

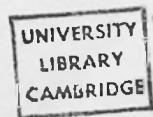
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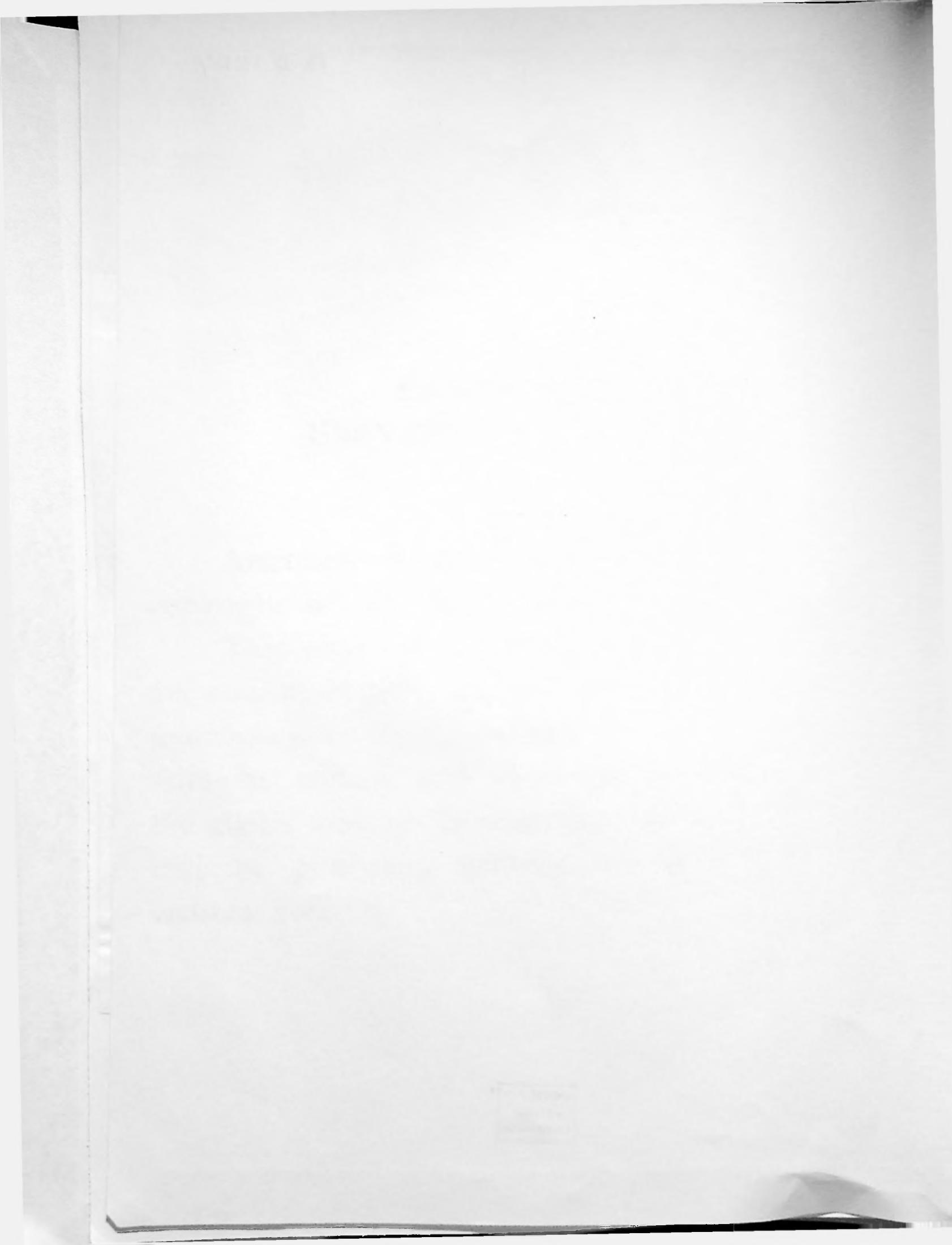
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Ph.D. 10117

VOLUME II





TABLES



Tables 3.I to 3.III are in the text.

and off in one file of 15 soldiers

	<u>Type</u>	<u>Number of graves in which it occurred</u>
1.	Decorated Bell Beaker	98
2.	Decorated Handled Bell Beaker	7
3.	Undecorated Bell Beaker	33
4.	Undecorated Handled Bell Beaker	34
5.	Undecorated Jug	267
6.	Decorated Jug	15
7.	Undecorated Bowl	203
8.	Decorated Bowl	17
9.	Polypod Bowl	20
10.	'Topf'	45
11.	Handled 'Topf'	27
12.	Other vessel (not belonging to any of the defined types)	16
13.	Arrowhead	33
14.	Stone Axe	9
15.	Flint Flake	27
16.	Bone Pendant	10
17.	Copper Awl	12
18.	Copper Dagger	25
19.	Wrist-guard	48
20.	V-perforated Button	22
21.	Bone Awl	6
22.	Animal Bones	28
23.	Ear-rings	5
24.	Copper Sheet	6
25.	Amber Button	8
26.	Amphora	13
27.	Flint Blade	33
28.	Sherds	11
29.	Flint Scraper	11
30.	Boar's Tusk	7
31.	Urn	9
32.	Whetstone	4

Table 3.1V A list of the object types used in the analysis of the grave associations, together with their frequencies.

(A comment on the word 'Topf': there seems to be no really adequate English translation of this German term, although it does in fact describe a quite specific pottery form - see, for example figure 3.1; the German word has therefore been retained.)

the administration of the new world requires us to take a more
liberal and enlightened view of the traditional relationships
of the different classes of society. This is based on the
fact that the different social classes will be influenced by
the same economic and cultural conditions, which is why
they must have a common and harmonious development.

COEFFICIENTS MATRIX

S 2	0.154								
S 3	0.203	0.070							
S 4	0.078	0.209	0.207						
S 5	0.356	0.220	0.290	0.243					
S 6	0.677	0.105	0.060	0.077	0.353				
S 7	0.273	0.222	0.300	0.300	0.673	0.215			
S 8	0.262	0.191	0.055	0.064	0.313	0.063	0.064		
S 9	0.091	0.020	0.121	0.044	0.079	0.059	0.055	0.037	
S 10	0.146	0.000	0.455	0.477	0.178	0.435	0.082	0.089	0.009
S 11	0.071	0.009	0.168	0.166	0.052	0.052	0.049	0.051	0.050
S 12	0.146	0.060	0.093	0.096	0.232	0.235	0.045	0.043	0.047
S 13	0.304	0.087	0.061	0.130	0.441	0.211	0.045	0.051	0.058
S 14	0.425	0.050	0.071	0.160	0.230	0.000	0.117	0.091	0.097
S 15	0.398	0.090	0.102	0.033	0.327	0.104	0.096	0.089	0.149
S 16	0.221	0.000	0.065	0.364	0.084	0.315	0.159	0.075	0.000
S 17	0.139	0.200	0.057	0.112	0.218	0.000	0.177	0.000	0.212
S 18	0.061	0.000	0.000	0.138	0.263	0.107	0.158	0.149	0.000
S 19	0.116	0.140	0.185	0.164	0.077	0.332	0.008	0.271	0.120
S 20	0.342	0.232	0.152	0.242	0.457	0.457	0.202	0.533	0.113
S 21	0.195	0.000	0.030	0.000	0.419	0.000	0.122	0.000	0.000
S 22	0.042	0.000	0.258	0.043	0.067	0.000	0.172	0.000	0.204
S 23	0.204	0.000	0.009	0.099	0.000	0.000	0.000	0.000	0.197
S 24	0.059	0.000	0.133	0.097	0.104	0.104	0.000	0.000	0.000
S 25	0.110	0.000	0.120	0.152	0.085	0.085	0.102	0.043	0.145
S 26	0.526	0.000	0.000	0.115	0.115	0.000	0.000	0.000	0.000
S 27	0.162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S 28	0.253	0.013	0.053	0.237	0.000	0.053	0.115	0.000	0.000
S 29	0.354	0.117	0.100	0.120	0.237	0.079	0.142	0.000	0.000
S 30	0.307	0.000	0.000	0.294	0.000	0.140	0.000	0.097	0.000
S 31	0.450	0.122	0.000	0.092	0.410	0.200	0.155	0.000	0.000
S 32	0.155	0.197	0.050	0.000	0.000	0.000	0.000	0.000	0.000
S 33	0.234	0.000	0.071	0.000	0.173	0.000	0.015	0.000	0.000
S 34	0.061	0.000	0.098	0.000	0.000	0.000	0.000	0.000	0.000
S 35	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S 36	0.523	0.600	0.141	0.000	0.254	0.000	0.150	0.000	0.000
S 37	0.155	0.197	0.050	0.000	0.200	0.000	0.000	0.000	0.000

Table 3.V Matrix of the similarities between the thirty-two object types used in the analysis.



Cycle	Edge removed	Number of clusters	Within-group similarities	Between-group similarities	Total similarity
1	1 - 5 1 - 32	2	32.725	19.212	51.937
2	1 - 5 1 - 32	3	26.285	25.653	51.937
3	1 - 5 1 - 32 5 - 7	4	18.256	33.681	51.937
4	1 - 5 5 - 7 13 - 32 19 - 30	5	16.098	35.839	51.937

Table 3.VI Summary of the groups produced by DMDRIT on the thirty-two Bell Beaker artifact types

the effect of the atmospheric circulation on the seasonal cycle of precipitation in the central Amazon.

The paper is organized as follows. In section 2, we present the data and methods used. In section 3, we describe the seasonal cycles of precipitation and circulation. In section 4, we discuss the results and their implications.

2. Data and methods

Two data sets were used to study the seasonal cycle of precipitation in the central Amazon. One is the monthly precipitation from the Climate Anomaly Monitoring System (CAMS) dataset (IPCC 2007), which is based on the Global Precipitation Climatology Project (GPCP) version 2.3 (Adler et al. 2003).

The second data set is the monthly circulation from the NCEP–DOE reanalysis (Kistner et al. 2008), which is based on the NCEP–DOE reanalysis version 2 (NCEP–DOE 2002).

Both datasets have a resolution of 2° × 2° and a temporal resolution of 1 month. The CAMS dataset covers the period from 1979 to 2005, and the NCEP–DOE dataset covers the period from 1979 to 2004.

In this study, the central Amazon is defined as the area between 5°S and 10°S and 55°W and 70°W, which corresponds to the area where the mean annual precipitation is greater than 1500 mm (Fig. 1).

The seasonal cycle of precipitation is calculated by averaging the monthly precipitation over the central Amazon for each year in the dataset.

The seasonal cycle of circulation is calculated by averaging the monthly circulation over the central Amazon for each year in the dataset.

The seasonal cycle of precipitation and circulation is compared by calculating the correlation coefficient between the seasonal cycle of precipitation and the seasonal cycle of circulation.

The seasonal cycle of precipitation and circulation is also compared by calculating the correlation coefficient between the seasonal cycle of precipitation and the seasonal cycle of circulation.

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Cluster I

- | | | | |
|-----|-----------------------|-----|---------------|
| 1. | Decorated Bell Beaker | 23. | Ear-ring |
| 13. | Arrowhead | 25. | Amber Button |
| 14. | Stone Axe | 28. | Sherds |
| 15. | Flint Flake | 29. | Flint Scraper |
| 17. | Copper Awl | 30. | Boar's Tusk |
| 18. | Copper Dagger | 32. | Whetstone |
| 19. | Wrist-guard | | |

Cluster II

- | | | | |
|-----|---------------------------------|-----|---------------------|
| 2. | Decorated Handled Bell Beaker | 12. | Pot (type unknown) |
| 3. | Undecorated Bell Beaker | 16. | Bone Pendant |
| 4. | Undecorated Handled Bell Beaker | 20. | V-perforated Button |
| 5. | Undecorated Jug | 21. | Bone Awl |
| 6. | Decorated Jug | 22. | Animal Bones |
| 7. | Undecorated Bowl | 24. | Copper Sheet |
| 8. | Decorated Bowl | 26. | Amphora |
| 9. | Polypod Bowl | 27. | Flint Blade |
| 10. | 'Topf' | 31. | Urn |
| 11. | Handled 'Topf' | | |

Table 3.VII A list of the members of the two clusters produced after the first cycle of the program DNDRIT

5. *Technique*

the following information, that will help you to better understand the

methodology of the study, and will help you to better understand the

background

of the study, and will help you to better understand the methodology

of the study.

The following information is provided to help you to better understand the

methodology

of the study, and will help you to better understand the methodology

of the study.

Background

Background information is provided to help you to better understand the

background

of the study, and will help you to better understand the methodology

of the study.

Methodology

The following information is provided to help you to better understand the

methodology

of the study, and will help you to better understand the methodology

of the study.

Conclusion

The following information is provided to help you to better understand the

conclusion

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MODE ANALYSIS

DISTANCE THRESHOLD = AVERAGE OF 2K LARGEST SIMILARITIES

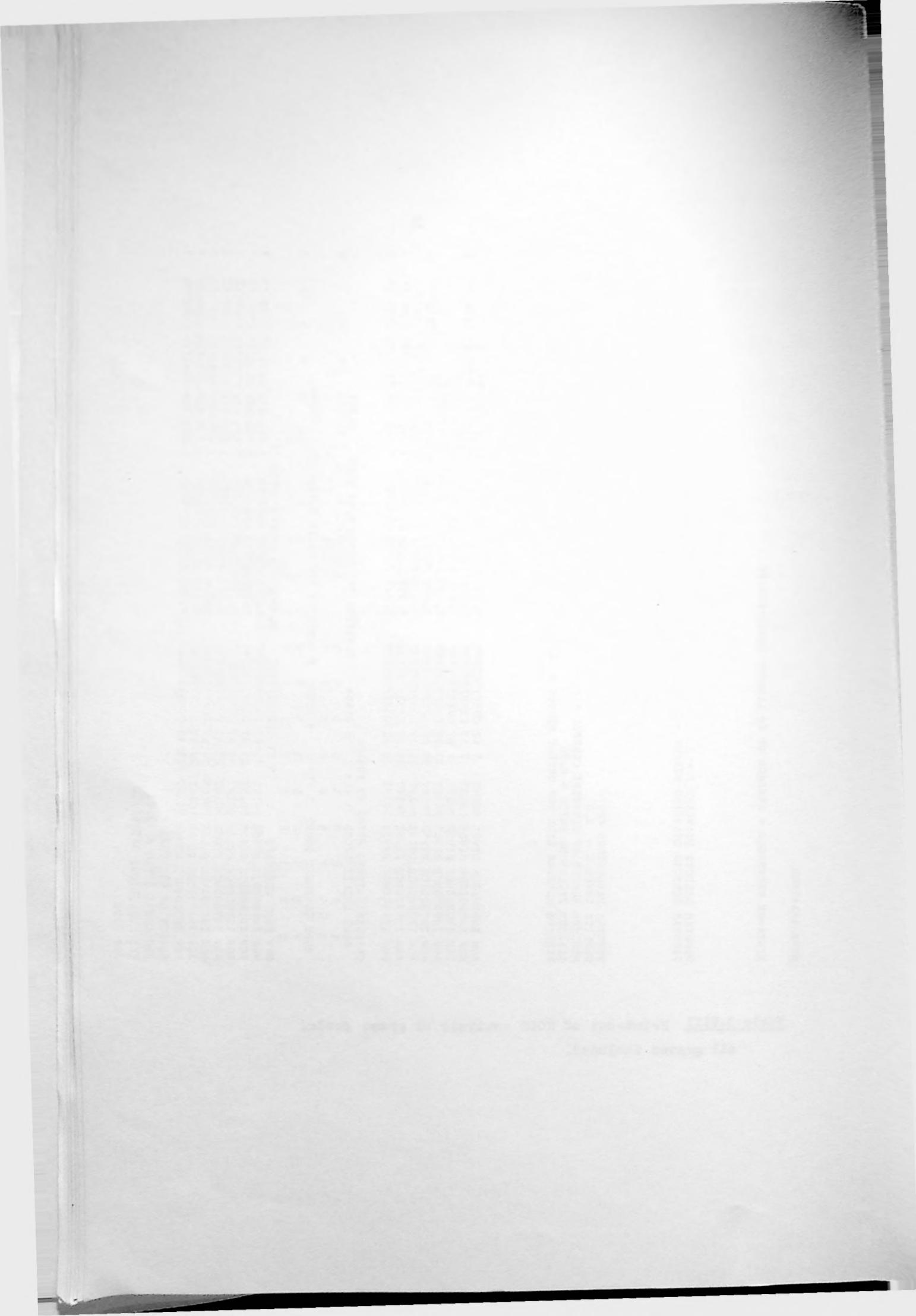
PROGRAM SELCTS STANDARD K = 2
 PROGRAM SELCTS STANDARD MINPUS = 2

PROGRAM PARAMETERS ARE -
 DENSITY LEVEL K = 2.0
 MINIMUM NUMBER OF CLUSTERS CONTROL MINC = 1
 MAXIMUM ENCLOSURE RATIO = 0.00
 MINIMUM CLUSTER SIZE FOR OUTPUT MINPUS = 2

NOW INTRODUCE DENSE POINT 5 AT COEFFICIENT 0.496 AND FORM NEW CLUSTER NUCLEUS 5
 NOW INTRODUCE DENSE POINT 7 AT COEFFICIENT 0.486 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NCW INTRODUCE DENSE POINT 1 AT COEFFICIENT 0.457 AND FORM NEW CLUSTER NUCLEUS 1
 NOW INTRODUCE DENSE POINT 13 AT COEFFICIENT 0.420 AND FORM NEW CLUSTER NUCLEUS 13
 NCW INTRODUCE DENSE POINT 30 AT COEFFICIENT 0.400 JOINS CLUSTER 13 AND NEW CLUSTER CODE IS 13
 NOW INTRODUCE DENSE POINT 32 AT COEFFICIENT 0.398 FORMS CLUSTER 1 FROM FUSION OF CLUSTERS 13
 NCW INTRODUCE DENSE POINT 19 AT COEFFICIENT 0.385 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 10 AT COEFFICIENT 0.381 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5

CLASSIFICATIONS PRIOR TO FUSION
 MODE NUCLEI GROUP 1 KL= 2 B DENSE 2 CLUSTERS ENC RATIO 0.63 COEF . 0.381
 1 0 0 5 0 5 5 0 0 1 1 1 1 1 1 1 1
 5 5 1 5 0 0 5 0 1 1 5 1 1 1 1 1 1
 MODE COMPLETE GROUP 1 KL= 2 B DENSE 2 CLUSTERS ENC RATIO 0.63 COEF 0.381
 1 5 5 5 5 5 5 5 5 5 5 5 1 1 1 1 1 1
 5 5 1 5 5 5 5 1 1 1 5 1 1 1 1 1 1
 NOW FUSE CLUSTERS 1 5 AT COEFFICIENT 0.356, NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 15 AT COEFFICIENT 0.355 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NCW INTRODUCE DENSE POINT 29 AT COEFFICIENT 0.333 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NCW INTRODUCE DENSE POINT 18 AT COEFFICIENT 0.328 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 27 AT COEFFICIENT 0.327 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 14 AT COEFFICIENT 0.326 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NCW INTRODUCE DENSE POINT 20 AT COEFFICIENT 0.316 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 25 AT COEFFICIENT 0.302 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NUMBER OF CLUSTERS = 1
 ENCLOSURE RATIO = 0.82
 END CONDITIONS SATISFIED
 JCB ENDS

Table 3.VIII Print-out of MODE analysis of grave goods,
 all graves included.



