The eastern Asian 'Middle Palaeolithic' revisited: a view from Korea

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Is the Middle Palaeolithic an appropriate concept in eastern Asia? The issue has been debated for China in two recent papers in Antiquity *(Yee 2012; Li 2014), which in turn responded to an earlier argument set out by Gao and Norton (2002). But does the Korean record offer a different perspective? Here, the authors argue that Korean archaeology, as with the Chinese record, provides no support for a distinct Middle Palaeolithic. Rather than seeking to validate an inappropriate chronological framework derived from European Palaeolithic research, emphasis should instead be placed on developing a regionally specific model of prehistory for eastern Asia. They conclude, akin to Gao and Norton (2002), that the East Asian Palaeolithic should be divided into two major cultural periods: Early and Late.*

Keywords: eastern Asia, Korea, Middle Palaeolithic, geochronology, typology

Table S1. Lithic assemblages and their basic information from representative stratified Palaeolithic sites in Korea.

Site	Layer	Characteristic artefacts	Total number of artefacts	Core	Raw material	Absolute date (BP)	Literature
Jeongok-ri*	uppermost	scraper, endscraper, denticulate, backed knife	–	pseudo-prismatic, biconical	–	AT tephra (28 ka)	NRICP 1983; Norton *et al.* 2006
	middle	handaxe, chopper, polyhedral, flake	–	large flat, tablet	–	K-Tz tephra (110cm underneath, 90–95 ka)	
	lower	handaxe, chopper, polyhedral	–	large flat, tablet	–	–	
Hwadae-ri	light brown	tanged point, groundstone	1297	–	quartz & quartzite (97.1%), obsidian (0.1%)	22 000±1000 BC (OSL)	Choi & Ryu 2005
	dark brown	tanged point	3709	–	quartz & quartzite (94.8%), porphyry (4.8%)	31 000±900 (AMS) 30 000±1700 (OSL)	
	lowest, above the gravel deposit	chopper, polyhedral	940	casual blocky	quartz & quartzite (99.5%)	39 000±1400 BC (OSL)	
Yongjeong-ri	light brown	blade, microblade, chopper, scraper, endscraper, notch, denticulate, awl	216	blocky	quartz (81.94%), hyaline quartz (12.04%), obsidian (3.24%)	–	Cha *et al.* 2013
	brown	cleaver, chopper,	900	flat, blocky	quartz (98.22%),	–	

		polyhedron, scraper, endscraper, denticulate, awl			hyaline quartz (1.22%)		
	dark brown	pick, cleaver, chopper, polyhedron, scraper, endscraper, denticulate	593	flat, blocky	quartz (90.05%), hyaline quartz (6.24%), quartzite (2.53%)	36 000±1400 (OSL)	
	reddish brown	handaxe, cleaver, chopper, polyhedron, scraper, denticulate	408	flat, radial	quartz (96.52%), hyaline quartz (0.49%), quartzite (1.96%)	52 300±3800 (OSL)	
	yellowish brown	handaxe, pick, chopper, scraper, notch	1002	casual, flat	quartz (90.32%), hyaline (0.7%), quartzite (8.78%)	73 000±7000 (OSL)	
	light brown	endscraper, notch	17	casual	quartz & quartzite (88.2%), (11.8%)	38 000±500 (OSL)	
	dark brown	polyhedron, scraper, notch	15		quartz & quartzite (100%)	38 000±4000 (OSL)	
Galdun	dark reddish brown (up)	polyhedron, chopper, scraper, endscraper, notch	543	casual, flat	quartz & quartzite (97%), other (3%)	86 000±6000 (OSL)	Choi & Kim 2008
	dark reddish brown (low)	handaxe, pick, polyhedron, chopper, scraper, notch	1377	casual, flat	quartz & quartzite (84.5%), other (15.5%)	92 000±7000, 98 000±5000, 102 000±9000 (OSL)	
Geodu-ri	dark brown	handaxe, pick, cleaver, chopper,	530	polyhedron, flat, casual	quartz (48.7%), quartzite (46%),	62 000±3000(OSL)	Jeong *et al*. 2009

