Supplement of J. Micropalaeontol., 44, 541–553, 2025
https://doi.org/10.5194/jm-44-541-2025-supplement
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Journal of Micropalaeontology
Open Access

Supplement of

Stratigraphy and palaeoenvironment of the Bangkok Clay (Holocene) from Samut Sakhon Province, Central Thailand

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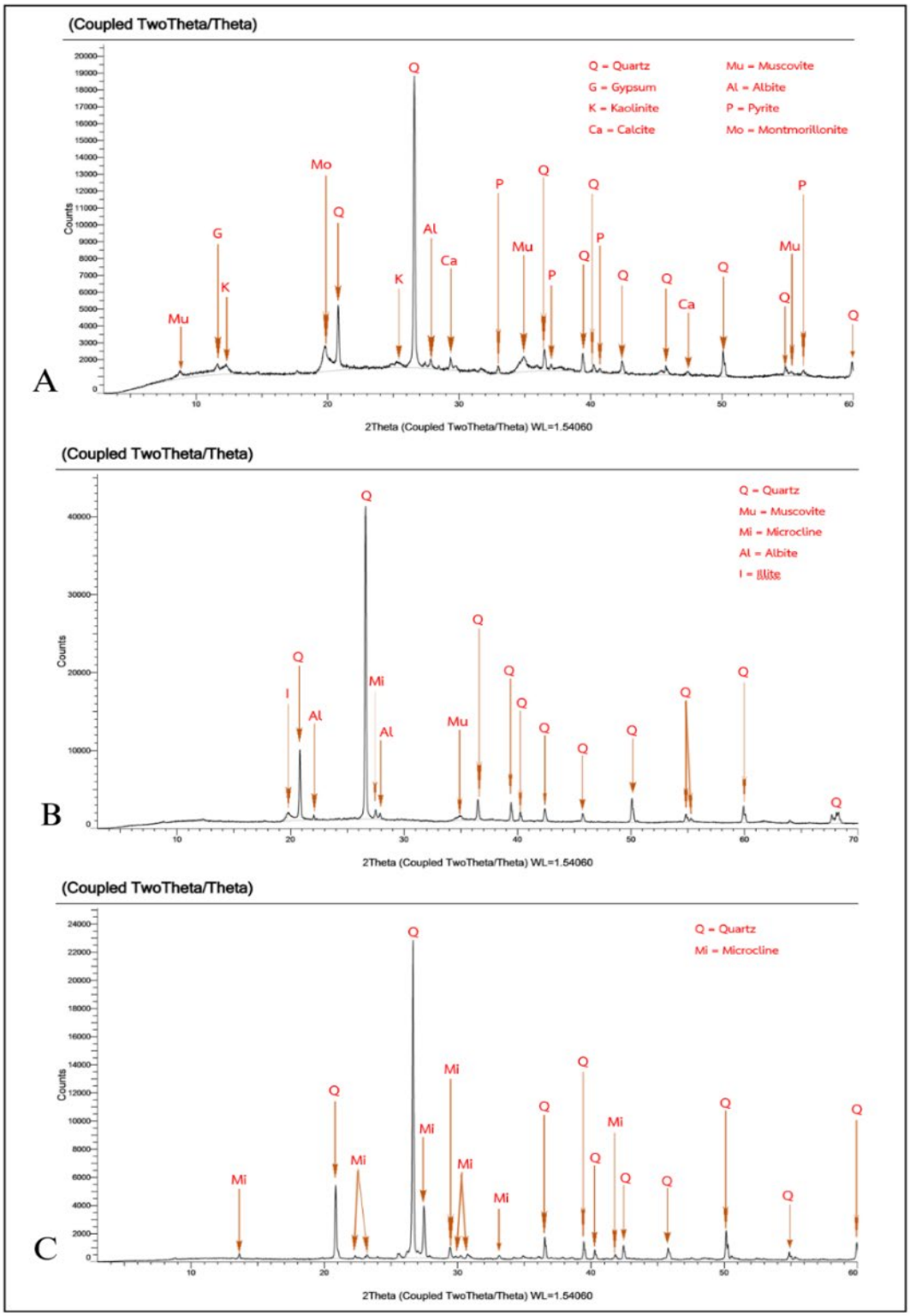

Figure S1: X-ray diffraction patterns from representative sediment samples of lithologic unit 2 and 5. (A) Sediment at 8.25-meter depth (KU2), representing Unit 5; (B) sediment at 19.75-meter depth (KU4), representing Unit 2; (C) sediment at 28.25-meter depth (KU5), representing Unit 2.