Cluster I

- 1. Decorated Bell Beaker
- 13. Arrowhead
- 14. Stone Axe
- 15. Flint Flake
- 18. Copper Dagger
- 19. Wrist-guard
- 23. Ear-ring
- 29. Flint Scraper
- 30. Boar's Tusk
- 32. Whetstone

Cluster II

- 5. Undecorated Jug
- 7. Undecorated Bowl
- 9. Polypod Bowl
- 10. 'Topf'
- 20. V-perforated Button
- 21. Bone Awl
- 22. Animal Bones
- 24. Copper Sheet
- 27. Flint Blade
- 31. Urn

Table 3.IX Members of the two 'nuclei' clusters produced by
program MODE from the 32 object types used in the analysis

L	Leucorrhoea	I	Inflammation
pus	pusular	inflamm	inflammation
dead	deadly	bacteri	bactericidal
body	body	cells	cellular
		inflam	inflammation
deadly	deadly	inflamm	inflammation
body	body	bacteri	bactericidal
		cells	cellular
dead	dead	deadly	deadly
body	body	bacteri	bactericidal
		cells	cellular
deadly	deadly	deadly	deadly
body	body	bacteri	bactericidal
		cells	cellular

of necessary materials "bacteri" out and to produce 100 mg
already out of 100 mg 100 mg 100 mg 100 mg 100 mg

	Bohemia	Moravia
1-grave sites without Cluster 1 goods	22	9
1-grave sites with Cluster 1 and 2 goods	11	12
Total number of 1-grave sites	35	22
Sites without Cluster 1 when 1-grave sites excluded	12	8

Table 3.X Table of 1-grave sites in Bohemia and Moravia

the same time as the other two

and the same time as the other two

NODE ANALYSIS

DISTANCE THRESHOLD = AVERAGE OF 2K LARGEST SIMILARITIES

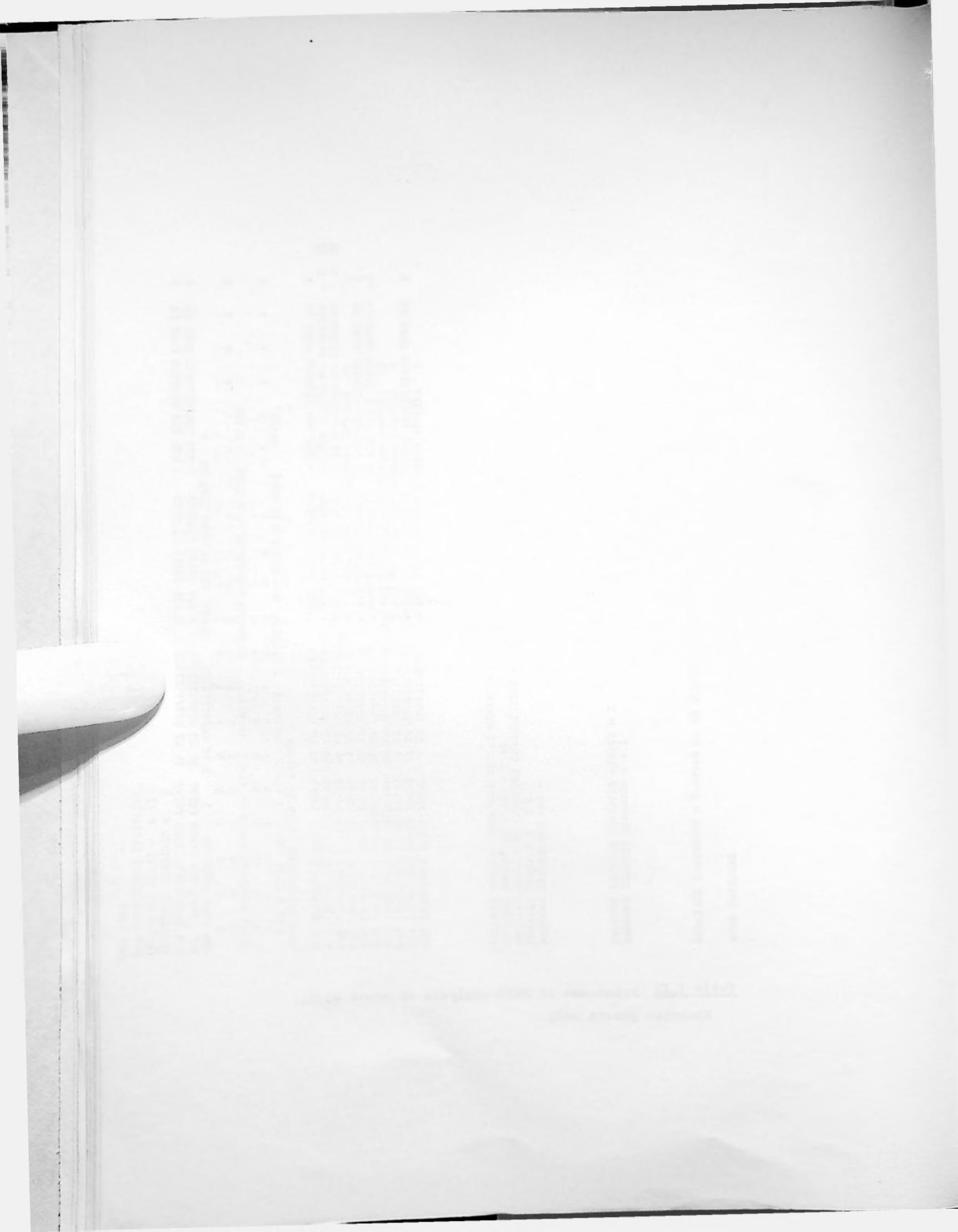
PROGRAM SELECTS STANDARD K = 2
 PROGRAM SELECTS STANDARD MINPUS = 2

PROGRAM PARAMETERS ARE -
 DENSITY LEVEL K = 2.0
 NUMBER OF CLUSTERS CONTROL MINC = 1
 MINIMUM ENCLOSURE RATIO = 0.80
 MINIMUM CLUSTER SIZE FOR OUTPUT MINPUS = 2

NOW INTRODUCE DENSE POINT 5 AT COEFFICIENT 0.567 AND FORM NEW CLUSTER NUCLEUS 5
 NOW INTRODUCE DENSE POINT 6 AT COEFFICIENT 0.520 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 7 AT COEFFICIENT 0.500 AND FORM NEW CLUSTER NUCLEUS 1
 NOW INTRODUCE DENSE POINT 8 AT COEFFICIENT 0.493 AND FORM NEW CLUSTER NUCLEUS 13
 NOW INTRODUCE DENSE POINT 9 AT COEFFICIENT 0.456 JOINS CLUSTER 13 AND NEW CLUSTER CODE IS 13
 NOW INTRODUCE DENSE POINT 10 AT COEFFICIENT 0.448 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 11 AT COEFFICIENT 0.439 AND FORM NEW CLUSTER NUCLEUS 19
 NOW INTRODUCE DENSE POINT 12 AT COEFFICIENT 0.425 FORMS CLUSTER 1 FROM FUSION OF CLUSTERS 19
 NOW INTRODUCE DENSE POINT 13 AT COEFFICIENT 0.422 FORMS CLUSTER 1 FROM FUSION OF CLUSTERS 1
 NOW INTRODUCE DENSE POINT 14 AT COEFFICIENT 0.420 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1

 CLASSIFICATIONS PRIOR TO FUSION
 MODE NUCLEI GROUP 1 KL= 2 10 DENSE 2 CLUSTERS ENC RATIO 0.75 COEF 0.420
 1 5 0 0 5 5 0 5 5 0 1 1 0 1 1 1 5
 5 5 1 0 0 5 0 1 1 5 1 1 1 1 1 1 5
 MODE COMPLETE GROUP 2 KL= 2 10 DENSE 2 CLUSTERS ENC RATIO 0.75 COEF 0.420
 1 5 5 5 5 5 5 5 5 5 1 1 1 1 1 1 5
 5 5 1 1 5 5 5 1 1 5 1 1 1 1 1 1 5
 NOW FUSE CLUSTERS 1 5 AT COEFFICIENT 0.409, NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 16 AT COEFFICIENT 0.409 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 17 AT COEFFICIENT 0.395 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NUMBER OF CLUSTERS = 1
 ENCLOSURE RATIO = 0.82
 END CONDITIONS SATISFIED
 JOB LIMS

Table 3.XI Print-out of NODE analysis of grave goods,
 Moravian graves only.



MODE ANALYSIS

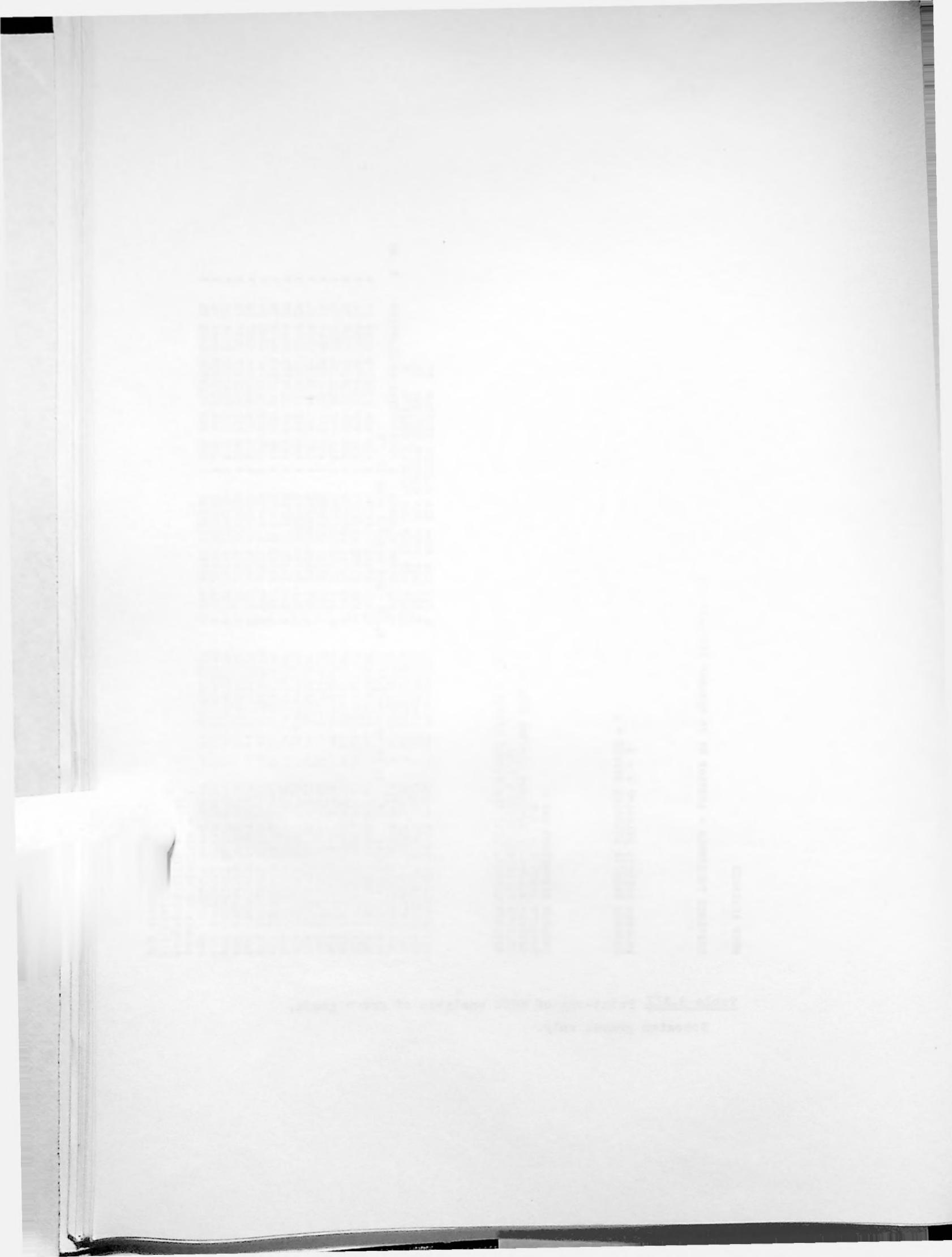
DISTANCE2 THRESHOLD = AVERAGE2 OF 2X LARGEST SIMILARITIES

PROGRAM SELECTS STANDARD K = 2
PROGRAM SELECTS STANDARD MINUS = 2

PROGRAM PARAMETERS ARE -
DENSITY LEVEL K = 2.0
MINIMUM NUMBER OF CLUSTERS CONTROL MINC = 1
MINIMUM ENCLOSURE RATIO = 0.80
MINIMUM CLUSTER SIZE FOR OUTPUT MINUS = 2

NOW INTRODUCE DENSE POINT 31 AT COEFFICIENT 0.547 AND FORM NEW CLUSTER NUCLEUS 31
NOW INTRODUCE DENSE POINT 30 AT COEFFICIENT 0.522 AND FORM NEW CLUSTER NUCLEUS 30
NOW INTRODUCE DENSE POINT 5 AT COEFFICIENT 0.507 AND FORM NEW CLUSTER NUCLEUS 5
NOW INTRODUCE DENSE POINT 7 AT COEFFICIENT 0.505. NEW CLUSTER CODE IS 5
NOW INTRODUCE DENSE POINT 1 AT COEFFICIENT 0.485 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 25 AT COEFFICIENT 0.450 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 19 AT COEFFICIENT 0.448 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 13 AT COEFFICIENT 0.420 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 27 AT COEFFICIENT 0.392 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 14 AT COEFFICIENT 0.372 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 15 AT COEFFICIENT 0.354 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 23 AT COEFFICIENT 0.344 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 24 AT COEFFICIENT 0.341 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 3 AT COEFFICIENT 0.340 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 16 AT COEFFICIENT 0.337 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 18 AT COEFFICIENT 0.333 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 29 AT COEFFICIENT 0.328 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 22 AT COEFFICIENT 0.296 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 10 AT COEFFICIENT 0.286 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NUMBER OF CLUSTERS = 1
ENCLOSURE RATIO = 0.81
END CONDITIONS SATISFIED
JOB ENDS

Table 3.XII Print-out of MODE analysis of grave goods,
Bohemian graves only.



Cluster 1

- | | | | |
|-----|-----------------------|-----|---------------|
| 1. | Decorated Bell Beaker | 19. | Wrist-guard |
| 13. | Arrowhead | 23. | Ear-ring |
| 14. | Stone Axe | 28. | Sherds |
| 15. | Flint Flake | 29. | Flint Scraper |
| 17. | Copper Awl | 30. | Boar's Tusk |
| 18. | Copper Dagger | 32. | Whetstone |

Cluster 2

- | | | | |
|-----|-------------------------------|-----|---------------------|
| 2. | Decorated Handled Bell Beaker | 11. | Handled 'Topf' |
| 5. | Undecorated Jug | 20. | V-perforated Button |
| 6. | Decorated Jug | 21. | Bone Awl |
| 7. | Undecorated Bowl | 22. | Animal Bones |
| 9. | Polypod Bowl | 26. | Amphora |
| 10. | 'Topf' | 31. | Urn |

Table 3.XIII Members of the two 'nuclei' clusters produced by program MODE from the 32 object types used in the analysis. Moravian graves only.

Landmarks

Ward's Island	107	Ward's Island Reservation	107
Ward's Pond	107	Woodlawn Cemetery	107
Ward's Point	107	Woodlawn Reservation	107
Ward's River	107	Woodlawn Reservation	107
Ward's Woods	107	Woodlawn Reservation	107
Ward's Woods	107	Woodlawn Reservation	107

Sightings

Black-headed Gull	107	Common Tern	107
Common Moorhen	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107
Common Tern	107	Common Moorhen	107

of Beaufort capsule 'balloons' not yet to oxidized. ~~1000 ft. off~~
uninhabited island off at base west dockside 50' off shore with oxygen
cylinders and other equipment.

	Bohemia	Moravia	Bohemia	Moravia	Bohemia	Moravia
1.	36	62	12.	11	5	1
2.	5	2	13.	14	19	2
3.	19	14	14.	5	4	6
4.	31	3	15.	9	18	6
5.	115	152	16.	6	4	27.
6.	4	11	17.	4	8	28.
7.	92	111	18.	9	16	29.
8.	4	13	19.	23	25	30.
9.	13	7	20.	5	17	31.
10.	10	35	21.	2	4	32.
11.	12	15	22.	12	16	

Table 3.XIV Numbers of the different grave goods found in Bohemia and Moravia

Alvarado, Antonio de

Alvarado, Antonio de

Alvarez, Pedro

Alvarez, Pedro, son of Pedro Alvarado

MODE ANALYSIS

DISTANCE THRESHOLD = AVERAGE OF 2X LARGEST SIMILARITIES

PROGRAM SELECTS STANDARD K = 2
 PROGRAM SELECTS STANDARD MINPUS = 2

PROGRAM PARAMETERS ARE -
 DENSITY LEVEL K = 2.0
 NUMBER OF CLUSTERS CONTROL MINC = 1
 MINIMUM ENCLOSURE RATIO = 0.80
 MINIMUM CLUSTER SIZE FOR OUTPUT MINPUS = 2

NOW INTRODUCE DENSE POINT 5 AT COEFFICIENT 5 AND TOP NEW CLUSTER NUCLEUS 5
 NOW INTRODUCE DENSE POINT 7 AT COEFFICIENT 0.553 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 32 AT COEFFICIENT 0.549 AND FOR NEW CLUSTER NUCLEUS 32
 NOW FUSE CLUSTERS 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 32 AT COEFFICIENT 0.504. NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 13 AT COEFFICIENT 0.471 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 1 AT COEFFICIENT 0.468 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
 NOW INTRODUCE DENSE POINT 27 AT COEFFICIENT 0.451 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 24 AT COEFFICIENT 0.449 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 25 AT COEFFICIENT 0.419 AND YORY NEW CLUSTER NUCLEUS 25
 NOW INTRODUCE DENSE POINT 16 AT COEFFICIENT 0.413 FORMS CLUSTER 1 FROM FUSION OF CLUSTERS 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 30 AT COEFFICIENT 0.397 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 15 AT COEFFICIENT 0.396 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 21 AT COEFFICIENT 0.387 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 19 AT COEFFICIENT 0.377 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 14 AT COEFFICIENT 0.374 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NOW INTRODUCE DENSE POINT 3 AT COEFFICIENT 0.357 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
 NUMBER OF CLUSTERS = 1
 ENCLOSURE RATIO = 0.92
 END CONDITIONS SATISFIELD
 J60 ENDS

Table 3.XV Print-out of MODE analysis of grave goods, with the graves randomly divided into two halves, Group 1.