		polyhedron, scraper, notch			granite (1.9%)		
	light reddish brown sandy clay	polyhedron, scraper, large flake	28	polyhedron, flat	quartz (39.3%), quartzite (46.4%), granite (10.7%)	57 000±4300 (OSL)	
	light reddish brown	cleaver, chopper, polyhedron, scraper, notch	30	flat	quartz (40%), quartzite (50%), granite (10%)	–	
	dark reddish brown	core, flake	4	–	quartzite (75%), quartz (25%)	61 000±5000 (OSL)	
	yellowish brown sandy clay	pick, chopper	73	–	quartz (89%), quartzite (10%)	64 000±4000, 68 000±5000 (OSL)	
Sangjiseok-ri	grayish blue muddy sand	handaxe, pick, chopper, polyhedron, scraper, notch	613	polyhedron, flat	quartz (88%), quartzite (12%)	–	Jeon *et al.* 2012
	reddish brown sandy clay	handaxe, pick, chopper, polyhedron, scraper, notch	1242	casual, flat	quartz (77%), quartzite (23%)	69 000±5000, 72 000±5000 (OSL)	
	yellow sand	core, flake	29	polyhedron	quartz (66%), quartzite (31%)	73 000±5000, 75 000±5000 (OSL)	
Hahwagye-ri	light brown	microblades, scraper, endscraper, burin	2267	microblade core	vein quartz & quartzite (70.7%), obsidian (21%), quartz crystal (0.2%)	–	Choi *et al.* 2004
	dark brown	chopper, scraper, large flake	787	casual blocky	quartz (91.87%), porphyry (4.19%), sand stone (2.54%),	40 600±1500 (AMS) 39 000±2000 (OSL)	

					granite (0.89%)		
	reddish brown	large chopper, core scraper	226	casual blocky	quartz (93.4%), porphyry (2.2%), sandstone (4.4%)	–	
	above the gravel layer	pick, chopper	18	–	–	79 000±4000, 66 000±3000 (OSL)	
	dark reddish brown	handaxe, pick, chopper, polyhedron, notch, scraper	340	flat, radial	quartz (23.4%), quartzite (75.4%)	34.0±1.2 kyrs, 35.9±5.0 kyrs (OSL)	
Baeki	reddish brown	handaxe, chopper, polyhedron, notch, scraper	139	casual, flat, polyhedron	quartz (20.9%), quartzite (79.1%)	42.0±1.8 kyrs, 42.5±2.6 kyrs (OSL)	Kim *et al*. 2009
	reddish brown sand	handaxe, pick, chopper, polyhedron, notch, scraper,	492	flat, casual	quartz (26.2%), quartzite (70.3%)	84.0±6.1 kyrs (OSL)	
	grayish brown	backed-knife, scraper, notch, awl	244	casual	quartz (91.0%), quartzite (7.4%)	–	
Anhyeon-dong	dark reddish brown	scraper, notch	221	casual	quartz (85.5%), quartzite (10.9%)	36 000±200 (OSL)	Jeong *et al*. 2011
	dark reddish brown	scraper, endscraper, notch	115	casual	quartz (84.4%), quartzite (13.0%), granite (1.7%)	41 000±3000 (OSL)	
Gigok	light brown	arrowhead, endscraper, awl, point, burin,	6655	microblade core	quartz (91.5%), quartz crystal (4.4%), chert (0.7%), obsidian	10 200±60 (AMS)	Lee *et al*. 2005

		microliths			(0.4%)		
	dark brown	chopper, polyhedral	1098	irregular blocky	quartz (vein quartz & quartzite, 95.3%)	33 500±1200, 32 100±1100, 36 070±380 (AMS)	
	reddish brown	chopper, scraper	118	casual blocky	quartzite, vein quartz	116 000±6000 (OSL, lowest sandstone layer)	
	dark brown	chopper, scraper, notch, denticulate	885	casual, flat, radial,	quartz (75%), quartzite (6%), granite (4%)	34 800±400 (AMS), 38 000±3000 (OSL)	
Mangsang-dong	reddish brown	polyhedron, chopper, scraper, notch	147	polyhedral, casual	quartz (61%), quartzite (9%), other (10%) granite (5%), sandstone (12%)	55 000±3000 (OSL)	Lee *et al.* 2009
	brown	chopper, scraper	38	casual	quartz (30%), quartzite (24%), granite (16%), sandstone (16%)	85 000±8000, 92 000±4000 (OSL)	
	light brown	chopper, scraper, endscraper, notch, backed knife, arrowhead	634	flat, blocky	quart (67.3%), quartzite (16.4%), sand stone (1.9%), chert (2.1%)	–	
Wolso	dark brown	pick, chopper, scraper, backed knife, awl, denticulate	699	casual, polyhedron, flat	quartz (73.8%), quartzite (9.2%), sandstone (2.2%), chert (4.9%)	43 450±790 (AMS)	Jeong *et al.* 2010
	gold yellow	handaxe, pick, cleaver, chopper, polyhedron,	526	casual	quartz (51.0%), quartzite (15.0%), sand stone (4.8%)	54 850±3320 (AMS)	