Table S1 Summary of radiocarbon dates obtained in this study; AMS = Accelerator Mass Spectrometry, cal BC = Calibrated Before Christ, cal BP = Calibrated Before Present.

Borehole number	Depth (m)	Material/ Pre-treatment	Method	Conventional Age		Calibrated Age		$\delta^{13}C$ (permil, ‰)	$\delta^{18}O$ (permil, ‰)
				^{14}C Age (yr BP)	error (+/- yr)	Calibrated Date (cal BC)	Radiocarbon determination (cal BP)		
KU1*	1.5–2.0	(shell)/ acid etch	AMS	3420	30	1342–996	3291–2945	-3.2	-3.78
KU1*	3.0–3.5	(shell)/ acid etch	AMS	3340	30	1228–896	3177–2845	-3.5	-3.87
KU1*	6.0–6.5	(shell)/ acid etch	AMS	3500	30	1419–1106	3368–3055	-3.7	-3.43
KU1*	7.5–8.0	(shell)/ acid etch	AMS	4180	30	2293–1940	4242–3889	-1.6	-2.99
KU1*	9.5–10.0	(shell)/ acid etch	AMS	4700	30	2946–2609	4895–4558	-3.2	-2.56
KU2*	8.5–9.0	(shell)/ acid etch	AMS	3900	30	1918–1584	3867–3533	+0.4	-2.81
KU2*	12.0–12.5	(shell)/ acid etch	AMS	4170	30	2282–1932	4231–3881	-0.9	-2.9
KU2*	13.5–14.0	(shell)/ acid etch	AMS	4340	30	2491–2146	4440–4095	-1.4	-2.97
KU3**	0.75	(shell)/ acid etch	AMS	3010	30	807–505	2756–2454	-1.5	-3.44
KU3**	6.75	(shell)/ acid etch	AMS	3390	30	1295–954	3244 –2903	-2.8	-2.84
KU3**	9.75	(shell)/ acid etch	AMS	4180	30	2293–1940	4242–3889	-0.4	-2.8
KU5*	5.5–6.0	(shell)/ acid etch	AMS	2360	30	26–286 cal AD	1975–1664	-2.0	-3.65
KU5**	6.0	(organic sediment)/ acid washes	AMS	3040	30	1401–1216	3350–3165	-23.8	-
KU5**	10.25	(organic sediment)/ acid washes	AMS	3830	30	2355–2197	4304–4146	-25.5	-
KU5*	10.5–11.0	(shell)/ acid etch	AMS	2250	30	124–424 cal AD	1826–1526	-2.0	-3.6
KU5*	12.0–12.5	(shell)/ acid etch	AMS	3690	30	1651–1341	3600–3290	-0.3	-1.91
KU5**	13.75	(organic sediment)/ acid washes	AMS	6110	30	5083–4939	7032–6888	-25.4	-
KU5*	14.5–15.0	(shell)/ acid etch	AMS	4760	30	3042–2685	4991–4634	-2.3	-2.69
KU5**	15.0	(organic sediment)/ acid washes	AMS	6290	30	5324–5211	7273–7160	-24.1	-
KU5**	34.25	(organic sediment)/ acid washes	AMS	10370	30	9633–9249	11,582–11,198	-24.7	-

(* studied by Kasetsart University, **studied by Synchrotron Light Institute of Thailand)

Table S2 Lists of ostracods from Holocene boreholes and Phanom Surin shipwreck site, Samut Sakhon Province, Central Thailand

		Occurrences
Family CYTHERIDEIDAE Baird, 1850		
Neocyprideis agilis (Guan, 1978)	Fig. 4-A, Fig. 5A-H, Fig.6	Unit 5
Sinocytheridea impressa (Brady, 1869)	Fig. 4-D	Unit 2, Unit 5, PS
Family HEMICYTHERIDAE Puri, 1953		
Hemicytheridea reticulata Kingma, 1948	Fig. 4-E	PS
Hemicytheridea cancellata (Brady, 1868)	Fig. 4-F	Unit 5
Family TRACHYLEBERIDIDAE Sylvester-Bradley, 1948		
Keijella multisulcus Whatley and Zhao, 1988	Fig. 4-B	Unit 5, PS
Keijella gonia Zhao and Whatley, 1989	Fig. 4-C	Unit 2, Unit 3, Unit 4, Unit 5, PS
Family SCHIZOCYTHERIDAE Howe in Moore, 1961		
Neomonoceratina iniqua (Brady, 1868)	Fig. 4-J	Unit 2, Unit 5
Neomonoceratina rhomboidea (Brady, 1968)	Fig. 4-G	Unit 2, Unit 5, PS
Neomonoceratina mediterranea malayensis Zhao and Whatley, 1988	Fig. 4-I	Unit 5, PS
Neomonoceratina mediterranea mediterranea (Ruggieri, 1953)	Fig. 4-H	Unit 2, Unit 5
Family PONTOCYPRIDIDAE Müller, 1894		
Propontocypris bengalensis Maddocks, 1969	Fig. 4-K	Unit 2, Unit 5
Family CANDONIDAE Kaufmann, 1900		
Aglaiocypris pellucida Mostafawi, 2003	Fig. 4-L	Unit 5
Lankacythere coralloides (Brady, 1886)	Fig. 4-N	Unit 4, Unit 5
Family CYTHERELLIDAE Sars, 1866		
Stigmatocythere bona Chen in Hou et al., 1982	Fig. 4-M	Unit 2, Unit 5
Cytherella sp.	Fig. 4-O	Unit 5