MODE ANALYSIS

DISTANCE THRESHOLD = AVERAGE OF 2K LARGEST SIMILARITIES

PROGRAM SUBJECTS STANDARD K = 2
PROGRAM SELECTS STANDARD MINUS = 2

PROGRAM PARAMETERS ARE -

DENSITY LEVEL K = 2.0
MINIMUM NUMBER OF CLUSTERS CONTROL MINC = 1
MINIMUM ENCLOSURE RATIO = 0.80
MINIMUM CLUSTER SIZE FOR OUTPUT MINUS = 2

NOW INTRODUCE DENSE POINT 5 AT COEFFICIENT 0.509 AND FORM NEW CLUSTER NUCLEUS 5
NOW INTRODUCE DENSE POINT 7 AT COEFFICIENT 0.493 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
NOW INTRODUCE DENSE POINT 1 AT COEFFICIENT 0.472 AND FORM NEW CLUSTER NUCLEUS 1
NOW INTRODUCE DENSE POINT 32 AT COEFFICIENT 0.424 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 32 AT COEFFICIENT 0.422 AND FORM NEW CLUSTER NUCLEUS 14
NOW INTRODUCE DENSE POINT 19 AT COEFFICIENT 0.397 FORMS CLUSTER 14 FROM FUSION OF CLUSTERS 14
NOW INTRODUCE DENSE POINT 18 AT COEFFICIENT 0.387 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 13 AT COEFFICIENT 0.346 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
NOW INTRODUCE DENSE POINT 30 AT COEFFICIENT 0.369 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5
NOW INTRODUCE DENSE POINT 26 AT COEFFICIENT 0.369 JOINS CLUSTER 5 AND NEW CLUSTER CODE IS 5

CLASSIFICATION BEFORE TO FUSION MODE NUCLEUS GROUP 1 KL= 2 9 DENSE 2 CLUSTERS ENC RATIO 0.49 COMP 0.450
1 0 0 5 0 5 0 5 0 1 5 0 5 1 1 1 1 5
0 5 1 0 1 5 5 0 1 5 5 1 1 1 1 1 5
NODE COMPLETE GROUP 1 KL= 2 9 DENSE 2 CLUSTERS ENC RATIO 0.69 COMP 0.369
1 5 5 5 5 5 1 5 5 1 5 5 1 1 1 1 5
5 5 1 5 5 5 1 5 5 1 5 5 1 1 1 1 5

NOW INTRODUCE DENSE POINT 15 AT COEFFICIENT 0.368 FORMS CLUSTER 1 FROM FUSION OF CLUSTERS 1
NOW INTRODUCE DENSE POINT 10 AT COEFFICIENT 0.362 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 29 AT COEFFICIENT 0.324 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NOW INTRODUCE DENSE POINT 22 AT COEFFICIENT 0.333 JOINS CLUSTER 1 AND NEW CLUSTER CODE IS 1
NUMBER OF CLUSTERS = 1
ENCLOSURE RATIO = 0.82
END CONDITIONS SATISFIED
JOD ENDS

Table 3.XVI(a) Print-out of MODE analysis of grave goods, with the graves randomly divided into two halves, Group 2.



Cluster 1

- | | | | |
|-----|-----------------------|-----|---------------|
| 1. | Decorated Bell Beaker | 23. | Ear-ring |
| 13. | Arrowhead | 25. | Amber Button |
| 17. | Copper Awl | 29. | Flint Scraper |
| 18. | Copper Dagger | 32. | Whetstone |
| 19. | Wrist-guard | | |

Cluster 2

- | | | | |
|-----|------------------|-----|---------------------|
| 5. | Undecorated Jug | 20. | V-perforated Button |
| 7. | Undecorated Bowl | 22. | Animal Bones |
| 9. | Polypod Bowl | 26. | Amphora |
| 10. | 'Topf' | 27. | Flint Blade |
| 11. | Handled 'Topf' | 30. | Boar's Tusk |
| 14. | Stone Axe | 31. | Urn |
| 16. | Bone Pendant | | |

Table 3.XVI(b) Members of the two 'nuclei' clusters produced by program MODE from the 32 object types used in the analysis, with the graves randomly divided into two halves. Group 2.

Constituents

water	100	Water	100
protein	10	Protein	10
carbohydrate	10	Carbohydrate	10
lipid	10	Lipid	10
minerals	10	Minerals	10

Components

Water	100	Water	100
Protein	10	Protein	10
Carbohydrate	10	Carbohydrate	10
Lipid	10	Lipid	10
Minerals	10	Minerals	10

and protein containing "fibrillar" and "non-fibrillar" components
and water, which can be seen using electron SE and XRD with samples
of ground, ungrounded and dried cellulose fibres.

	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
1.	46	50	12.	8	8	25.
2.	2	5	13.	15	18	24.
3.	17	16	14.	5	4	25.
4.	15	22	15.	10	17	26.
5.	142	124	16.	5	5	27.
6.	6	8	17.	5	7	28.
7.	113	90	18.	10	15	29.
8.	8	9	19.	22	25	30.
9.	12	8	20.	7	15	31.
10.	22	23	21.	3	3	32.
11.	14	13	22.	11	17	

Table 3.XVII Numbers of the different grave goods in randomly divided samples 1 and 2.

Cluster 1

- | | |
|--------------------------|---------------------|
| 1. Decorated Bell Beaker | 5. Undecorated Jug |
| 18. Copper Dagger | 7. Undecorated Bowl |
| 19. Wrist-guard | 9. Polypod Bowl |
| 23. Ear-ring | 10. 'Topf' |
| | 24. Copper Sheet |
| | 27. Flint Blade |

Enclosure ratio 0.49 at coefficient 0.353

Table 3.XVIII Members of the two 'nuclei' clusters produced by program MODE from the 27 object types (five rare types removed from the original total). Bohemian graves only.

Decorated Bell Beakers with continuous zones

Moravia

No Begleitkeramik

1. Blažovice Gr. 14: bowl, jug.
2. Šlapanice (1025) Gr. 16: "Topf", 2 small jugs.
3. Šlapanice (1025) Gr. 13: "Topf", small jug.
4. Šlapanice (1025) Gr. 9: small jug.
5. Šlapanice (1025) Gr. 25-6: Urn, small jug.
6. Šlapanice (1025) Gr. 21: small jug, bowl.
7. Šlapanice (1025) Gr. 38: Bowl, small jug, small vessel.
8. Šlapanice (1025) Gr. 28: Undecorated Bell Beaker, small jug.
9. Svatoborice Gr. 16: Small jug, bowl.
10. Svatoborice Gr. 22: Small jug, bowl.
11. Stražnice Gr. 1: Handled "Topf".
12. Stražnice Gr. 1: Bowl, "Topf".

Table 4.I (a) Associations of decorated Bell Beakers with continuous (i.e. non-metopic) zones. Moravia.

Associations of decorated Bell Beakers with continuous (i.e. non-metopic)



Table 4.I (b)

Decorated Bell Beakers with continuous zones

Bohemia

No Begleitkeramik

Begleitkeramik

1. Žabovřesky Gr. 3: 2 Decorated Bell Beakers, 5 arrowheads, flint scraper, flint blade, 2 flint flakes, boars tusk.
2. Radotín I Gr. 1: Decorated Bell Beaker, flint scraper, copper awl.
3. Neškaredice: Decorated Bell Beaker.
4. Kolin Gr. 1: 2 Decorated Bell Beakers.
5. Cháře I Gr. 2: Decorated Bell Beaker.
6. Sulejovice I Gr. 3: Decorated Bell Beaker, 2 decorated handled Bell Beakers, wrist-guard, 3 arrowheads.
7. Fraha-Bubeneč II Gr. 1: Decorated Bell Beaker, dagger, 2 ear-rings.

1. Bylany I Gr. 2: 4 Decorated Bell Beakers, 3 flint arrowheads, 1 small jug, 1 vessel, 1 flint blade, 2 wrist-guards, smoothing stone.
2. Bylany I Gr. 5: 2 Decorated Bell Beakers, 1 small jug.
3. Kolin VI Gr. 9: Decorated Bell Beaker, 1 jug.
4. Cháře I Gr. 1: Decorated Bell Beaker, bowl, vessel.
5. Praha-Dolní Liboč: Decorated Bell Beaker, jug, undecorated Bell Beaker, flint blade, flint arrowhead, stone axe, whetstone.
6. Rež I Gr. 3: 2 Decorated Bell Beakers, bowl, 2 undecorated Bell Beakers, small jug.
7. Rožďalovice I Gr. 1: 2 Decorated Bell Beakers, 2 small jugs, decorated bowl, amber pendant.
8. Lysolaje III Gr. 1: 2 Decorated handled Bell Beakers, 2 copper ear-rings, jug, small jug, 'Topf', copper awl.



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Table 4.I (b)
(continued)

Decorated Bell Beakers with continuous zones

<u>Bohemia</u>	<u>No Begleitkeramik</u>	<u>Begleitkeramik</u>
		<p>9. Kolin VI Gr. 12: Decorated Bell Beaker, 2 small jugs, flint axe.</p> <p>10. Tisice I Gr. 2: 3 Decorated Bell Beakers, bowl.</p> <p>11. Praha Krc II Gr. 1: Decorated Bell Beaker, handled 'Topf'.</p> <p>12. Lysolaje III Gr. 1: Decorated handled Bell Beaker, small jug, jug, bowl, 2 copper ear-rings.</p>

Table 4.I (b) Associations of decorated Bell Beakers with continuous (i.e. non-metopic)
zones. Bohemia.

1964) and the corresponding 1964-1965 (1965) and 1965-1966 (1966) data sets.

The first two data sets were collected by the U.S. Fish and Wildlife Service.

The third data set was collected by the U.S. Fish and Wildlife Service.

The fourth data set was collected by the U.S. Fish and Wildlife Service.

The fifth data set was collected by the U.S. Fish and Wildlife Service.

The sixth data set was collected by the U.S. Fish and Wildlife Service.

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The eighth data set was collected by the U.S. Fish and Wildlife Service.

The ninth data set was collected by the U.S. Fish and Wildlife Service.

The tenth data set was collected by the U.S. Fish and Wildlife Service.

The eleventh data set was collected by the U.S. Fish and Wildlife Service.

The twelfth data set was collected by the U.S. Fish and Wildlife Service.

The thirteenth data set was collected by the U.S. Fish and Wildlife Service.

The fourteenth data set was collected by the U.S. Fish and Wildlife Service.

The fifteenth data set was collected by the U.S. Fish and Wildlife Service.

The sixteenth data set was collected by the U.S. Fish and Wildlife Service.

The seventeenth data set was collected by the U.S. Fish and Wildlife Service.

The eighteenth data set was collected by the U.S. Fish and Wildlife Service.

The nineteenth data set was collected by the U.S. Fish and Wildlife Service.

The twentieth data set was collected by the U.S. Fish and Wildlife Service.

The twenty-first data set was collected by the U.S. Fish and Wildlife Service.

The twenty-second data set was collected by the U.S. Fish and Wildlife Service.

The twenty-third data set was collected by the U.S. Fish and Wildlife Service.

The twenty-fourth data set was collected by the U.S. Fish and Wildlife Service.

The twenty-fifth data set was collected by the U.S. Fish and Wildlife Service.

The twenty-sixth data set was collected by the U.S. Fish and Wildlife Service.

The twenty-seventh data set was collected by the U.S. Fish and Wildlife Service.

The twenty-eighth data set was collected by the U.S. Fish and Wildlife Service.

Name	Type of site	Decorated Bell Beaker sherds	Others
Bedřichovice	Pit(s)	2	over 30
Brno-Bosonohy	Pit	2	26
Brno-Medlanky	Pit	+	+
Brno-Obrány	Pit	1	c.500-600
Čechůvky	'Culture layer'	8	3
Dolní Sukolom	Pit 1	9	48
	Pit 2	7	29
Klobouky 1	Pit	2	5 (only these survive)
Klobouky 2	Pit 1	-	+
	Pit 2	-	+
	Pit 3	14	over 18
Mostkovice	Pit 1	+	+
	Pit 2	-	+
Rajhrad	Pit	-	47
Střelice 'Klobouček'	Pits surviving in museum	+	+
		5	16
Slapanice	Pit	+	+
Lazce	Pit	+	+
Těšetice	Pit	8	22
Určice 1	Pit	+	+
Určice 2	Pit	-	4
Vanovice	Pit	+	+
Vrahovice	Pit surviving in museum	+	+
		4	8
Želechovice	Pit	+	+
Želešice	Pit	8	over 10

Table 4.II Summary description of adequately reported Bell Beaker culture settlements from Moravia. The numbers refer to the number of sherds present; the + sign simply indicates the presence of the type.

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indicates that between Kibbutzim to establish equal rights of all
to receive equal political influence or that their right to have private
and public property and personal rights - will be protected through
laws of the State of Israel.

Cluster 1

Site	Grave
Letonice 1	3
Marefy 1	1
Marefy 1	5
Němcice 2	4
Němcice 2	4
Hrubčice 2	2
Kobylnice 1	13

Cluster 1

Site	Grave
Brankovice 1	2
Šlapanice 7	41
Holešov 1	5
Holešov 1	6
Holešov 1	7
Tešetice 1	1
Tešetice 1	1

Others

Site	Grave
Slavkov 4	5
Němcice 2	1
Němcice 2	1
Kobylnice 1	5
Kobylnice 1	20
Kobylnice 1	23
Šlapanice 7	5
Šlapanice 7	2
Šlapanice 7	35
Brno-Julianov 3	1
Holešov 1	8
Příkasy 1	1

Others

Site	Grave
Postoupky 1	1
Postoupky 1	1
Chrlice 1	2
Chrlice 1	2
Chrlice 1	3
Chrlice 1	3
Senice 1	

Table 4.III Provenances of the 38 Moravian jugs for which drawings were available.

	Latin	Meaning	Latin	Meaning
1.	admirabilis	admirable	2.	admirabilis
3.	admirabilis	admirable	4.	admirabilis
5.	admirabilis	admirable	6.	admirabilis
7.	admirabilis	admirable	8.	admirabilis
9.	admirabilis	admirable	10.	admirabilis
11.	admirabilis	admirable	12.	admirabilis
13.	admirabilis	admirable	14.	admirabilis
15.	admirabilis	admirable	16.	admirabilis
17.	admirabilis	admirable	18.	admirabilis
19.	admirabilis	admirable	20.	admirabilis
21.	admirabilis	admirable	22.	admirabilis
23.	admirabilis	admirable	24.	admirabilis
25.	admirabilis	admirable	26.	admirabilis
27.	admirabilis	admirable	28.	admirabilis
29.	admirabilis	admirable	30.	admirabilis
31.	admirabilis	admirable	32.	admirabilis
33.	admirabilis	admirable	34.	admirabilis
35.	admirabilis	admirable	36.	admirabilis
37.	admirabilis	admirable	38.	admirabilis
39.	admirabilis	admirable	40.	admirabilis
41.	admirabilis	admirable	42.	admirabilis
43.	admirabilis	admirable	44.	admirabilis
45.	admirabilis	admirable	46.	admirabilis
47.	admirabilis	admirable	48.	admirabilis
49.	admirabilis	admirable	50.	admirabilis
51.	admirabilis	admirable	52.	admirabilis
53.	admirabilis	admirable	54.	admirabilis
55.	admirabilis	admirable	56.	admirabilis
57.	admirabilis	admirable	58.	admirabilis
59.	admirabilis	admirable	60.	admirabilis
61.	admirabilis	admirable	62.	admirabilis
63.	admirabilis	admirable	64.	admirabilis
65.	admirabilis	admirable	66.	admirabilis
67.	admirabilis	admirable	68.	admirabilis
69.	admirabilis	admirable	70.	admirabilis
71.	admirabilis	admirable	72.	admirabilis
73.	admirabilis	admirable	74.	admirabilis
75.	admirabilis	admirable	76.	admirabilis
77.	admirabilis	admirable	78.	admirabilis
79.	admirabilis	admirable	80.	admirabilis
81.	admirabilis	admirable	82.	admirabilis
83.	admirabilis	admirable	84.	admirabilis
85.	admirabilis	admirable	86.	admirabilis
87.	admirabilis	admirable	88.	admirabilis
89.	admirabilis	admirable	90.	admirabilis
91.	admirabilis	admirable	92.	admirabilis
93.	admirabilis	admirable	94.	admirabilis
95.	admirabilis	admirable	96.	admirabilis
97.	admirabilis	admirable	98.	admirabilis
99.	admirabilis	admirable	100.	admirabilis

Handwriting sample no. 10, which can be compared with the samples given above.

Handwriting sample

BANK	FIRST GROUP	SECOND GROUP	FIRST GROUP	SECOND GROUP
	VALUES	VALUES	ITEM NO.	ITEM NO.
1	-0.17332		6	9
2		-0.18052		
3	-0.18230		9	
4	-0.18895		3	
5		-0.19101		20
6	-0.20472		1	
7	-0.21117		11	
8	-0.21395		7	
9		-0.21740		6
10	-0.22196		13	
11	-0.22400		8	
12	-0.22922		2	
13	-0.23224		4	
14	-0.23455		10	
15		-0.23966		8
16		-0.24056		13
17		-0.25384		11
18	-0.25914		5	
19		-0.26445		19
20		-0.26788		5
21		-0.27423		23
22		-0.27455		22
23		-0.29269		2
24		-0.28379		12
25	-0.28541		14	
26		-0.28561		14
27		-0.28754		16
28		-0.28792		15
29		-0.28942		18
30		-0.28990		7
31	-0.29510		12	
32		-0.29811		1
33		-0.29929		4
34		-0.30143		3
35		-0.30398		21
36		-0.30512		10
37		-0.30632		24
38		-0.33449		17

Table 4.IV Moravian jugs ranked on the discriminant function.

The left hand group is those jugs associated with
'Cluster 1' goods, the right hand group is the
remainder.

GROUP	NUMBER OF CASES CLASSIFIED INTO GROUP -		
	A	X	Y
A	11	1	2
X	1	8	3
Y	3	3	6

Table 4.V Classification matrix produced by discriminant analysis for the three groups of Moravian jugs.



'Cluster 1' jugs

Group	Site	Number of vessels
A	Šlapanice	1
B	Kobylnice	1
C	Nemčice	2
D	Holešov	3
E	Těšetice	2
F	Marefy	2
G	Others	3

Other jugs

Group	Site	Number of vessels
S	Chrlice	5
T	Senice	5
U	Šlapanice	3
V	Kobylnice	3
W	Nemčice	2
X	Holešov	1
Y	Postoupký	2
Z	Others	3

Table 4.VI Moravian jugs divided by site and association for canonical analysis.