		scraper, denticulate					
	yellowish brown	handaxe, chopper, scraper	367	casual	quartz (40.0%), quartzite (16.4%)	89 000±4000 (OSL)	
	reddish brown	handaxe, pick, cleaver, chopper, polyhedron, scraper	249	casual	quartz (42.6%), quartzite (17.7%), sandstone (6.8%)	79 000±5000, 81 000±10 000, 96 000±14 000 BC (OSL)	
	brown	endscraper, scraper, awl	892	small globular	quartzite (57.2%), quartzite (41.8%),	–	
Dongbaek-ri	dark brown	scraper, endscraper	1366	small globular	quartzite (53.1%), quartzite (45.8%)	20 670±410, 27 000±300, 31 100±300 (AMS)	Jeong & Rho 2005
	reddish brown	polyhedral, scraper, chopper	1759	casual blocky	quartzite (51.8%), quartzite (47.7%)	–	
	reddish brown	pick, chopper, polyhedron, scraper, endscraper, notch, awl	34	flat, polyhedral	vein quartz (86%), quartzite (14%)	–	
Gaejeong-ri	reddish yellow	pick, chopper, scraper	192	flat, casual	vein quartz (92%), quartzite (8%)	–	Lee YJ *et al.* 2011b
	yellowish brown	pick, chopper, scraper, endscraper	55	flat, casual	vein quartz (78%), quartzite (22%)	40 000±2000 (OSL)	

	yellowish brown	chopper, scraper, endscraper, burin, notch	152	flat	quartz (84.6%), quartzite (12%)	23 200±1600 BC (OSL)	
Suheol-ri	dark brown	discoid, chopper, polyhedron, scraper, notch	127	flat	quartz (84.3%), quartzite (10.2%)	29 600±2500 BC (OSL)	Han & Kang 2007
	reddish brown	chopper, pick, biface, polyhedron, scraper, notch, denticulate	175	flat, casual	quartz (86.8%), quartzite (11.2%), hormfels	41 600±3500 BC (OSL)	
	dark brown	chopper, polyhedron, scraper, endscraper	–	–	–	18 030±100, 23 920±160 (AMS)	
Mansu-ri	yellowish brown	chopper, polyhedron, scraper, endscraper, denticulate	166	–	quartz & quartzite (93.7%)	–	Kim 2011; Lee YJ *et al.* 2009
	brown sandy clay	chopper	1239	–	quartz & quartzite (98%)	–	
	reddish sandy clay	chopper, polyhedron, scraper	309	–	–	52 000±3000 (OSL)	
Nosan-ri	yellowish brown	handaxe, chopper, polyhedron, scraper	1809	radial, polyhedron	quartz (60%), quartzite (27%), porphyry (7%)	–	Lee YJ *et al.* 2011a
	grayish dark	chopper,	116	casual, flat	quartz (64%), quartzite	44 000±4000,	

	brown	polyhedron, scraper, endscraper			(19%), porphyry (14%)	45 000±3000 (OSL)	
	brown sandy clay	handaxe, chopper, polyhedron, scraper, endscraper	474	blocky, flat	quartz (70%), quartzite (16%), porphyry (12%)	48 000±4000, 49 000±4000 (OSL)	
	light brown sand	chopper, scraper, endscraper	254	flat	quartz (91%), quartzite (5%), porphyry (3%)	–	
	gravel layer	chopper	15	blocky, polyhedron	quartz (82%), quartzite (9%), porphyry (8%)	43 000±3000, 43 000±2000 (OSL)	
	light brown	handaxe, pick, chopper, polyhedron, scraper, endscraper, denticulate, notch, awl	1479	polyhedron, flat, radial, casual	quartz (48.65%), quartzite (19.26%), rhyolite (1.1%), granite (3.4%)	29.50±2.92 kyrs BC 28.19±2.98 kyrs BC (OSL), 29 800±1500 (AMS)	
Jeungsan	brown	handaxe, pick, chopper,				29 600±1100 (AMS)	Lee YD *et al.* 2011
	light brown sandy clay	polyhedron, scraper, endscraper, denticulate, notch, point	156	blocky	quartz (38.62%), quartzite (20.33%), granite (2.3%)	49.18±4.08 kyrs B.C. (OSL)	
	dark brown	endscraper	1	–	vein quartz (100%)	23 700±400 (AMS), 41 700±3000 (OSL)	
Usin-ri	reddish brown	chopper, polyhedron,	48	blocky	vein quartz (100%)	44 000±4400 (AMS)	Lee SW *et al.* 2011

		scraper, awl					
	reddish yellow	pick, polyhedron, chopper, scraper, endscraper, notch	210	flat, casual	vein quartz (98%), quartzite (1.5%), sandstone (0.5%)	51 800±3000 (OSL)	
	dark brown	chopper, point, notch, scraper	301	–	quartzite (20%), quartz (70%), basalt (3%)	44 000±1900, 44 300±1500 BC (OSL)	
Jangnamgyo	light brown	handaxe, cleaver, pick, chopper, scraper	423	–	quartzite (23%), quartz (70%), basalt (1%), other (6%)	50 500±4000, 50 600±3000 BC (OSL)	Bae *et al.* 2011
	reddish brown	handaxe, cleaver, pick, chopper, polyhedron, denticulate, scraper	245	–	quartzite (36%), quartz (56%), gneiss (1%), other (6%)	54 800±3000, 55 900±2400 BC (OSL)	

* The actual number of artefacts collected at Jeongok-ri is not available given the more than dozen excavations conducted by different institutions from the late 1970s.

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