	7	2	2.2						
KWT - 1	0 + 5N (a)	0 - 50	50	2	2.0						
		50 - 70	20	2	2.1						
		70 - 130	60	2	2.2					P	
		130 - 140	10	2	2.2					C	
KWT - 1	0 + 5N (b)	0 - 40	40	2	2.0						
		40 - 70	30	2	2.2						
		70 - 90	20	2	2.2						
		90 - 130	40	2	2.1 + 2.2					C	
		130 - 135	5	2	2.2					P	
KWT - 1	0 + 15N	0 - 70	70	2	2.0 + 2.1						
		70 - 100	30	2	2.2						
		100 - 130	30	2	2.2	C		A			
		130 - 140	10	4	4.0	A		C	P		
KWT - 1	0 + 20N	0 - 40	40	2	2.0						
		40 - 90	50	2	2.1						
		90 - 140	50	2	2.2						
		140 - 160	20	4	4.0						
KWT - 1	0 + 30N	0 - 40	40	2	2.0						
		40 - 50	10	2	2.1						
		50 - 90	40	2	2.2						
		90 - 125	35	2	2.2						
		125 - 145	20	?	?	A		C	P		
		145 - 170	25	4	4.0	C		P	P		
KWT - 1	0 + 50N	0 - 30	30	2	2.0						
		30 - 70	40	2	2.1						
		70 - 100	30	2	2.2						
		100 - 120	20	2	2.3						
		120 - 140	20	2	2.5						
		140 - 170	30	2	2.5						
		170 - 175	5	N.A.	N.A.						
KWT - 1	0 + 55N	0 - 30	30	2	2.0						
		30 - 80	50	2	2.1 + 2.2						
		80 - 110	30	2	2.2 + 2.3						
		110 - 130	20	2	2.4 + 2.5						
		130 - 160	30	2	2.4 + 2.5						
		160 - 175	15	2	2.5	C	P	P	P		
		175 - 190	15	4	4.0	P	P	P?	P		
KWT - 1	0 + 95N	0 - 30	30	2	2.0						
		30 - 80	50	2	2.1						
		80 - 130	50	2	2.2						
		130 - 170	40	2	2.3						
		170 - 180	10	2	2.4	P	P	P	P		
		180 - 190	10	3	3.2	A	C		C		
		190 - 200	10	4	4.0	A	P		C		
KWT - 1	0 + 120N	0 - 35	35	2	2.0						
		35 - 100	65	2	2.1						
		100 - 120	20	2	2.2						
		120 - 150	30	2	2.2 + 2.3						
		150 - 180	30	2	2.5						
		180 - 190	10	2	2.5	A	A	C	A		
		190 - 210	20	3	3.2	A		P	P		
KWT - 1	0 + 150N	0 - 40	40	2	2.0						
		40 - 245	205	2	2.1						
		245 - 265	20	2	2.4 + 2.5						
		265 - 280	15	3	3.2	A			C		
		280 - 300	20	4	4.0	P					

Kawai Nui Marsh Data Sheet 8: Distribution of Fossil Seeds by Sample Interval for Transects KWT-2, KWT-3, and KWT-4