100% 100%

100% 100%

1

100%
100%
100%
100%
100%
100%
100%
100%

100% 100%

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100% 100%
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100% 100%

FIGURE VALUES

8.23	0.64	0.63	0.18	0.06	0.03	0.02	0.01	0.00	0.00
------	------	------	------	------	------	------	------	------	------

PERCENTAGE VARIANCE

82.34	8.40	6.30	1.84	0.57	0.27	0.19	0.07	0.05	0.03
-------	------	------	------	------	------	------	------	------	------

CUMULATIVE VARIANCE

82.34	90.73	97.02	98.85	99.42	99.68	99.86	99.93	99.98	100.00
-------	-------	-------	-------	-------	-------	-------	-------	-------	--------

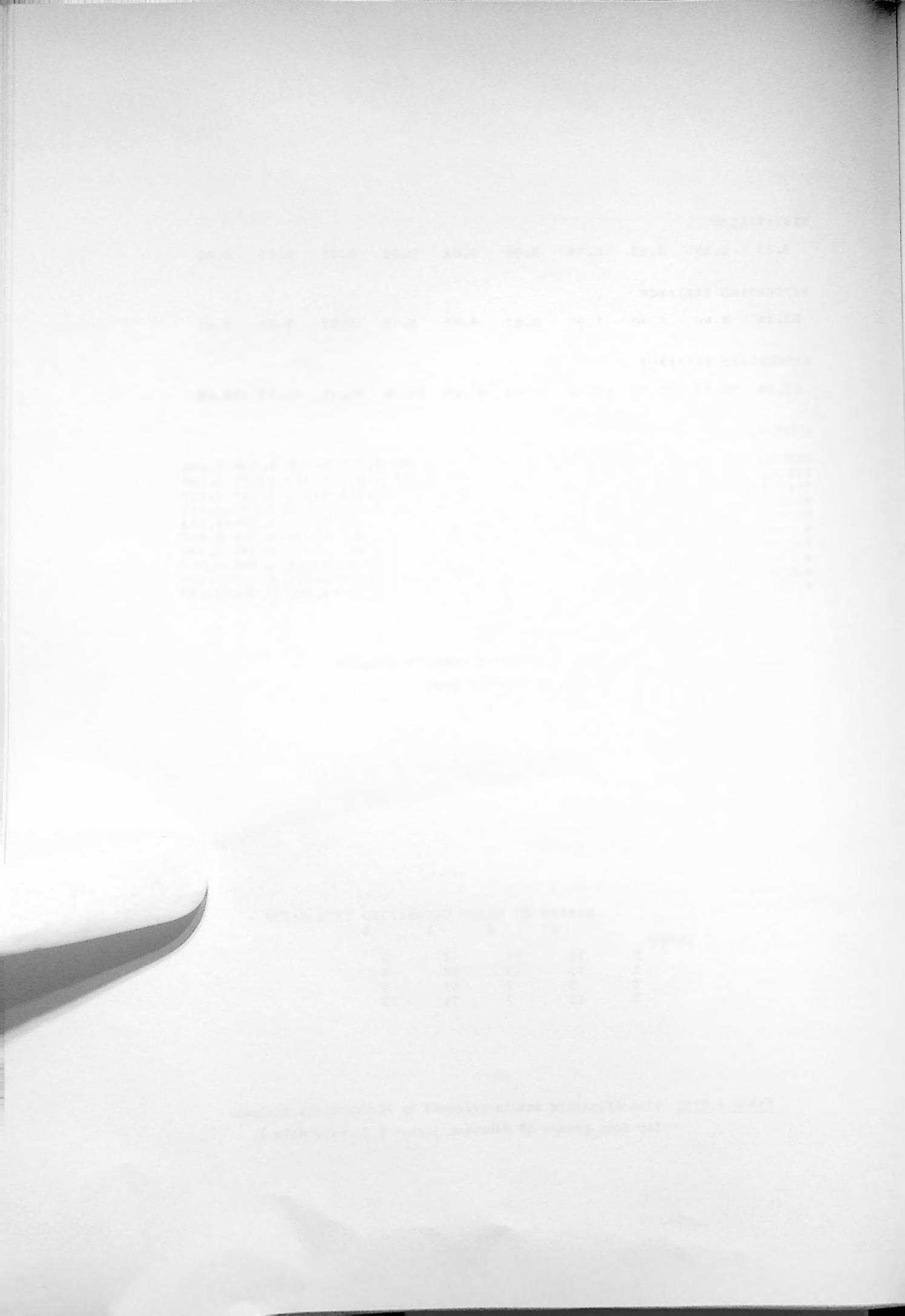
EIGENVECTORS - BY ROWS

VECTOR 1	0.286	0.311	0.331	0.336	0.328	0.332	0.333	0.330	0.319	0.246
VECTOR 2	-0.601	-0.484	-0.366	-0.004	0.258	0.261	0.245	0.253	0.212	0.087
VECTOR 3	0.025	-0.045	-0.025	-0.191	-0.213	-0.174	-0.155	-0.111	0.301	0.869
VECTOR 4	0.190	0.060	-0.152	-0.321	-0.345	-0.192	0.148	0.429	0.557	-0.335
VECTOR 5	-0.365	0.029	0.285	0.479	-0.050	-0.236	-0.512	-0.136	0.521	-0.193
VECTOR 6	-0.476	0.155	0.604	-0.246	-0.428	0.117	0.310	0.030	-0.164	0.047
VECTOR 7	0.077	-0.256	-0.054	0.545	-0.392	-0.342	0.141	0.472	-0.315	0.130
VECTOR 8	-0.216	0.510	-0.180	-0.058	0.377	-0.617	0.245	0.080	-0.102	0.067
VECTOR 9	0.074	-0.019	-0.224	0.267	-0.241	-0.031	0.628	-0.610	0.207	-0.064
VECTOR 10	0.221	-0.559	0.489	-0.191	0.389	-0.431	0.204	-0.102	0.054	-0.037

Table 4.VII Results of the principal components analysis
carried out on the Moravian jugs.

GROUP	NUMBER OF CASES CLASSIFIED INTO GROUP -			
	A	X	Y	Z
L	30	11	7	9
X	13	10	18	4
Y	9	8	19	9
Z	15	7	11	13

Table 4.VIII Classification matrix produced by discriminant analysis
for four groups of Moravian jugs. (3 ratio data).

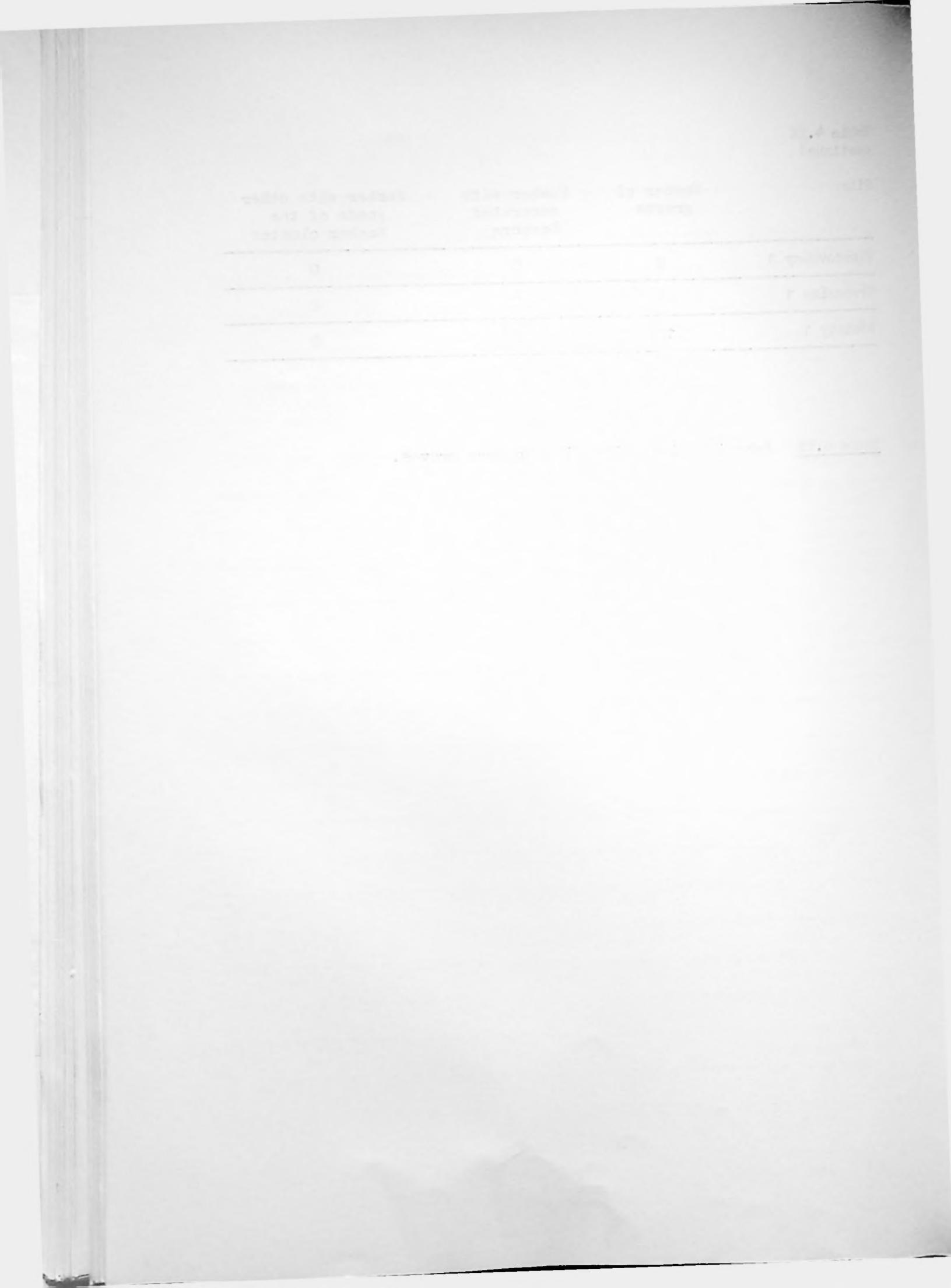


Site	Number of graves	Number with decorated Beakers	Number with other goods of the Beaker cluster
Bilina 6	5	0	1
Brandyšek 1	22	2	3
Bylany 1	6	3	2
Ďáblice 1	over 14	0	0
Dolní Chabry 1	6	2	0
Chrast 2	5	0	2
Jenčice 1	8	0	0
Kněževes 1	13	0	0
Kolin 6	13	6	2
Libochovice 2	7	0	1
Lochenice 1	6	1	3
Lovosice 1	10	3	1
Lovosice 4	11	3	0
Lysolaje 3	25	7	6
Most 5	7	1	0
Neratovice 1	24	6	4
Ohrada 1	7	0	0
Postoloprty 3	5	0	1
Praha 6-Dejvice	5	0	0
Praha 8-Kobylisy	6	0	0
Praha 8-Liben	6	0	0
Praha 10-Vršovice	6	0	2
Řež 1	9	1	1
Svobodné Dvory 1	9	1	5
Tisice 1	11	3	0

Table 4.IX
continued

Site	Number of graves	Number with decorated Beakers	Number with other goods of the Beaker cluster
Tlustovousy 1	9	0	0
Třebusice 1	6	0	0
Všetaty 1	10	2	0

Table 4.IX Bohemian sites with five or more graves.



		Base point			
		Bell Beaker	No Bell Beaker		
		A	B		
Bell Beaker	A	4		9	13
Nearest Neighbour	No Bell Beaker		9	5	14
		13		14	27

Table 4.X

Bohemian Bell Beaker cemeteries divided into those containing decorated Bell Beakers and those without. Contingency table shows for every site whether its nearest neighbour contained a decorated Bell Beaker or not.

1930-1931
1931-1932
1932-1933
1933-1934
1934-1935
1935-1936
1936-1937
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1938-1939
1939-1940
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1941-1942
1942-1943
1943-1944
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2093-2094
2094-2095
2095-2096
2096-2097
2097-2098
2098-2099
2099-20100

Name	Type of site	Total sherds	Decorated Bell Beaker sherds	Others
Bzany	Pit			+
Chudonice	Pit	475	+	+
Jenštejn	Pit		1	+
Kolin	12 Pits		+	+
		(in 3 of pits)		
Kozly	Pits and post-holes	164	11	153
Lovosice	Pit 1		+	+
	Pit 2			+
	Pit 3			+
Lysolaje	Pit 1		+	+
Nebovidy	Pit		1	+
Popovice	?		2	+
Poričany	Pit		+	+
Praha 8-Kobylysy	Pit			+
Praha 10-Hoštivar	Pit		+	+
Semice	Pit		+	+
Vranany	Pit		+	+

Table 4.XI Summary description of adequately reported Bell Beaker culture settlements from Bohemia. The numbers refer to the number of sherds present; the + sign simply indicates the presence of the type.

negative and negative evidence in addition to positive evidence all provide both converging and divergent evidence + the memory should be tested and retested until there is no evidence left unexplored.

Table 4.XII Provenances of the 65 Bohemian jugs for which drawings were available

Cluster 1

Site	Grave
Roždalovice 1	1
Roždalovice 1	1
Řež 1	3
Řež 1	3
Řež 1	3
Lysolaje 3	6
Lysolaje 3	6
Bylany 1	2

Cluster 1

Site	Grave
Bylany 1	5
Rosnice 1	1
Rosnice 1	2
Brandyšek 1	19
Brandyšek 1	22
Brandyšek 1	71
Brandyšek 1	71
Trébovle 1	1

Others

Site	Grave
Řež 1	4
Řež 1	5
Řež 1	5
Řež 1	7
Neratovice 1	9
Neratovice 1	9
Neratovice 1	3
Neratovice 1	13
Neratovice 1	12
Neratovice 1	12
Neratovice 1	11
Brandyšek 1	18
Brandyšek 1	20
Brandyšek 1	25
Brandyšek 1	67
Tlustovousy 1	6
Tlustovousy 1	8
Kolín-Zálabí 1	1
Kolín-Zálabí 1	2
Kolín-Zálabí 1	3
Libochovice 1	7
Bílina 8	1
Losanky 1	1
Poborí 1	1
Trébovle 1	1

Others

Site	Grave
Kněževes 1	12
Kněževes 1	4
Kněževes 1	8
Kněževes 1	11
Kněževes 1	11
Kněževes 1	5
Kněževes 1	6
Kněževes 1	11
Dáblíce 1	5
Dáblíce 1	6
Dáblíce 1	2
Dáblíce 1	4
Dáblíce 1	14
Dáblíce 1	11
Dáblíce 1	12
Kolín 6	1
Lysolaje 3	2
Praha-Notol 1	1
Polepy 1	1
Most 5	6
Ohrada 1	2
Trébešice 1	1

GROUP	NUMBER OF CASES CLASSIFIED INTO GROUP -			
	A	X	Y	Z
A	9	4	2	1
X	3	5	5	3
Y	2	2	10	2
Z	3	5	1	8

Table 4.XIII Classification matrix produced by discriminant analysis on four groups of Bohemian jugs.
 (12 ratio data).



'Cluster 1' jugs

<u>Group</u>	<u>Site</u>	<u>Number of vessels</u>
A	Řež	3
B	Rožďalovice	2
C	Lysolaje	2
D	Bylany	2
E	Brandýsek	4
F	Rosnice	2
G	Others	1

Other jugs

<u>Group</u>	<u>Site</u>	<u>Number of vessels</u>
R	Řež	4
S	Kněževs	8
T	Lysolaje	1
U	Neratovice	7
V	Dáblíce	10
W	Brandýsek	4
X	Tlustovousy	2
Y	Kolin-Zálabi	3
Z	Others	10

Table 4.XIV Bohemian jugs divided by site and association for canonical analysis.

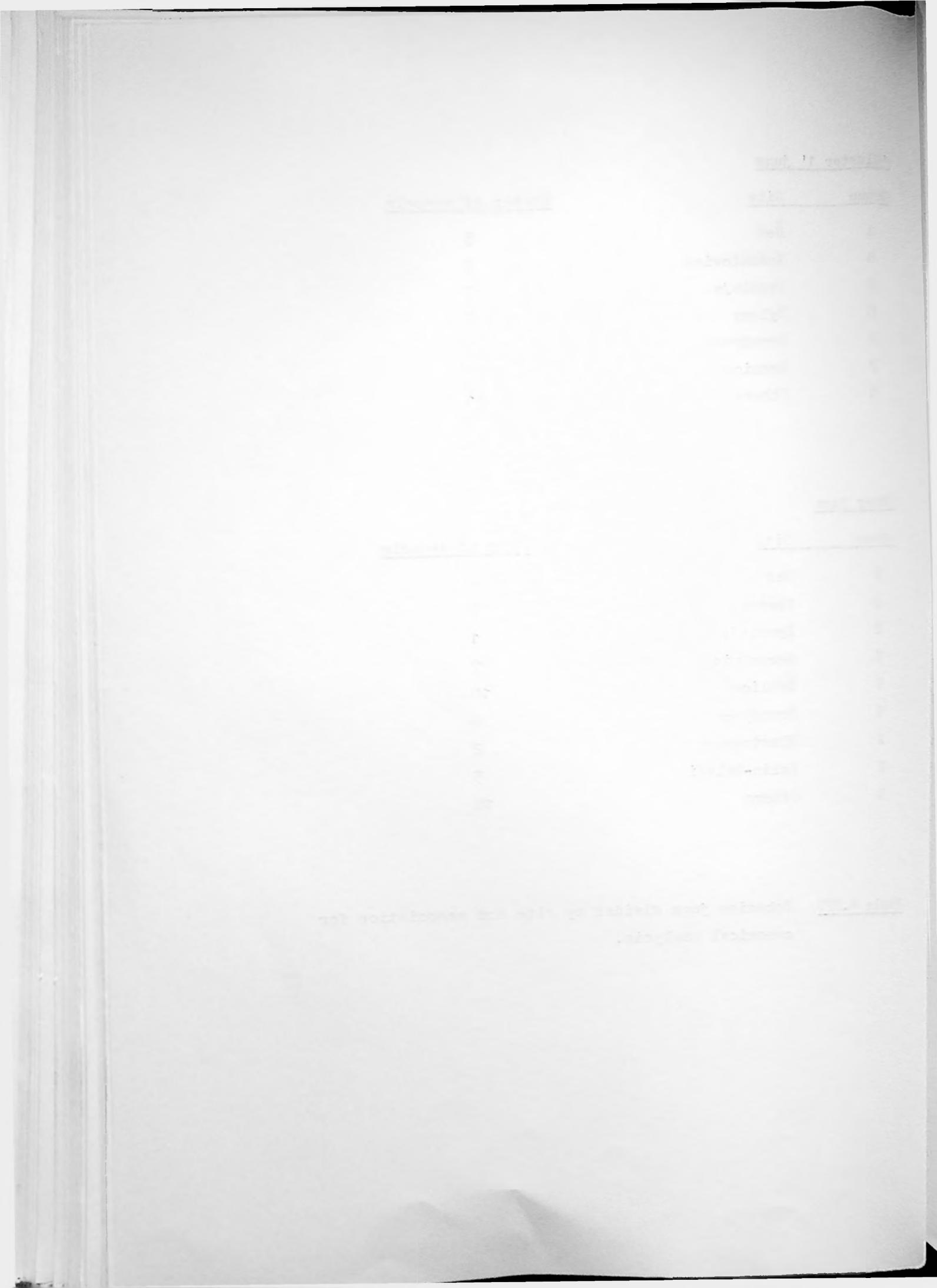


Table 5.I Results of tests on the significance of the difference between the mean number of types/goods in a) those graves with 'cluster 1' goods and those without and b) those graves with decorated Bell Beakers and those without.

