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①

471000 ②

100875 ③

471500

33 ~ 31 kaB. P.

33°47'24"N 111°36'28"E 2011 2 ~ 4

512

96

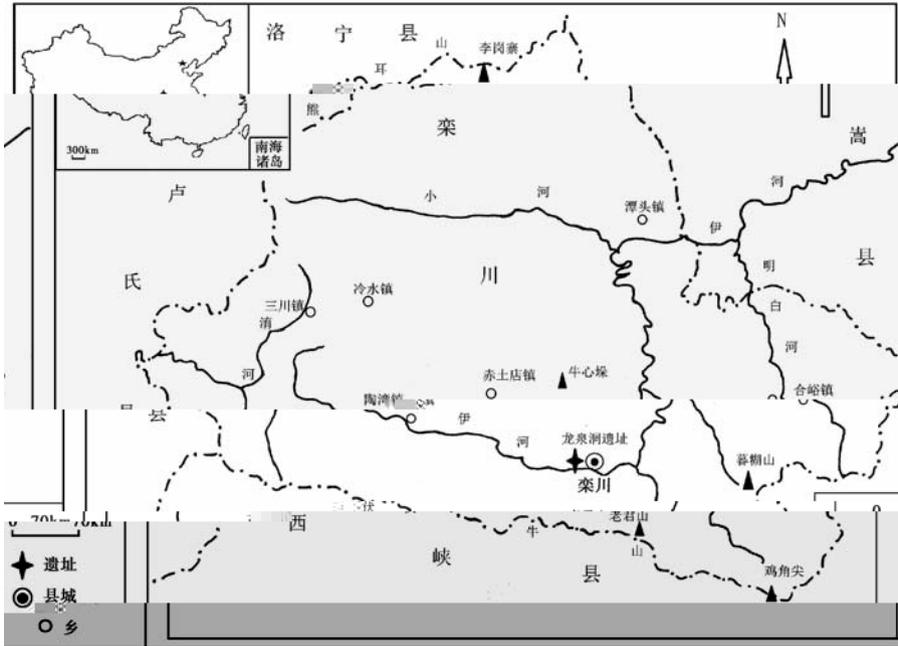
60

73

58

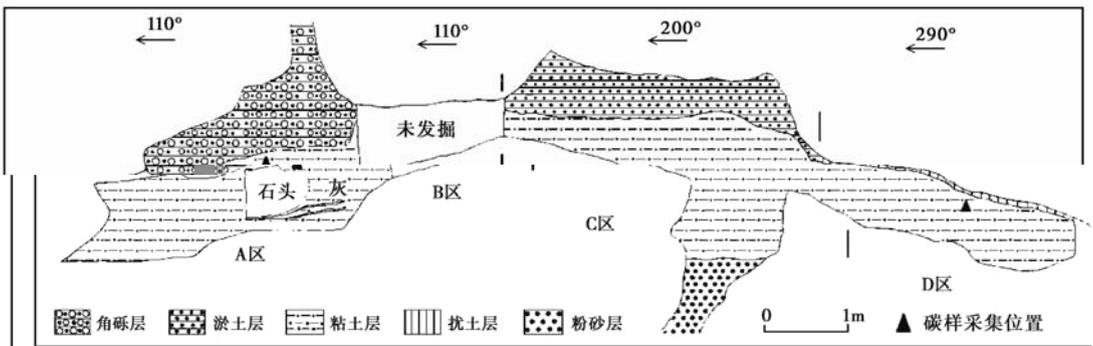
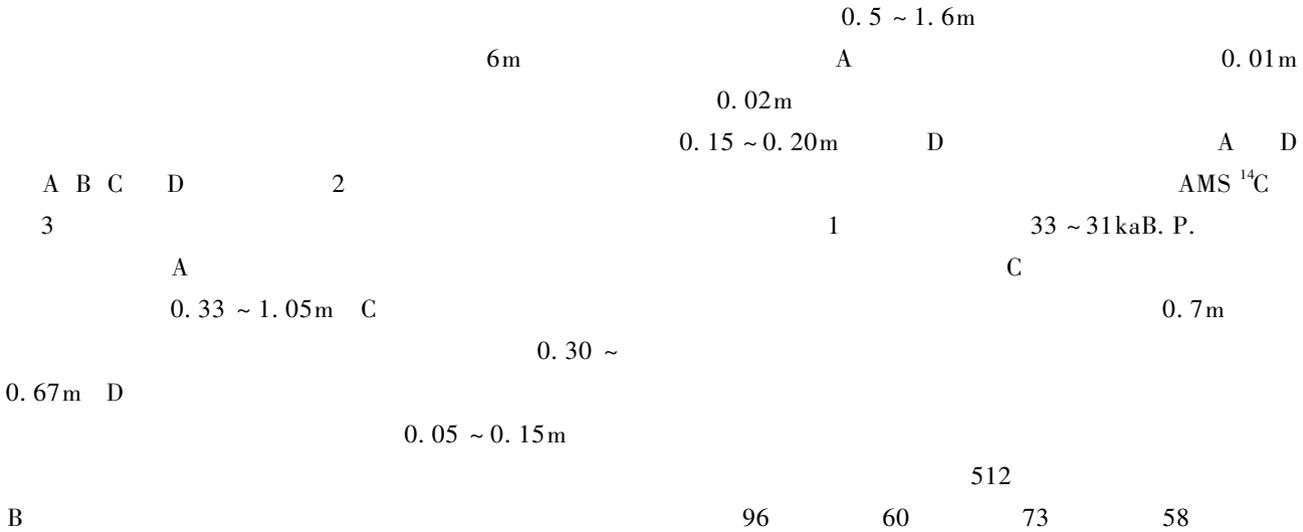
225