Sample Identification				Facies		Fossil Seed Identification					
				Sample	Sample	Ruppia	Potamogeton	Schoenoplectu	Unknown	Aleurites	Cucurbitacea
Transect No.	Station No.	Interval	Thickness	Facies	Subfacies	maritima	foliosus	lacustris		moluccana	
KWT - 2	0 + 5W	0 - 50	50	1	1.1						
		50 - 90	40	1+2	1.2+2.2						
		90 - 130	40	2	2.2						
KWT - 2	0 + 10W	0 - 40	40	1	1.1						
		40 - 100	60	1+2	1.2+2.2						
		100 - 160	60	2	2.2						
KWT - 2	0 + 20W	0 - 10	10	1	1.1						
		10 - 50	40	1+2	1.2+2.2						
		50 - 60	10	2	2.2+2.3						
		60 - 120	60	2	2.2						
		120 - 150	30	2	2.4						
		150 - 160	10	2+3	2.3+3.1						
		160 - 170	10	4	4.0	A		P	C		
KWT - 2	0 + 50W	0 - 20	20	1	1.1						
		20 - 60	40	1+2	1.2+2.2						
		60 - 100	40	2	2.2						
		100 - 140	40	2	2.3						
		140 - 180	40	2	2.2						
		180 - 182	2	3	3.1						
		182 - 200	18	4	4.0	C		C	C		
KWT-3	0+10E	0-20	20	1	1.1						
		20-65	45	1	1.2						
		65-200	135	1	2.2						
		200-240	40	1	2.2						
		240-270	30	1	2.4						
		270-280	10	1	2.4	A	A		A		
		280-300	20	3	3.1	A	A	P	A	P	P
		300-350	50	4	4.0	P			P		
KWT-4	0+0E	0-30	30	1	1.1						
		30-60	30	2	2.2						
		60-70	10	2	2.2						
		70-130	60	2	2.4						
KWT-4	0+15E	0-40	40	2	2.0						
		40-80	40	2	2.2						
		80-140	60	2	2.3						
		140-150	10	3	3.1						
		150-160	10	4	4.0	A		P	C		
KWT-4	0+30E	0-20	20	2	2.0						
		20-40	20	2	2.0						
		40-80	40	2	2.2						
		80-160	80	2	2.4	A		C	A		
		160-180	20	3	3.1	A	C		A		
		180-190	10	4	4.0	C			C		
KWT-4	0+60E	0-50	50	2	2.0						
		50-60	10	2	2.2						
		60-70	10	2	2.2						
		70-150	80								
		150-180	30	2	2.4						
		180-220	40	3	3.1	A		P	A		P
KWT-4	0+90E	0-70	70	2	2.0						
		70-90	20	2	2.0+2.2						
		90-120	30	2	2.4						
		120-180	60	2	2.1+2.2						
		180-185	5	2	2.5	A	A	C	A		
		185-200	15	3	3.1	A	A		C		
		200-210	10	4	4.0	A	C	C	A		
KWT-4	0+120E	0-30	30	2	2.0						
		30-60	30	2	2.0						
		60-70	10	2	2.2						
		70-75	5	2	2.2						
		75-100	25	2	2.4						
		100-150	50	2	2.1						
		150-170	20	2	2.5						
		170-180	10	3	3.2	A	A		A		
		180-200	20	4	4.0	A			P		

Kawai Nui Marsh Data Sheet 9: Summary Distribution of Fossil Seeds.

Sample I.D.				Classification		Fossil Seed Identification					
				Sample	Sample	Ruppia	Potamogeton	Schoenoplectus	Unknown	Alseurites	Cucurbitaceae
Transect No.	Station No.	Interval	Thickness	Facies	Subfacies	maritima	foliosus	lacustris	species	moluccana	species
KWT - 1	0 + 5N (a)	70 - 130	60	2	2.2					P	
		130 - 140	10	2	2.2					C	
KWT - 1	0 + 5N (b)	90 - 130	40	2	2.1 + 2.2					C	
		130 - 135	5	2	2.2					P	
KWT - 1	0 + 15N	100 - 130	30	2	2.2	C		A			
		130 - 140	10	4	4.0	A		C	P		
KWT - 1	0 + 30N	125 - 145	20	?	?	A		C	P		
		145 - 170	25	4	4.0	C		P	P		
KWT - 1	0 + 55N	160 - 175	15	2	2.5	C	P	P	P		
		175 - 190	15	4	4.0	P	P	P?	P		
KWT - 1	0 + 95N	170 - 180	10	2	2.4	P	P	P	P		
		180 - 190	10	3	3.2	A	C		C		
		190 - 200	10	4	4.0	A	P		C		
KWT - 1	0 + 120N	180 - 190	10	2	2.5	A	A	C	A		
		190 - 210	20	3	3.2	A		P	P		
KWT - 1	0 + 150N	265 - 280	15	3	3.2	A			C		
		280 - 300	20	4	4.0	P					
KWT - 2	0 + 20 W	160 - 170	10	4	4.0	A		P	C		
KWT - 2	0 + 50W	182 - 200	18	4	4.0	C		C	C		
KWT - 3	0 + 10E	270-280	10	1	2.4	A	A		A		
		280-300	20	3	3.1	A	A	P	A	P	P
		300-350	50	4	4.0	P			P		
KWT - 4	0 + 15E	150-160	10	4	4.0	A		P	C		
KWT - 4	0 + 30E	150-160	10	2	2.5	A		C	A		
KWT - 4	0 + 30E	160-180	20	3	3.1	A	C		A		
		180-190	10	4	4.0	C			C		
KWT - 4	0 + 60E	180-220	40	3	3.1	A		P	A		P
KWT - 4	0 + 90E	180-185	5	2	2.5	A	A	C	A		
		185-200	15	3	3.1	A	A		C		
		200-210	10	4	4.0	A	C	C	A		
KWT - 4	0 + 120E	170-180	10	3	3.2	A	A		A		
		180-200	20	4	4.0	A			P		