5.I ai. Mean number of types.

N_1 Number of graves with 'cluster 1' goods = 90

N_2 Number of graves without 'cluster 1' goods = 110

$$\bar{X}_1 = 4.03 \pm 4.19$$

$$\bar{X}_2 = 2.31 \pm 2.51$$

$$t = 3.41 \text{ w. } 198 \text{ df}$$

Significant at the 0.0005 level for a 1 tailed test.

5.Ia ii Mean number of goods

N_1 Number of graves with 'cluster 1' goods = 90

N_2 Number of graves without 'cluster 1' goods = 110

$$\bar{X}_1 = 6.40 \pm 8.08$$

$$\bar{X}_2 = 3.26 \pm 3.67$$

$$t = 3.46 \text{ w. } 198 \text{ df}$$

Significant at the 0.0005 level for a 1 tailed test.

5.Ib i Mean number of types

N_1 = Number of graves with decorated Bell Beakers = 71

N_2 = Number of graves without decorated Bell Beakers = 129

$$\bar{X}_1 = 4.12 \pm 4.48$$

$$\bar{X}_2 = 2.51 \pm 2.81$$

$$t = 2.74 \text{ w. } 112 \text{ df}$$

Significant at the 0.005 level for a 1 tailed test.

opposition and the population are easier to influence.

Right now we would be inclined to believe most anti-war and peace folks would be the people most likely to turn out. People would turn out because they

want to reduce taxes.

PS = about 1/2 million people in medium.

PSI = about 1/2 million people in large.

PSII = about 1/2 million people in very large.

PSIII = about 1/2 million people in largest.

PSIV = about 1/2 million people in largest.

PSV = about 1/2 million people in largest.

PSVI = about 1/2 million people in largest.

PSVII = about 1/2 million people in largest.

PSVIII = about 1/2 million people in largest.

PSIX = about 1/2 million people in largest.

PSXI = about 1/2 million people in largest.

PSXII = about 1/2 million people in largest.

PSXIII = about 1/2 million people in largest.

PSXIV = about 1/2 million people in largest.

PSXV = about 1/2 million people in largest.

PSXVI = about 1/2 million people in largest.

PSXVII = about 1/2 million people in largest.

PSXVIII = about 1/2 million people in largest.

PSXIX = about 1/2 million people in largest.

PSXII = about 1/2 million people in largest.

PSXIII = about 1/2 million people in largest.

PSXIV = about 1/2 million people in largest.

PSXV = about 1/2 million people in largest.

PSXVI = about 1/2 million people in largest.

PSXVII = about 1/2 million people in largest.

PSXVIII = about 1/2 million people in largest.

PSXIX = about 1/2 million people in largest.

Table 5.I continued

5.Ib ii Mean number of goods

N_1 = Number of graves with decorated Bell Beakers = 71

N_2 = Number of graves without decorated Bell Beakers = 129

$\bar{x}_1 = 6.32 \pm 8.19$

$\bar{x}_2 = 3.58 \pm 4.44$

$t = 2.56$ w. 94 df

Significant at the 0.01 level for a 1 tailed test.

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THE AMERICAN REVOLUTIONARY WAR IN THE MOUNTAINS OF THE APPALACHIAN MOUNTAINS

Edited by Robert K. Ladd, Jr.

Associate Editor: Michael J. Ladd

Editorial Assistant: Michael J. Ladd

Table 5.II Results of tests on the significance of the difference between the mean number of types/goods in a) those graves with Bohemian 'cluster 1' goods and those without and b) those graves with decorated Bell Beakers and those without. Bohemia.

5.II a i. Mean number of types.

N_1 Number of graves with 'cluster 1' goods = 58

N_2 Number of graves without 'cluster 1' goods = 141

$$\bar{X}_1 = 3.55 \pm 3.96$$

$$\bar{X}_2 = 2.33 \pm 2.57$$

$$t = 2.15 \text{ w. } 76 \text{ df}$$

Significant at the 0.025 level for a 1 tailed test.

5.II a ii. Mean number of goods.

N_1 Number of graves with 'cluster 1' goods = 58

N_2 Number of graves without 'cluster 1' goods = 141

$$\bar{X}_1 = 4.69 \pm 5.62$$

$$\bar{X}_2 = 2.91 \pm 3.54$$

$$t = 2.22 \text{ w. } 74 \text{ df}$$

Significant at the 0.025 level for a 1 tailed test.

5.II b i. Mean number of types.

N_1 = Number of graves with decorated Bell Beakers = 104

N_2 = Number of graves without decorated Bell Beakers = 476

$$\bar{X}_1 = 2.51 \pm 2.96$$

$$\bar{X}_2 = 1.86 \pm 2.16$$

$$t = 2.11 \text{ w. } 132 \text{ df}$$

Significant at the 0.025 level for a 1 tailed test.

the same time as the first. The second was a smooth, thin
yellowish-green band, about 1 mm. wide, which extended all around
the surface of the shell. It was very brittle, so when it broke
it was easily crushed.

2. *Conularia* sp.

Specimen No. 17, from the

same horizon as the last.

It is a thin, elongated
specimen, 17 mm. long.

Specimen No. 18, from the

same horizon as the last.

It is a smooth, thin, yellowish-green band, about 1 mm.

wide, which extended all around the surface of the

shell. It was very brittle, so when it broke

it was easily crushed.

Specimen No. 19, from the

same horizon as the last.

It is a smooth, thin, yellowish-green band, about 1 mm.

wide, which extended all around the surface of the

shell. It was very brittle, so when it broke

it was easily crushed.

Table 5.II continued

5.II b ii. Mean number of goods

N_1 = Number of graves with decorated Bell Beakers = 104

N_2 = Number of graves without decorated Bell Beakers = 476

$\bar{X}_1 = 3.16 \pm 4.08$

$\bar{X}_2 = 2.31 \pm 2.89$

$t = 2.0$ w. 129 df

Significant at the 0.025 level for a 1 tailed test.

N.B. In table 5.IIb the total sample of graves has been increased since with only 200 graves the number of occurrences of decorated Bell Beakers was too small for the test to be carried out.

1. What is the evidence that the
lungs are involved in the disease?

2. What is the evidence that the heart is involved in the disease?

3. What is the evidence that the kidneys are involved in the disease?

4. What is the evidence that the liver is involved in the disease?

5. What is the evidence that the brain is involved in the disease?

6. What is the evidence that the skin is involved in the disease?

7. What is the evidence that the bones are involved in the disease?

8. What is the evidence that the joints are involved in the disease?

9. What is the evidence that the eyes are involved in the disease?

10. What is the evidence that the muscles are involved in the disease?

11. What is the evidence that the heart muscle is involved in the disease?

12. What is the evidence that the blood vessels are involved in the disease?

13. What is the evidence that the nerves are involved in the disease?

14. What is the evidence that the bone marrow is involved in the disease?

15. What is the evidence that the lymphatic system is involved in the disease?

16. What is the evidence that the connective tissue is involved in the disease?

17. What is the evidence that the blood cells are involved in the disease?

18. What is the evidence that the glands are involved in the disease?

19. What is the evidence that the blood vessels are involved in the disease?

20. What is the evidence that the blood vessels are involved in the disease?

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Table 5.III Distribution of objects between adults and children.

a) Jugs	<u>Adults</u>	<u>Children</u>
	Bohemia	17
	Moravia	14
b) 'Cluster 1' goods	<u>Adults</u>	<u>Children</u>
	Bohemia	5
	Moravia	7
c) Decorated Bell Beakers	<u>Adults</u>	<u>Children</u>
	Bohemia	4
	Moravia	8
Bohemia and Moravia		
combined	12	4
d) All non-ceramic goods combined	<u>Adults</u>	<u>Children</u>
	Bohemia	9
	Moravia	9
e) More than 3 goods types	<u>Adults</u>	<u>Children</u>
	Bohemia	6
	Moravia	9

100% of the time

Table 5.IV The side on which individuals were lying in the grave tabulated against their sex, where known.

a) Moravia

	Male	Female	
RHS	4	4	8
LHS	3	0	3
	7	4	11

b) Bohemia

	Male	Female	
RHS	1	2	3
LHS	12	1	13
	13	3	16

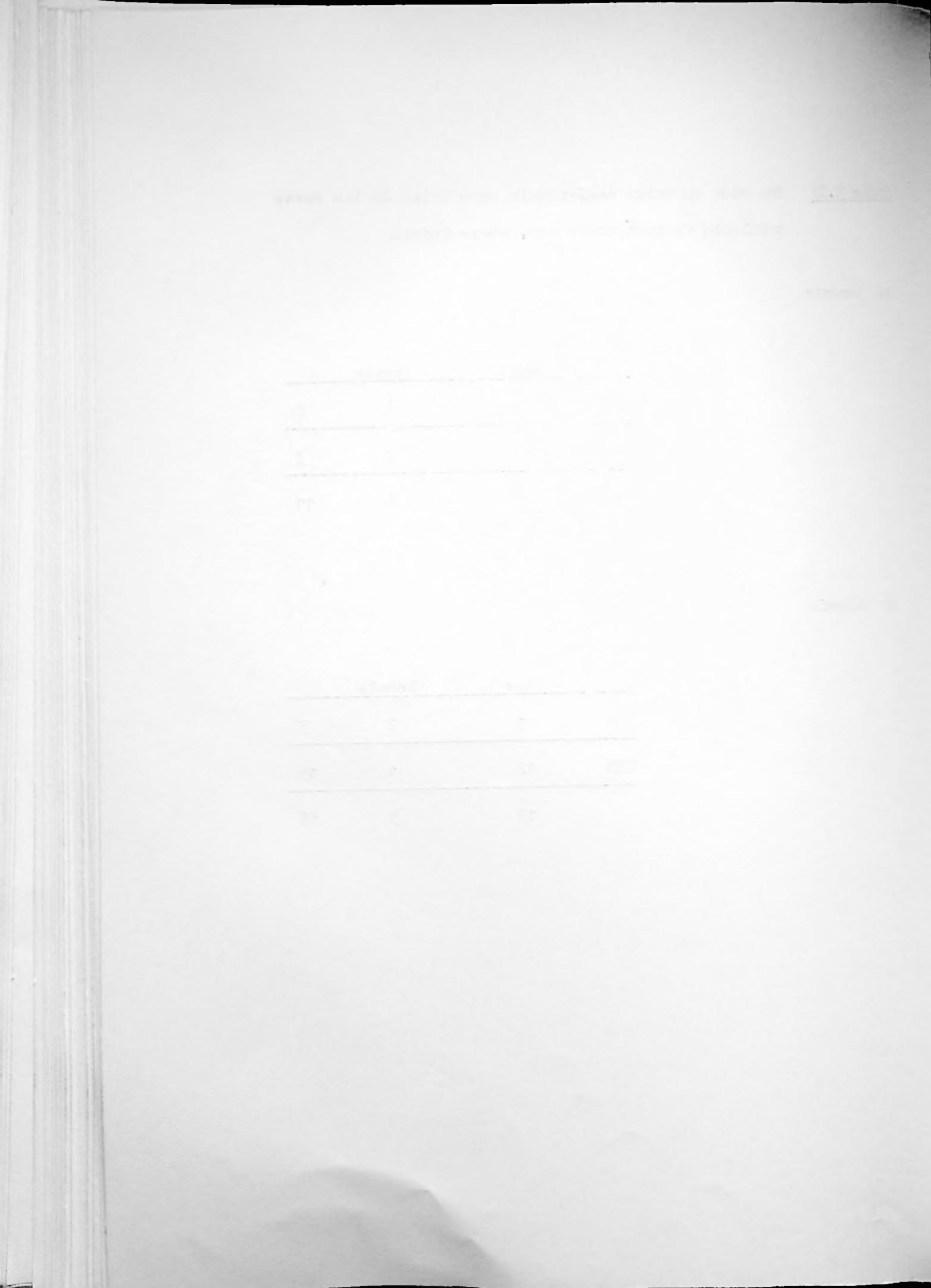


Table 5.V The side on which the skeleton was lying tabulated against the presence of certain objects.

a) Moravia

i) Decorated Bell Beakers

	Present	Absent	
LHS	22	52	74
RHS	17	55	72
	39	107	146

ii) Cluster 1

	Present	Absent	
LHS	38	38	76
RHS	23	53	76
	61	91	152

iii) V-perforated buttons

	Present	Absent	
LHS	3	73	76
RHS	16	57	73
	19	130	149

sent the following note and enclosed additional notes on
the subject. Please return to me as soon as possible.

Very truly yours,

John D. Edwards

P. S. Enclosed

100	100	100
50	50	50
50	50	50

an old dog becomes

100	100	100
50	50	50
50	50	50

Table 5.V continued

iv) 'Topf'

	Present	Absent	
LHS	10	56	66
RHS	30	42	72
	40	98	138

b) Bohemia

i) Decorated Bell Beaker

	Present	Absent	
LHS	18	80	98
RHS	8	42	50
	26	122	148

ii) Bohemian Cluster 1

	Present	Absent	
LHS	25	76	101
RHS	11	39	50
	36	115	151

OR SP

SAT SSR 12

DAE DAE

DAE DAE

DAE DAE

DAE DAE

Table 5.V continued

iii) V-perforated buttons

	Present	Absent	
LHS	1	100	101
RHS	4	45	49
	5	145	150

iv) 'Topf

	Present	Absent	
LHS	7	87	94
RHS	8	40	48
	15	127	142

hamilton inc. 100

selected materials (1)

item	description	unit	price
1	100 ft. 100 ft. 100 ft.	ft.	1.00
2	100 ft. 100 ft. 100 ft.	ft.	1.00
3	100 ft. 100 ft. 100 ft.	ft.	1.00

item	description	unit	price
4	100 ft. 100 ft. 100 ft.	ft.	1.00
5	100 ft. 100 ft. 100 ft.	ft.	1.00
6	100 ft. 100 ft. 100 ft.	ft.	1.00

Table 6.I a Association of 'early', 'middle' and 'late' decorated Bell Beakers with other objects.

<u>Object associated</u>	<u>Decorated Bell Beaker type</u>		
	<u>Early</u>	<u>Middle</u>	<u>Late</u>
No association (decorated Bell Beaker alone)		2	6
Jug	1		2
Arrowhead		1	1
Pot			2
Undecorated Handled Bell Beaker			1
Wrist-guard		1	
Blade			1
Flake			2
Boars tusk			1
Tanged dagger		1	
Sherds	1		2
Stone axe	1		
Shell			1
Amber V-perforated button			1
Belt-hook		1	
Total number of decorated Bell Beakers	3	3	10

before prop. "soft" and "starch" subject to modification

interior walls with similar light

Dark Yellow Wall - Dark Proprietary

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modest bedrooms - 1 bedroom

soil

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1100 bedrooms

medium

or

or

or

Table 6.Ib Association of 'early', 'middle' and 'late' decorated Bell Beakers with the side on which the skeleton was lying in grave.

Side lying	<u>Decorated Bell Beaker type</u>		
	Early	Middle	Late
LHS	1	2	3
RHS	0	0	5

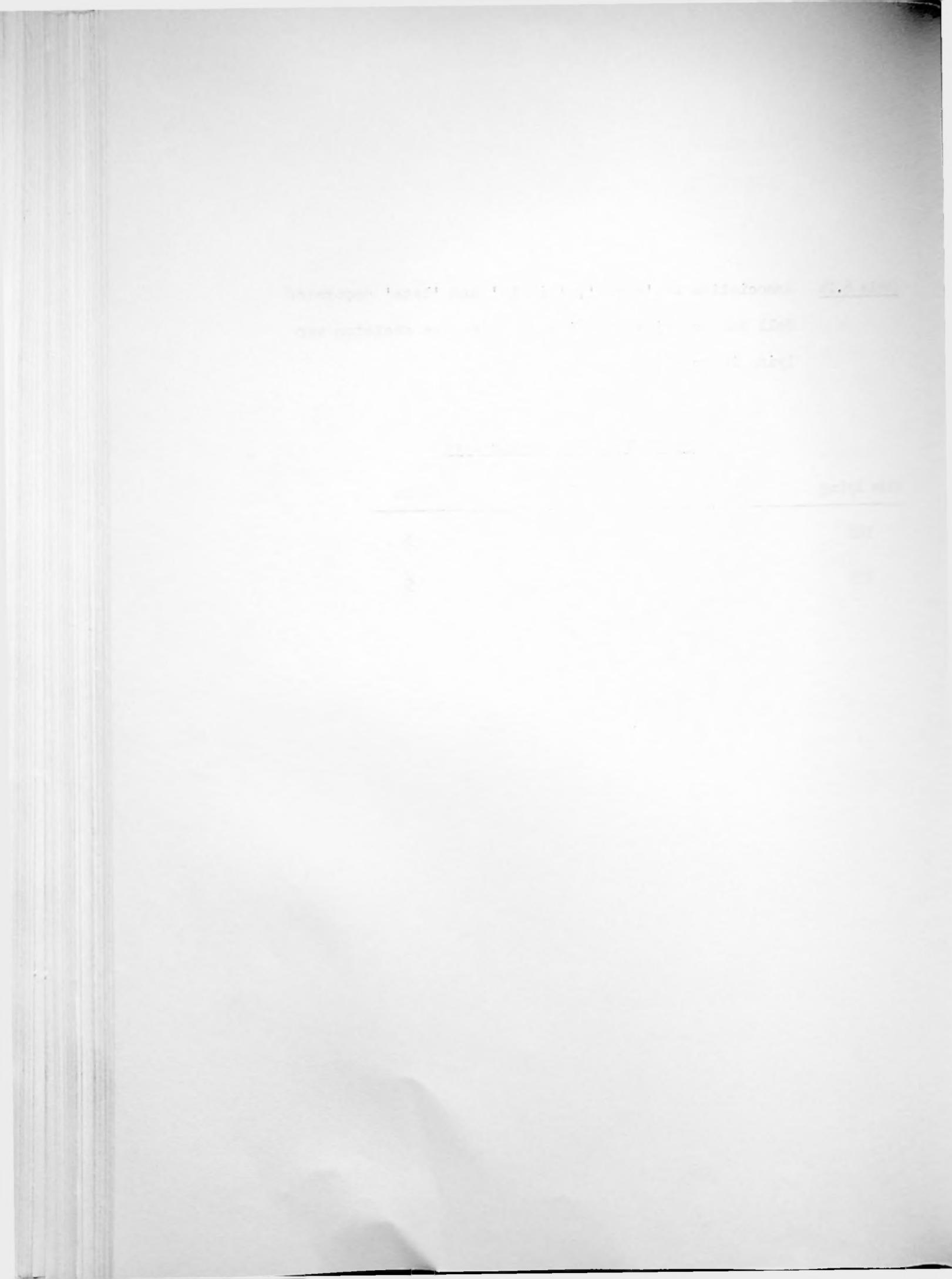


Table 6.II Association between certain grave attributes, including common grave good types, and the sex of the individual buried.

i) Side-lying

	Sex		F
	M		
Side lying	LHS	18	5
	RHS	4	12
		22	17
			39

ii) Presence of stone cist/wood construction

	Sex		F
	M		
Grave type	Simple earth pit	28	25
	Stone/cist wood construction	13	7
		41	32
			73

iii) Occurrence of decorated or undecorated Bell Beaker (these are mutually exclusive).