Table S3 Distribution of ostracods from borehole KU1

Depth (m)	*Keijella multisulcus*	*Keijella gonia*	*Sinocytheridea impressa*	*Neomonoceratina rhomboidea*	*Neomonoceratina iniqua*	*Neomonoceratina mediterranea malayensis*	*Stigmatocythere bona*	*Neocyprideis agilis*	*Lankacythere coralloides*
1		1							
2								10	
3									
4				3					
5									
6	2	1			1	1			
7				3				1	
8	48	4	9	2					
9	21	9	19				2		
10			29		4		2		13
11									
12									
13			3						3
14									
15									
16									
17									
18									
19									
20									

Table S4 Distribution of ostracods from borehole KU2

Depth (m)	*Keijella multisulcus*	*Keijella gonia*	*Sinocytheridea impressa*	*Neomonoceratina rhomboidea*	*Neomonoceratina iniqua*	*Neomonoceratina mediterranea malayensis*	*Propontocypris bengalensis*	*Hemicytheridea cancellata*
0.25								
1.25								
2.25								
3.25								
4.25								
5.25								
6.25	4	7		32	14			
7.25	34	15		86	57	8		
8.25	55	26	1	173	76	7	2	
9.25	30	6	25					1
10.25	8	5	15	2				
11.25								
12.25								
13.25	4	1	1	1				
14.25	2							
15								

Table S5 Distribution of ostracods from borehole KU3

Depth (m)	*Keijella multisulcus*	*Keijella gonia*	*Sinocytheridea impressa*	*Neomonoceratina rhomboidea*	*Neomonoceratina iniqua*	*Propontocypris bengalensis*	*Stigmatocythere bona*	*Neocyprideis agilis*	*Hemicytheridea cancellata*
0.25									
1.25	3			3				29	
2.25				1				4	
3.25	1			1					
4.25									
5.25				1		1		1	
6.25	23	32	9	116	66	1	2		
7.25	13	6		24	27				
8.25	81	22	12	5	1	2	1		1
9.25	28	7	9	3		2			
10.00	10	5	25		3				

Table S6 Distribution of ostracods from borehole KU4

Depth (m)	*Keijella multisulcus*	*Keijella gonia*	*Sinocytheridea impressa*	*Neomonoceratina rhomboidea*	*Stigmatocythere bona*	*Hemicytheridea cancellata*	*Lankacythere coralloides*	*Cytherella* sp.
0.25	22	19	46	2		1		
1.25		4	2		1	1		
2.25	3						4	
3.25	1		3					1
4.25								
5.25								
6.25								
7.25								
8.25								
9.25								
10.25								
11.25								
12.25								
13.25								
14.25								
15.25								
16.25								
17.25								
18.25								
19.25								
20								

Table S7 Distribution of ostracods from borehole KU5

Depth (m)	*Keijella multisulcus*	*Keijella gonia*	*Sinocytheridea impressa*	*Neomonoceratina rhomboidea*	*Neomonoceratina iniqua*	*Neomonoceratina mediterranea malayensis*	*Propontocypris bengalensis*	*Stigmatocythere bona*	*Cytherella* sp.	*Aglaiocypris pellucida*	*Hemicytheridea cancellata*
1											
2											
3											
4											
5											
6											
7		3							1		
8	12	11	3	7	1	3					
9	12	6	4	12	1	1	3				
10	1	4		2			1	1			
11	2		1	1							
12	14	9	2	22			3	1		1	1
13	208	113	59	80	42	1	1	8			2
14	1										
15		3									
15.25		1									
16.25											
17.25											
18.25											
19.25	1	1									
20.25											
21.25											
22.25											
23.25											
24.25											
25.25											
26.25											
27.25	5	5	1		1			1			
28.25	12	6	2	1			1				
29.25		4	1	1							
30.25											
31.25											
32.25											
33.25											
34.25											