30%



1

Fig. 1 Geographic location of Longquan Cave



2

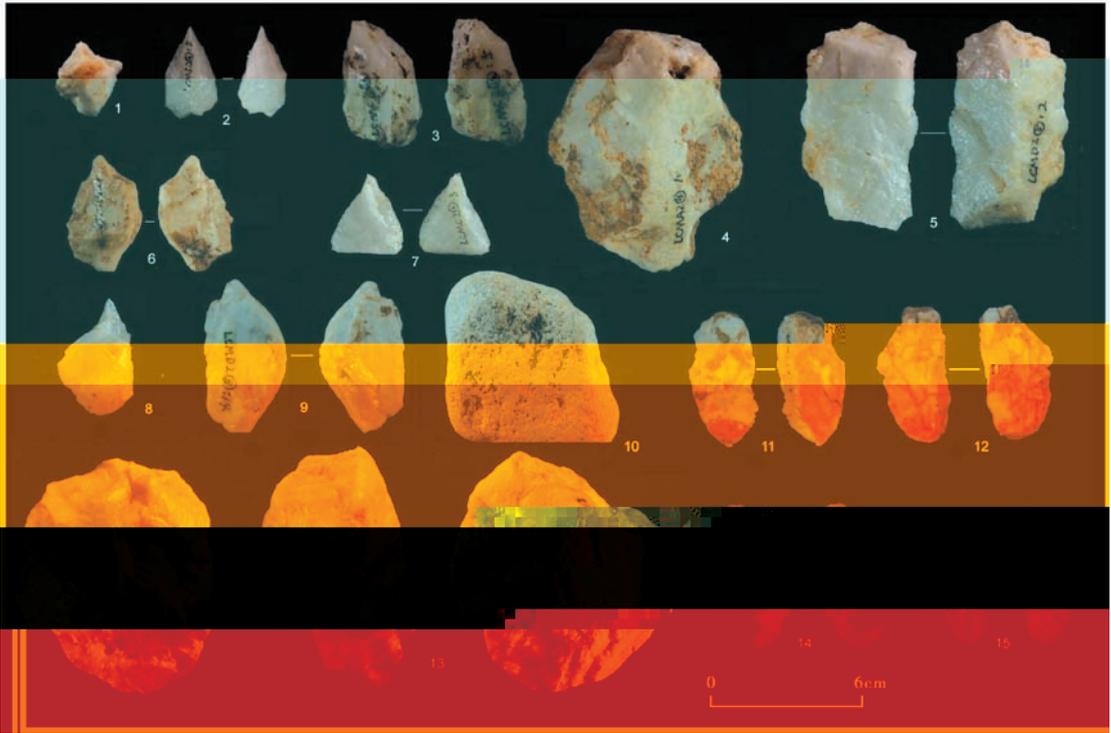
Fig. 2 Section of the Longquan Cave

Table 1 AMS <sup>14</sup>C dating results

Lab		<sup>14</sup> C /kaB. P.	/cal. BC	
			1σ 68.2%	2σ 95.4%
BA110237	LCMA2② 1	26620±210	29308 ~ 29084	29435 ~ 28931
BA110238	LCMD2① 1	28610±170	31376 ~ 30842	31608 ~ 30234
225			2 cm	1327
	2 cm	16854	0.5 cm	