	Sex		
	M		F
Decorated Bell Beaker	17		4
			21
Undecorated Bell Beaker	14		20
			34
	31		24
			55

action bank, particularly during periods of severe water shortage.

Water distribution is not uniform, major head being about

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Table 6.II (continued)

iv) Other objects

	Sex	
	M	F
Animal bones	10	1 11
Wrist-guards	6	0 6
Chipped stone	13	1 14
Polypod bowl	2	2 4
Bowl	1	3 4
Undecorated Handled Bell Beaker	1	3 4

(Continued) 11-1-66

Stockton winter (1)

2nd

PP	P	PP	PP	second floral
0	0	0	0	ribbons (red)
0	0	0	0	empty flower
0	0	0	0	red flower
0	0	0	0	leaf
+	0	0	0	black bedrock shell yellow (1)

Table 6.III List of values attached to grave goods for points system.

Copper tanged dagger	15
Wrist-guard	12
Amber	12
Decorated Bell Beaker	10
Decorated Handled	10
Bell Beaker	
Polypod bowl	10
Bone pendant	9
Stone axe	8
Stone chisel	8
Polishing stone	8
Boars tusk	8
Undecorated Bell Beaker	7
Undecorated handled	7
Bell Beaker	
Animal bones	7
Bowl	7
Jug	7
Bone point	5
Bone pin	5
Antler object	5
Pot	4
Handled 'Topf'	4
Coarse basin	4
Arrowhead	4
Shell	4
Scraper	3
Blade	2
Sherds	1
Flake	1
Burnt clay	1

and the author's wife, who were in constant contact by telephone.

After the author had been in the hospital for about two weeks, he was able to get out of bed and walk around the room. He was then able to go home, but he still had to take care of himself. He had to eat a special diet and take medicine. He also had to rest a lot. He was able to go back to work after about three weeks. He was very grateful to his wife for taking care of him and helping him get better.

He was able to go back to work after about three weeks.

Table 6.IV The graves are divided into those with more than 20 points and those with less than 20 points. The contingency table shows whether or not each site's nearest neighbour has a grave scoring more than 20 points.

		nearest neighbour	
		20 points	20 points
Base point	20 points	9	10
	20 points	9	32
		18	42
			60

OS and other daily counts with latitude and longitude with
precipitation and wind speed. The amount of rainfall has a strong
influence on the number of birds. The amount of wind affects
the amount of birds. The amount of birds is also

Conclusion

Methodology

Method	Parameter	Value
OS	Number of birds	1000
OS	Latitude	40°N

Table 6.V Distribution of male ages at death.

<u>Age category</u>	<u>Number of individuals</u>
Juvenilis	3
Adultus	10
Maturus	27
Senilis	2

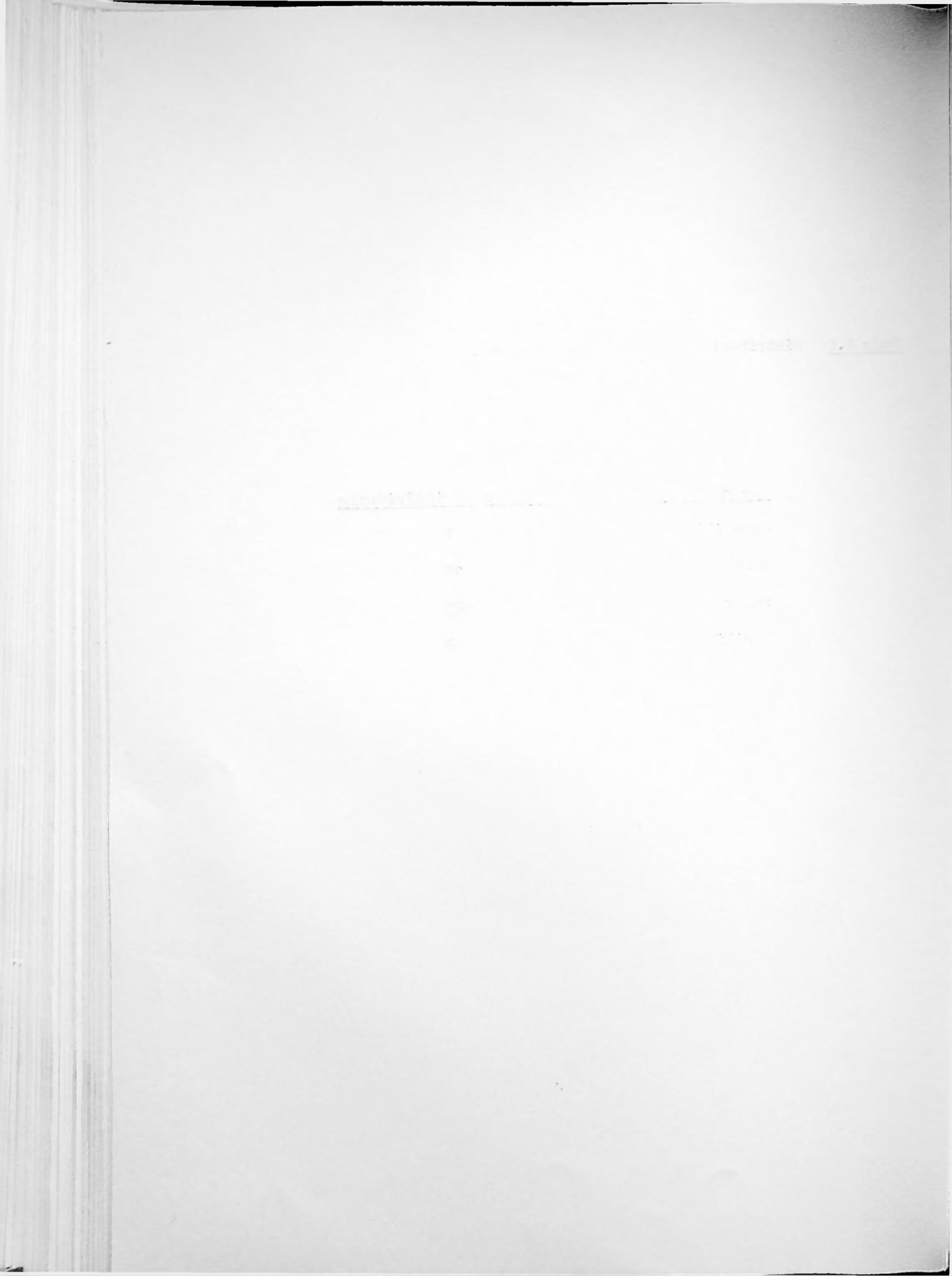


Table 7.I Bell Beaker Culture Pottery in Bohemia (excluding settlements)

Decorated Bell Beakers (including those with handles)	11%
Undecorated jugs	42%
Undecorated bowls	23%
Others	24%
Total number of vessels	1647

1. *What is the name of your organization?*

2. *What is the name of your organization?*

3. *What is the name of your organization?*

4. *What is the name of your organization?*

5. *What is the name of your organization?*

Table 7.II Bell Beaker Culture Pottery in Moravia (graves only)

Decorated Bell Beakers (including those with handles)	17%
Undecorated jugs	41%
Undecorated bowls	21%
Others	21%
Total number of vessels	2132

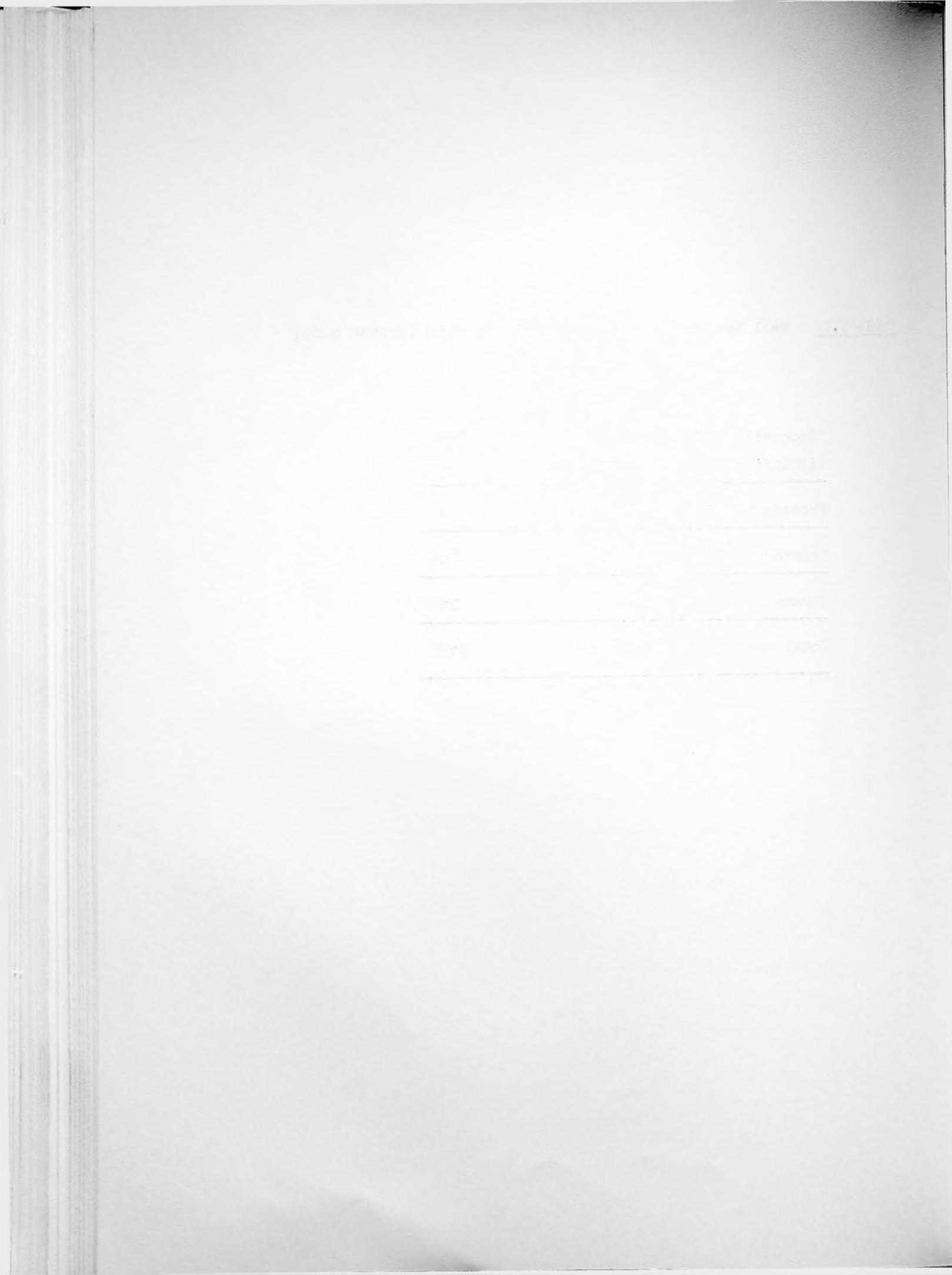


Table 9.I Domestic animals documented for late Neolithic groups in Central Germany. (Information from Behrens 1973).

+ denotes presence.

Culture	Cattle	Sheep	Goat	Pig	Horse	Dog
Baalberg	+	+	+	+		+
Salzmunde	+	+	+	+		+
Walternienburg	+	+	+			+
Bernburg	+	+	+	+		+
Globular Amphora	+	+		+		+
Corded Ware	+	+	+	+	+	+
Bell Beaker				+		

the same position of the two main features observed in the first
and second spectra, and the corresponding features
in the third spectrum.



Table 9.II Domestic animals documented for Eneolithic groups in Bohemia and Moravia. (Information from a variety of sources.)

+ denotes presence.

Culture	Cattle	Sheep	Goat	Pig	Horse	Dog
Earlier TRB/Jevišovice C2	+	+	+	+		+
Salzmunde TRB/Jevišovice C1	+	+	+	+		+
Rivnáč/Jevišovice B	+	+	+	+	+	+
Corded Ware	+	+	+	+		+
Bell Beaker	+	+	+	+	+	+

ni sono, più che mai, per me un'etica di fondo.

Le idee e i valori della vita sono le mie pregiudiziali

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idee e i valori della vita sono le mie pregiudiziali

Table 9.III Plant crops documented for the late Neolithic in Central Germany.

+ denotes presence.

Culture	Barley	Emmer	Einkorn	Other	Total impressions
Corded Ware	23	17	7	29	76
Schönfeld	+	+	+		
Single Grave	+	+	+	Spelt	
Bell Beaker	+	+		+	

an identified site and the number must include 100000

or 100001

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or 100003 or 100004 or 100005 or 100006

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or 100009 or 100010 or 100011 or 100012

or 100013

Table 10.I Sex of the individual buried tabulated against the side on which they were lying. Vikletice cemetery.

Side lying	Sex		F
	M	RHS	
RHS	6	-	6
LHS	6	7	13
	12	7	19

Table 10.II Sex of the individual buried tabulated against the side on which they were lying. Bohemian Corded Ware graves excluding Vikletice cemetery.

Side lying	Sex		F
	M	RHS	
RHS	6	-	6
LHS	2	3	5
	8	3	11

with dark brownish-yellow feathers and the neck
and breast being white.

22

22

This was another excellent specimen and it is a good
example of the "brown" animal. It had very pale
yellow-green coloration on the head.

Table 10.III Presence of particular grave goods tabulated against the side on which the associated skeleton was lying. Figures refer to numbers of graves in which the objects occur.

Object type	<u>Side lying</u>		
	RHS	LHS	Total
Decorated beaker	17	8	25
Decorated lugged beaker	6	1	7
Flat axe	32	2	34
Hammer axe	12	1	13
Mace	5	0	5
Coarse jar	0	4	4
Cylindrical vessel	3	9	12
'Topf'	4	21	25
Small handled 'Topf'	0	7	7
Perforated teeth	0	10	10
Perforated shell	1	11	12

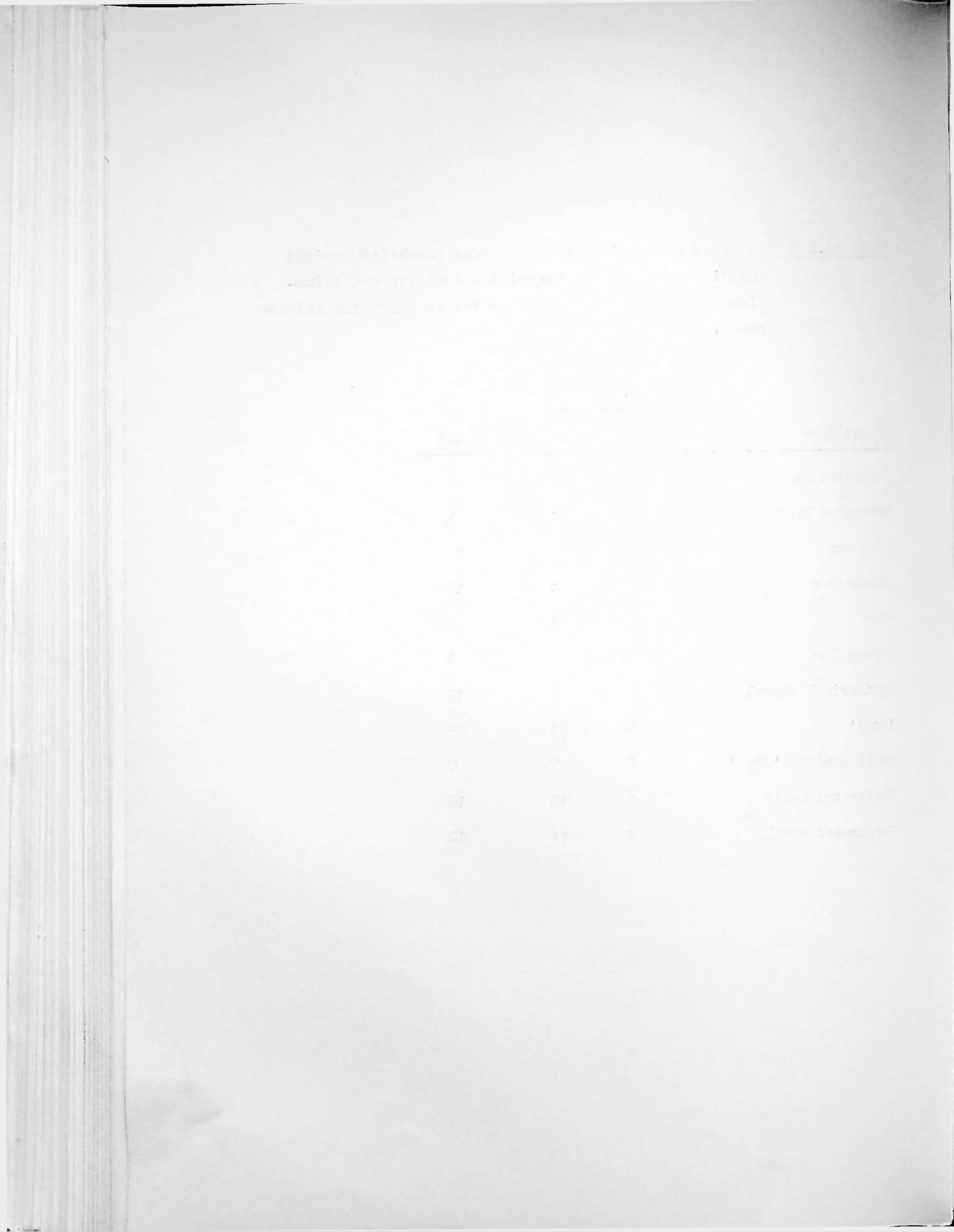


Table 10.IV Contents of the graves at each end of the axes produced by principal coordinates analysis on the graves from Vikletice.

i) Axis 1

Loading on axis	Side lying of skeleton (if known)	Grave contents
-0.94	-	No goods
-0.94	RHS	"
-0.94	-	"
-0.94	-	"
-0.94	-	"
-0.94	-	"
-0.94	LHS	"
0.23	RHS	Beaker, undecorated amphora.
0.24	RHS	Beaker, undecorated amphora, blade, bowl, grindstone.
0.24	LHS	Beaker, undecorated amphora, Topf.
0.26	RHS	Beaker, undecorated amphora blade, flat axe, grindstone.
0.26	RHS	Beaker, undecorated amphora, blade, flat axe, hammer axe.
0.27	-	Beaker, undecorated amphora, blade, mace.
0.31	RHS	Beaker, undecorated amphora, blade, flat axe.
0.31	RHS	Beaker, undecorated amphora, blade, flat axe.
0.32	-	Beaker, undecorated amphora, blade.

Table 10.IV (continued)

ii) Axis 2

Loading on axis	Side lying of skeleton (if known)	Grave contents
-0.54	-	Undecorated amphora, Topf, lugged beaker.
-0.54	LHS	Undecorated amphora, Topf, lugged beaker.
-0.52	LHS	2 Töpfe, 2 undecorated amphorae, small Topf.
-0.46	LHS	Undecorated amphora, undecorated jug, Topf.
-0.41	-	Undecorated amphora, lugged beaker, Topf, cylindrical vessel.
-0.38	LHS	Undecorated amphora, decorated amphora, Topf, jug/Topf.
-0.36	-	Undecorated amphora, Topf, lugged beaker, lugged Topf, flint point.
-0.35	?LHS	Undecorated amphora, Topf, basin, cylindrical vessel, polypod bowl.
-0.30	-	Undecorated amphora.
-0.30	LHS	Undecorated jug, jug/Topf, Topf.
0.30	-	Beaker, decorated amphora, blade.
0.30	RHS	Decorated amphora, blade, bone awl.
0.32	-	Decorated jug, Beaker, flat axe, hammer-axe, grindstone.
0.32	RHS	Cordoned amphora, decorated jug, flat axe, blade.
0.33	-	Beaker, Blade, mace, flat axe, sherd.
0.34	RHS	Flat axe, blade, flake, sherds.
0.40	RHS	Undecorated amphora, Beaker, flat axe, blade, grindstone.
0.40	RHS	Undecorated amphora, Beaker, hammer axe, flat axe, blade.
0.43	RHS	Undecorated amphora, Beaker, flat axe, blade.
0.43	RHS	Undecorated amphora, Beaker, flat axe, blade.

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Table 10.IV (continued)

ii) Axis 2 (continued)

Loading on axis	Side lying of skeleton (if known)	Grave contents
0.51	-	Beaker, blade, hammer-axe, mace, flat axe.
0.51	-	Decorated amphora, beaker, blade.
0.51	-	Decorated amphora, beaker, blade.

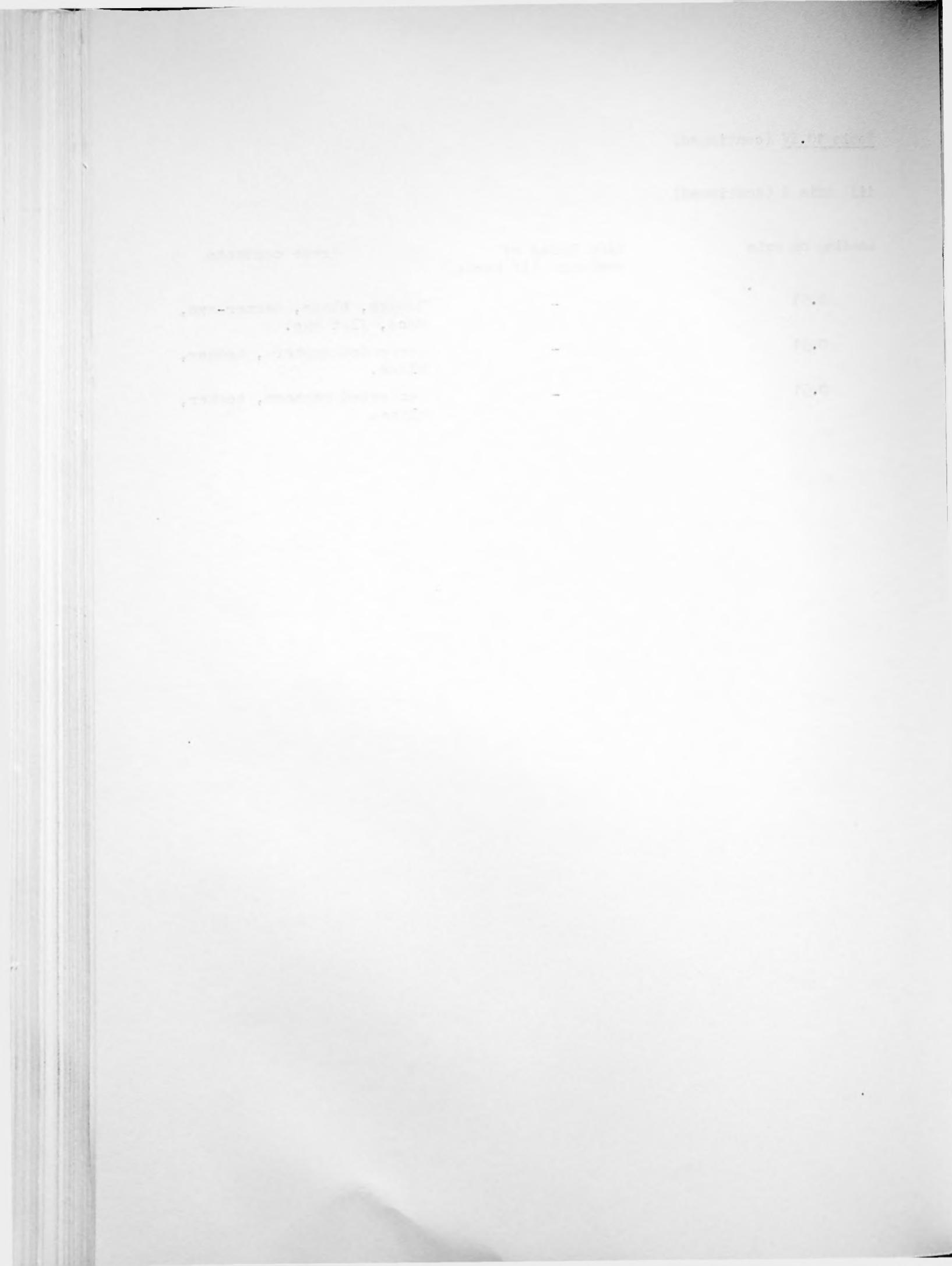


Table 10.IV (continued)

iii) Axis 3

Loading on axis	Side lying of skeleton (if known)	Grave contents
-0.40	-	Decorated amphora, decorated jug, Topf.
-0.39	LHS	Decorated amphora, Topf, cylindrical vessel.
-0.38	-	Cordoned amphora, decorated jug, Topf, jug/Topf, cylindrical vessel, blade, copper.
-0.38	-	Decorated amphora.
-0.38	-	Decorated amphora.
-0.35	LHS	Cordoned amphora, Topf, blade.
-0.35	-	Cordoned amphora, undecorated lugged beaker, jug/Topf.
-0.34	LHS	Cordoned amphora, Topf, basin, small Topf, blade.
-0.33	?LHS	Decorated amphora, decorated lugged beaker.
-0.31	RHS	Decorated amphora, blade, awl.
-0.30	Double grave	Decorated amphora, undecorated lugged beaker, blade.
-0.29	LHS	Cordoned amphora, amphora/Topf, decorated jug, Topf, amphora, flake, point.
-0.29	LHS	Topf, undecorated jug, jug/Topf.
0.30	-	Undecorated amphora, beaker, bowl.
0.32	-	Undecorated amphora, beaker, blade, mace.
0.33	RHS	Undecorated amphora, beaker, flat axe, blade, grindstone.
0.33	RHS	Undecorated amphora, beaker, hammer axe, flat axe, blade.
0.38	-	Undecorated amphora.
0.39	-	Undecorated amphora, beaker, blade.
0.40	RHS	Undecorated amphora, beaker, flat axe, blade.
0.40	RHS	Undecorated amphora, beaker, flat axe, blade.
0.42	-	Undecorated amphora, bowl.

of the disease, the patient's condition, and the results of the treatment.

The following table gives a general idea of the results of the treatment.

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Table 10.IV (continued)

iii) Axis 3 (continued)

Loading on axis	Side lying of skeleton (if known)	Grave contents
0.42	LHS	Undecorated amphora, bowl.
0.46	RHS	Undecorated amphora, bowl, beaker, flat axe.
0.48	?RHS	Undecorated amphora, beaker.

Chlorophyl a 0.01 Molar

Chlorophyl b 0.01 Molar

Chlorophyll a + b 0.01 Molar

Table 10.IV (continued)

iv) Axis 4

Loading on axis	Side lying of skeleton (if known)	Grave contents
-0.64	-	Decorated amphora.
-0.64	-	Decorated amphora.
-0.56	?LHS	Decorated amphora, lugged beaker.
-0.55	-	Undecorated amphora, decorated amphora.
-0.31	-	Undecorated amphora, bowl.
-0.31	LHS	Decorated amphora, cylindrical vessel, decorated lugged beaker, bowl, blade.
-0.31	LHS	Undecorated amphora, bowl.
-0.28	?LHS	Decorated amphora, cordoned amphora, beaker, undecorated jug, decorated lugged beaker.
-0.27	-	Decorated amphora, beaker, blade.
-0.27	RHS	Decorated amphora, beaker, blade.
-0.26	-	Undecorated amphora, beaker, bowl.
0.25	-	Decorated amphora, beaker,
0.27	-	Cordoned amphora, decorated jug, Topf, jug/Topf, cylindrical vessel, blade, copper.
0.27	RHS	Cordoned amphora, decorated jug, flat axe, blade.
0.27	LHS	Topf, small handled Topf, undecorated amphora, blade.
0.28	LHS	Undecorated amphora, Topf, small handled Topf, blade, flake.
0.29	Double grave	Undecorated amphora, cordoned amphora, Topf, beaker, undecorated lugged beaker, flat axe, hammer axe, blade

W. H. C. 7/18/07

1000 ft. above sea level

Geological Survey of the State of California

Report on the Geology of the State of California

Volume I. General Geology

Volume II. Geology of the Coast Range

Volume III. Geology of the Sierra Nevada

Volume IV. Geology of the Central Valley

Volume V. Geology of the Colorado River Basin

Volume VI. Geology of the San Joaquin Valley

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Table 10.IV (continued)

iv) Axis 4 (continued)

Loading on axis	Side lying of skeleton (if known)	Grave contents
0.31	LHS	Cordoned amphora, Topf, basin, small handled Topf, blade.
0.35	LHS	Cordoned amphora, Topf, blade, stone disc.
0.36	-	Cordoned amphora, undecorated lugged beaker, Topf, jug/Topf, blade.

(Continued from page 1)

Continued from page 1

Table 10.IV (continued)

v) Axis 5

Loading on axis	Side lying of skeleton (if known)	Grave contents
-0.39	-	Decorated lugged beaker, flat axe, flake.
-0.39	-	Decorated lugged beaker, flat axe, mace, blade, sherd.
-0.39	-	Decorated lugged beaker, undecorated amphora, Topf, cylindrical vessel.
-0.32	LHS	Cordoned amphora, point, dog teeth, bone bead, sherds.
-0.32	RHS	Flat axe, blade, sherds, flake.
-0.27	LHS	Sherds.
-0.27	RHS	Undecorated amphora, decorated lugged beaker, hammer axe.
-0.27	LHS	Cordoned amphora, undecorated lugged beaker, bowl.
-0.26	-	Decorated lugged beaker, undecorated jug.
-0.26	-	Undecorated amphora, bowl.
-0.26	LHS	Undecorated amphora, bowl.
-0.25	RHS	Cordoned amphora, decorated jug, flat axe, blade.
-0.25	LHS	Cordoned amphora, decorated shell.
-0.25	RHS	Undecorated amphora, lugged beaker, blade.
0.25	-	Beaker.
0.26	LHS	Amphora, bone.
0.27	LHS	Decorated amphora, basin, Topf.
0.27	Double grave	Decorated amphora, beaker, cordoned amphora, Topf, hammer axe.
0.31	LHS	Undecorated amphora, decorated amphora, Topf, jug/Topf.
0.36	RHS	Decorated amphora, beaker, blade.
0.36	-	Cordoned amphora, beaker, blade.
0.38	LHS	Undecorated amphora, beaker, Topf.

(London) Visit etc.

London

Table 10.V List of graves and their contents in the clusters produced by monothetic subdivisive cluster analysis: Cluster numbering corresponds to that in the dendrogram (fig. 10.3), reading from left to right.

Cluster 1

Grave No. Contents

- 21 Undecorated amphora, undecorated jug, decorated lugged beaker, mace head, flat axe, blade.
- 48 Undecorated amphora, undecorated jug, decorated lugged beaker, flat axe, blade, spindle whorl.
- 10⁴ Undecorated amphora, jug, undecorated lugged beaker, flat axe, blade.

Cluster 9

Grave No. Contents

- 47 Undecorated amphora, decorated jug, decorated lugged beaker, flat axe, blade.
- 75 Undecorated amphora, undecorated lugged beaker, hammer axe, blade.
- 76 Undecorated amphora, beaker, flat axe, blade.
- 88 Undecorated amphora, decorated jug, decorated lugged beaker, hammer axe, flat axe, blade.

Cluster 5

Grave No. Contents

- 10 Decorated jug, decorated lugged beaker, cylindrical vessel, 2 flat axes, blade.
- 83 Amphora, decorated jug, sherd, flat axe, blade.

Cluster 13

Grave No. Contents

- 7 4 flat axes, bone disc, blade.
- 8 Flat axe, blade.
- 23 Cordoned amphora, 2 flat axes, blade.
- 45 Amphora sherds, beaker, undecorated lugged beaker, flat axe, blade.
- 78 Lugged beaker, flat axe, blade.
- 10³ Cordoned amphora, beaker, mace head, flat axe, blade.

and the other side of the body. The right side of the body is the side of the body which is closest to the heart. The left side of the body is the side of the body which is furthest from the heart.

Table 10.V (continued)

Cluster 3

Grave No. Contents

- 43 Cordoned amphora, beaker, hammer axe, flat axe.
66 Cordoned amphora, beaker, undecorated lugged beaker, hammer axe, flat axe, grindstone.
92 Cordoned amphora, beaker, flat axe.

Cluster 11

Grave No. Contents

- 11 Beaker sherds, hammer axe, flat axe.
28 Amphora sherds, beaker, 2 ribbed jugs, hammer axe, flat axe.

Cluster 7

Grave No. Contents

- 13 Sherds, hammer axe, flat axe.
86 Amphora sherds, cylindrical vessel, sherds, flat axe.

Cluster 15

Grave No. Contents

- 6 2 flat axes, bone chisel.
24 Undecorated jug, 2 flat axes.
29 Cordoned amphora, undecorated jug, hammer axe, flat axe.

Cluster 2

Grave No. Contents

- 99 2 undecorated jugs, Topf, decorated shell, copper, blade.
105 Cordoned amphora, 2 small lugged amphorae, undecorated amphora decorated jug, 2 undecorated jugs, 2 Topfe, cylindrical vessel, small Topf, decorated shell, copper, blade.

Cluster 10

Grave No. Contents

- 35 Undecorated amphora, decorated amphora, undecorated jug, Topf, blade.
39 Cordoned amphora, undecorated jug, Topf, undecorated handled beaker, small handled Topf, clay disc, blade.

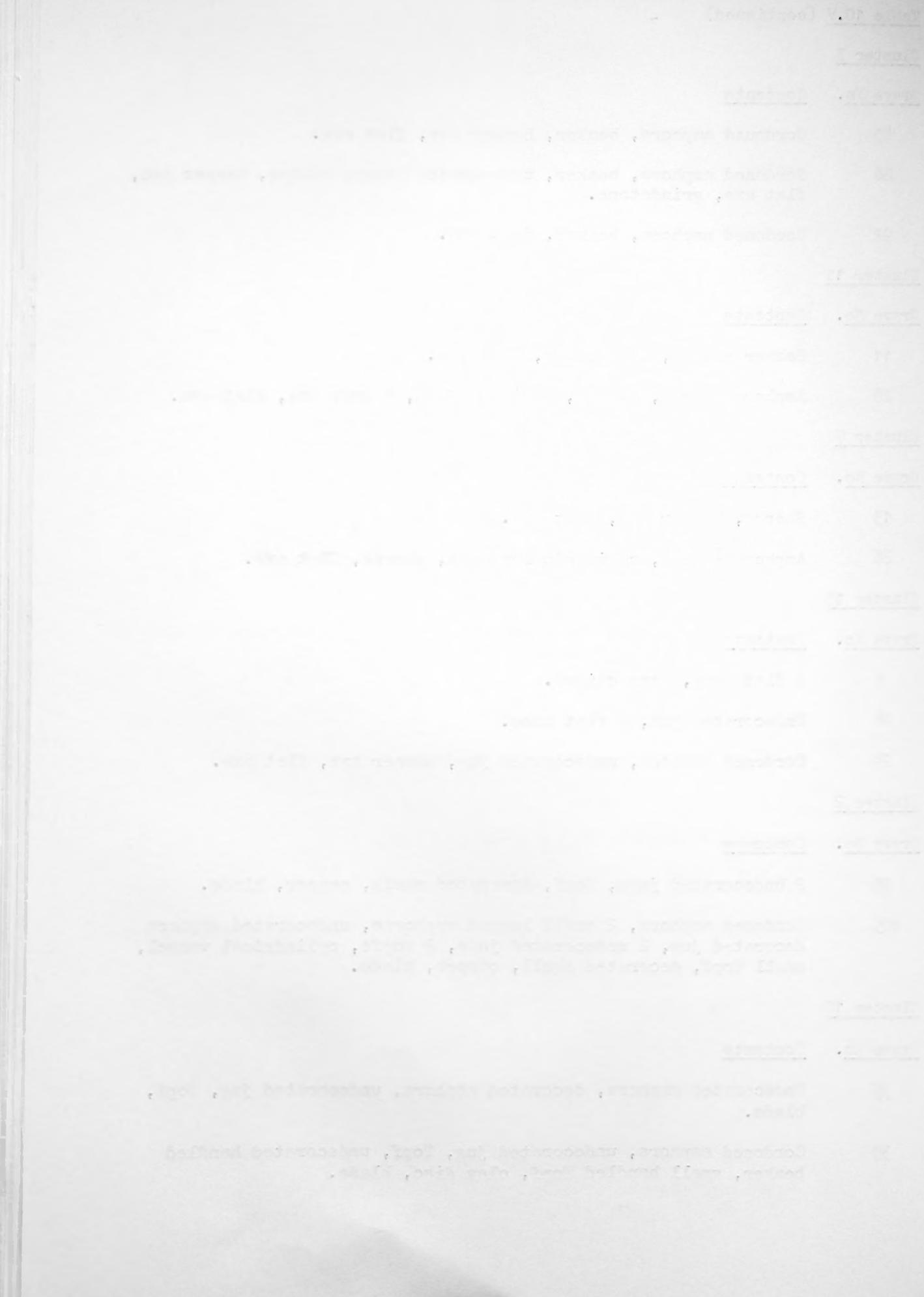


Table 10.V (continued)