3km

96	18.7%	14
82		
1		
82	85.4%	76



4

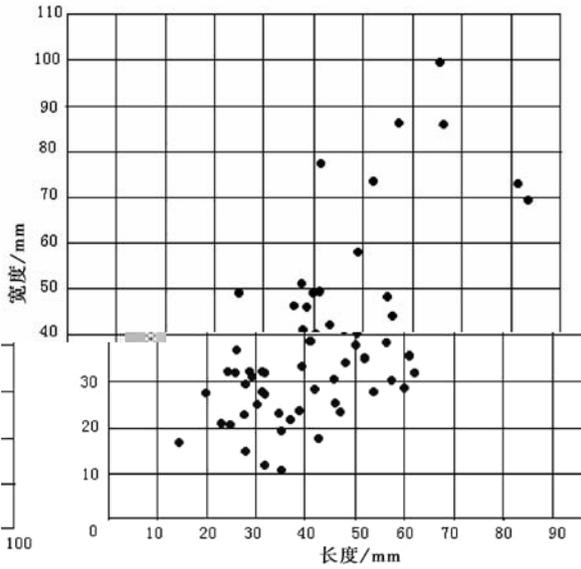
- 1 — LCMA2③ 13    2 — LCMA2⑥ 5    3 — LCMC2⑩ 5    4 — LCMA2④ 10
- 5 — LCMD2⑤ 2    6 — LCMC2⑤ 10    7 — LCMC2⑧ 3    8 — LCMC2④ 2
- 9 — LCMD2⑧ 14    10 — LCMC2⑧ 8    11 — LCMC3① 4    12 — LCMC2② 32
- 13 — LCMD2⑦ 17    14 — LCMD2⑧ 36    15 — LCMC3① 7

Fig. 4 Stone artifacts

					15.6%				
				3		5		8.6%	
60		11.7%	2	7	12.1%	79.3%			
	58				57°	123°			97°
1						9		15.52%	
		54						21	
	32							36.2%	4
12		22.2%		10	6.9%	1/2			17
	18.5%		1	3	29.3%	1/2		16	27.6%
		14.5mm						2	
45.2mm			10.5mm	99.2mm		25			
		37.7mm		5.5mm	2		17	29.3%	
36.7mm		16.1mm		2	41		70.7%	5	
	20	34.5%		38					9
65.5%						53.0%			
	10		11 ~ 20		2		22.2%		
	20					2	22.2%		
	47			19	1	11.1%			
40.4%		16	34%	12	4	44.5%			

Table 2 The main feature of hammering flakes

32	26	27	31	10	48	3	55
55.2%	44.8%	46.6%	53.4%	17.2%	82.8%	5.2%	94.8%



5

Fig. 5 Distribution of the length and width of flakes

4		23.5%		
" "	1		25%	" "
3	75%		4	
	23.5%	" Y "	2	
50%	" Y "	1	25%	1
25%				
LCMD2⑤	2	78.2mm	44.1mm	
29.2mm		×	27.7mm ×	
25.3mm	110°			
50%	Y	3		
			4-5	
2				
2	1		1	
LCMD2⑧	14		61.4mm	
33.3mm	17.1mm			

	225	44.0%		
	212	94.2%	12	5.3%
1	0.5%		8	
	173		6	
9			210	
	169.1mm		13.7mm	
50.9mm			112.1mm	8.0mm
	35.4mm			75.7mm
4.1mm			21.9mm	
	58		11.3%	1
	57			9
1		32		14
2		71.6mm		11.5mm
	35.5mm			65.0mm
8.3mm		28.2mm		34.7mm
	3.2mm		12.8mm	
	73		14.3%	
	1			
	34		33	
20		60.6%		6
	18.2%		7	21.2%
1		14		41.2%
	29.4%	10		29.4%
			14	27
				2
		1	5	
	4		1	2
				13
3		15		2
	1	-		-
				13
5		7		
48.1mm				36.7mm
19.5mm			73°	
	LCMA2④	10		

LCMC2⑩ 5		42.5mm				
27.2mm	20.5mm					
25.3mm		38mm				
	72°	4-3				
3	2					
LCMA2③ 13					30%	
22.8mm	21.2mm	10.9mm				
20.1mm	15.1mm		84°	86°		
	65°		76°			
	4-1					
LCMC2⑤ 10		44.5mm				
26.2mm	14.4mm					
	17.5mm	10.3mm			6	
49°	45°	4-6			-	
4	2					
LCMA2⑥ 5						7
20.4mm	11.7mm					
31.7mm	10.1mm		67°	50°		
	50°			74°	<sup>14</sup> C	26kaB. P.
4-2						
LCMC2⑧ 3		31.6mm				
26.4mm	8.6mm					
27.1mm	32.1mm					
	62°	67°	30°	4-7	28130±1370	28945±1370
5	1					<sup>14</sup> C
LCMC2⑭ 2		43.3mm				
28.5mm	13.7mm					
		19.5mm				
		16.7mm	31.1mm			10
	60°	71°	45°			
	75°	4-8				150m
6	31			5		
16.1%	22	71.0%		4		
12.9%				84.9mm		11
	67.2mm	46.7mm				
LCMC2⑧ 8		65.2mm				
61.5mm	44mm					30kaB. P.
1	36.1mm×35.7mm	4-10				

12

28

25kaB. P.

3

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13 ~ 15

16 ~ 22

25kaB. P.

23

<sup>14</sup>C 24100±500aB. P.

9

24 25

23 ~ 16kaB. P. <sup>26 27</sup>

27

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Longquan Cave is situated in the Longquanshan park in Luanchuan County of Henan Province  $33^{\circ}47'24''$  N and  $111^{\circ}36'28''$  E. It is an upper Paleolithic site. *Qin Li*