Cluster 10 (continued)

Grave No. Contents

- | | |
|----|---|
| 40 | Undecorated amphora, Topf, small handled Topf, grindstone, blade. |
| 44 | Incised amphora, Topf, cylindrical vessel, blade. |
| 46 | Undecorated amphora, Topf, lugged beaker sherd, sherd, blade. |
| 70 | Undecorated amphora, 2 undecorated jugs, Topf, blade. |
| 84 | Undecorated amphora, Topf, sherd, blade. |

Cluster 6

Grave No. Contents

- | | |
|-----|--|
| 17 | Sherds, blade. |
| 36 | Sherds, blade, animal bones. |
| 56 | Sherds, blade, mace head. |
| 59 | Sherd, blade. |
| 77 | Cordoned amphora, sherd, blade. |
| 98 | Cordoned amphora, beaker sherds, sherd, hammer axe, blade. |
| 102 | Undecorated jug, small Topf, sherd, blade. |

Cluster 14

Grave No. Contents

- | | |
|----|---|
| 1 | Undecorated amphora, blade. |
| 3 | Decorated jug, lugged bowl, 2 basins, grindstone, bone point, blade. |
| 9 | Jug, hammer axe, blade. |
| 19 | Undecorated amphora, undecorated jug, perforated tooth, copper, blade. |
| 25 | Beaker sherd, perforated shell disc, perforated tooth, blade. |
| 27 | Undecorated amphora, 2 undecorated jugs, cylindrical vessel, blade, animal bones. |
| 38 | Perforated shell disc, perforated tooth, blade. |
| 49 | Bone pin, blade. |

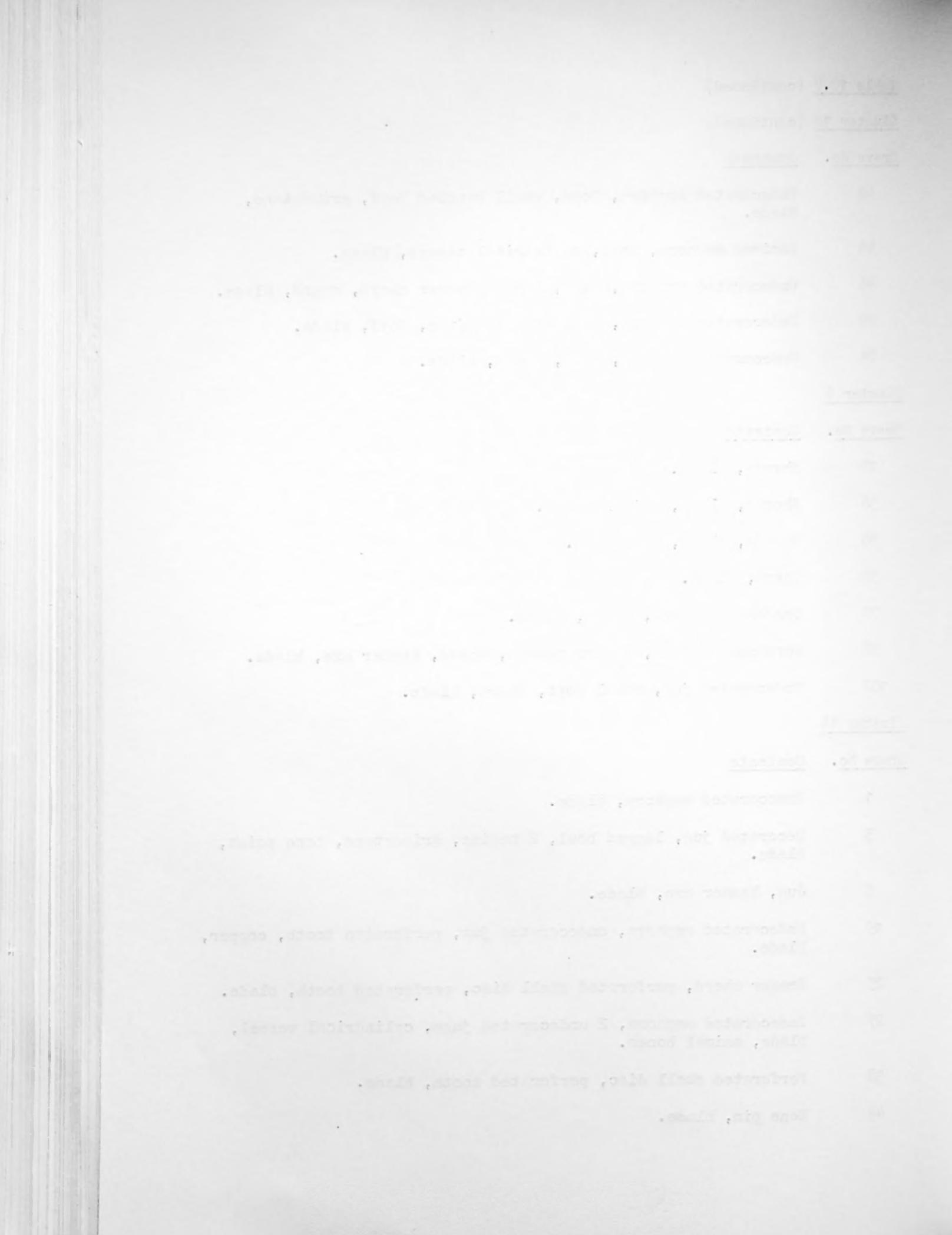


Table 10.V (continued)

Cluster 14 (continued)

Grave No. Contents

- 50 Perforated tooth, blade.
55 Undecorated jug, hammer axe, blade, animal bones.
57 Decorated amphora, beaker, mortar, decorated shell, blade.
63 Cylindrical vessel, perforated shell, perforated tooth, blade.
67 Incised amphora, undecorated amphora, amphora, 3 jugs,
 perforated shell, perforated tooth, copper, blade.
68 2 cordoned amphorae, 2 beakers, hammer axe, blade.
80 Amphora, undecorated handled beaker, blade.
89 Amphora sherds, beaker sherds, decorated shell, perforated
 shell, blade.
90 Amphora sherds, beaker, copper, blade.
94 2 cordoned amphorae, decorated jug, blade.
95 Cordoned amphora, undecorated amphora, ribbed jug, blade.
96 Hammer axe, blade.
108 Blade.

Cluster 4

Grave No. Contents

- 15 Cordoned amphora, beaker, hammer axe.
16 Cordoned amphora, beaker sherds, decorated jug.
79 Cordoned amphora, amphora, beaker, Topf, sherd.
97 Cordoned amphora, beaker sherds, Topf, copper.

Cluster 12

Grave No. Contents

- 106 Beaker sherds, decorated shell.
2 Beaker, decorated jug.
4 Incised amphora, beaker.
12 Beaker sherds, ribbed jug, sherds, mace head.

Document 101

Document 102

Document 103

Document 104

Document 105

Document 106

Document 107

Document 108

Document 109

Document 110

Document 111

Document 112

Document 113

Document 114

Document 115

Document 116

Document 117

Document 118

Document 119

Document 120

Document 121

Document 122

Document 123

Document 124

Document 125

Document 126

Document 127

Document 128

Document 129

Table 10.V (continued)

Cluster 12 (continued)

Grave No. Contents

- | | |
|----|---|
| 14 | Beaker. |
| 52 | Undecorated amphora, beaker, hammer axe, mace head. |
| 54 | Incised amphora, beaker sherd, ribbed jug. |
| 61 | Beaker, lugged beaker, lugged bowl. |
| 81 | Beaker. |
| 85 | Beaker, jug. |

Cluster 8

Grave No. Contents

- | | |
|-----|---|
| 18 | Cordoned amphora, undecorated amphora, topf, decorated lugged beaker, sherd. |
| 20 | Topf. |
| 22 | Undecorated amphora, undecorated jug, Topf, small lugged Topf, copper. |
| 69 | Undecorated amphora, decorated jug, Topf, animal bones. |
| 73 | Cordoned amphora, Topf, undecorated lugged beaker, decorated shell, perforated shell, perforated tooth. |
| 74 | Cordoned amphora, Topf, undecorated handled beaker, cylindrical vessel, 2 decorated shells. |
| 101 | Cordoned amphora, undecorated jug, Topf, cylindrical vessel, small lugged Topf, copper. |

Cluster 16

Grave No. Contents

- | | |
|----|---|
| 5 | Incised amphora, decorated lugged beaker. |
| 26 | Undecorated amphora. |
| 30 | Small lugged Topf. |
| 31 | Undecorated amphora. |
| 32 | Decorated lugged beaker. |
| 33 | Hammer axe. |
| 34 | Undecorated amphora, decorated lugged beaker. |

Committee) 1 of 100

Committee) 2 of 100

Committee) 3 of 100

Committee) 4 of 100

Committee) 5 of 100

Committee) 6 of 100

Committee) 7 of 100

Committee) 8 of 100

Committee) 9 of 100

Committee) 10 of 100

Committee) 11 of 100

Committee) 12 of 100

Committee) 13 of 100

Committee) 14 of 100

Committee) 15 of 100

Committee) 16 of 100

Committee) 17 of 100

Committee) 18 of 100

Committee) 19 of 100

Committee) 20 of 100

Committee) 21 of 100

Committee) 22 of 100

Committee) 23 of 100

Committee) 24 of 100

Committee) 25 of 100

Committee) 26 of 100

Committee) 27 of 100

Committee) 28 of 100

Committee) 29 of 100

Table 10.V (continued)

Cluster 16 (continued)

Grave No. Contents

- 37 Incised amphora.
- 41 Undecorated amphora, cylindrical vessel.
- 42 Small lugged amphora, cylindrical vessel, polypod bowl.
- 51 Cordoned amphora, undecorated amphora, decorated lugged beaker.
- 53 Cylindrical vessel.
- 58 Undecorated jug, animal bones.
- 60 Undecorated amphora, perforated shell, perforated tooth.
- 62 Undecorated amphora.
- 64 Undecorated amphora, jug sherd, undecorated lugged beaker.
- 65 Cordoned amphora, undecorated lugged beaker, hammer axe.
- 71 Decorated jug, undecorated jug, sherds, mace head.
- 72 Cordoned amphora, decorated jug.
- 82 Lugged beaker, sherds.
- 87 Amphora sherds, cylindrical vessel, sherds, perforated shell, perforated tooth.
- 91 Amphora sherds.
- 93 Undecorated amphora.
- 100 Undecorated amphora.
- 107 Amphora sherds, perforated shell.

Constitutive *of* *gastroesophageal*

reflux *in* *patients*

with *esophageal* *adenocarcinoma*

and *normal* *control* *subjects*

Yannick *Bardet*, *MD*, *MPH*, *FRCP(C)*

John *W*. *El-Serag*, *MD*, *MPH*, *FRCP(C)*

David *W*. *Griffiths*, *MD*, *FRCP(C)*

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David *W*. *Griffiths*, *MD*, *FRCP(C)*

Table 10.VI List of goods values for Bohemian Corded Ware graves.

<u>Object</u>	<u>Points</u>
Undecorated amphora	7
Cordoned amphora	8
Incised amphora	8
Amphora	7
Beaker	8
Undecorated beaker	7
Decorated jug	8
Jug	7
Lugged bowl	7
Polypod bowl	8
Basin	6
Decorated lugged beaker	8
Undecorated lugged beaker	7
Cylindrical vessel	7
Topf	7
Sherds	2
Small lugged Topf	7
Undecorated handled beaker	7
Small handled Topf	7
Small lugged amphora	7
Blade	2
Grindstone	6
Bone point	4
Flat axe	8
Bone chisel	6
Bone disc	3
Hammer axe	10
Mace head	10
Perforated tooth	5
Copper	9
Perforated shell disc	7
Animal bones	7
Clay disc	3
Copper arm-ring	15
Arrowhead	4

admiral

1887

1887

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1887

adult

admiral. Reddish brown.

wing tips blackish

wings dark

abdomen

black

abdominal

blackish

wings

Table 10.VI (continued)

<u>Object</u>	<u>Points</u>
Flake	2
Bone bead	2
Flint point	2
No goods	0
Bohrkern	5
Decorated shell	7
Bone pin	3
Spindle whorl	3
Shell necklace	9
Clay ball	4
Worked bone	2
Antler frags	4
Pot	6
Stone disc	7
Flint scraper	2

1970-1971

1970-1971

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1970-1971

a) Moravia

Graves	Settlements
Decorated Bell Beakers	17%
Undecorated bowls	21%
Undecorated jugs	41%
Others	21%
Total number of vessels	2132
	Decorated Bell Beakers 8%
	Others 92%
	Total number of sherds c.870

b) Bohemia

Graves	Settlements (Kozly only)
Decorated Bell Beakers	11%
Undecorated jugs	42%
Undecorated bowls	23%
Others	24%
Total number of vessels	1647
	Decorated Bell Beakers 7%
	Others 93%
	Total number of sherds 164

Table 11.I Table showing decorated Bell Beakers as a proportion of the total number of vessels/sherds in grave and settlement contexts, a) Moravia b) Bohemia. Information from Tables 4.II and 4.XI.

Chlorophyll

greenish

yellowish greenish yellowish greenish yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

yellowish greenish

chlorophyll

greenish

yellowish greenish

to obtain good greenish yellowish greenish yellowish greenish
yellowish greenish yellowish greenish yellowish greenish yellowish
yellowish greenish yellowish greenish yellowish greenish yellowish

FIGURES



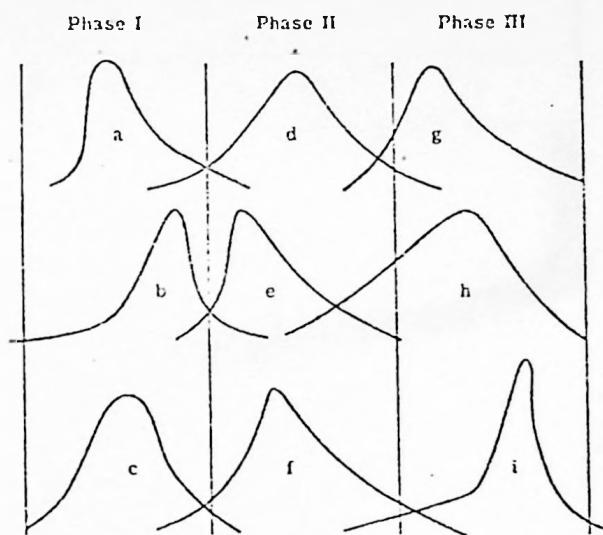
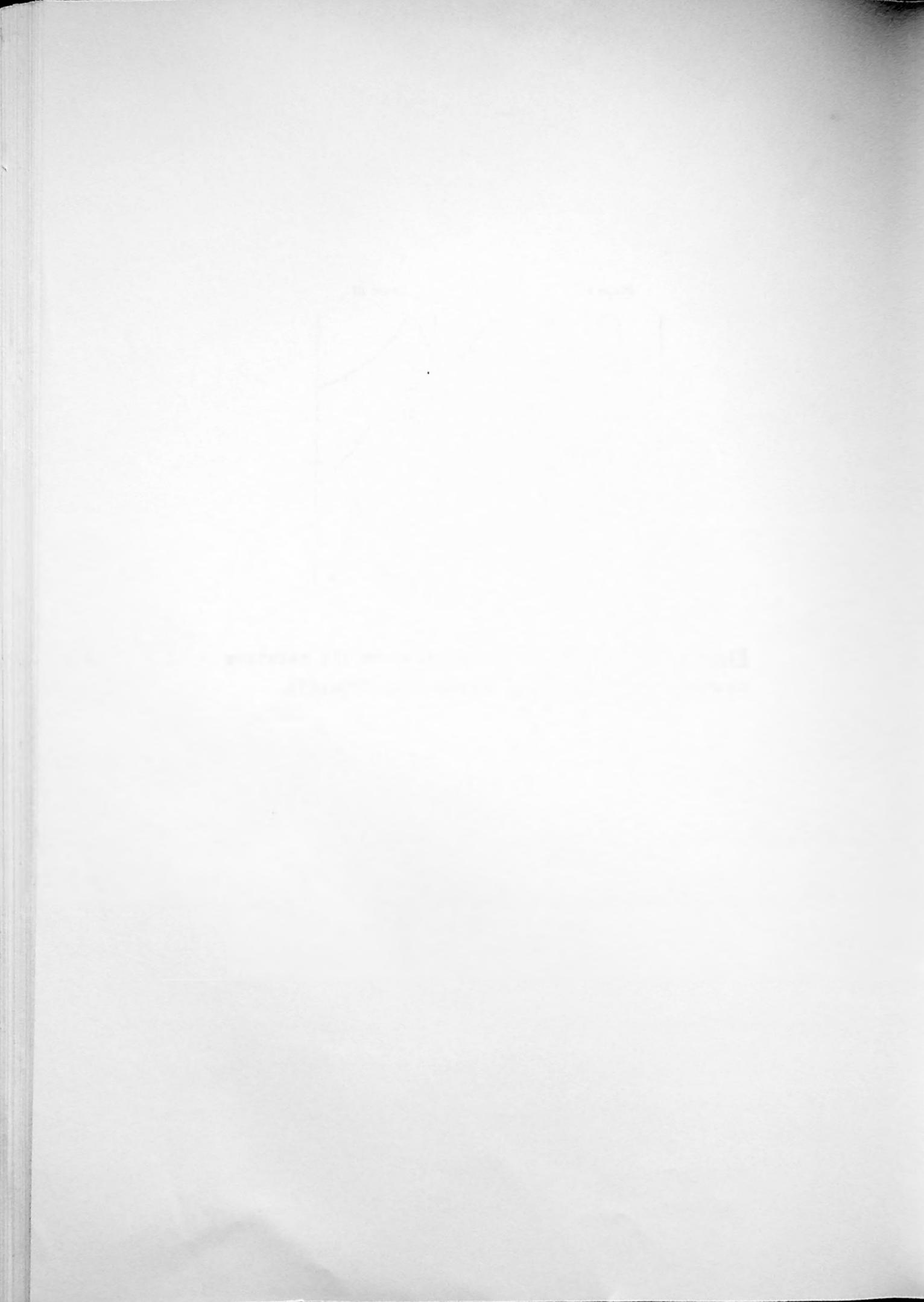
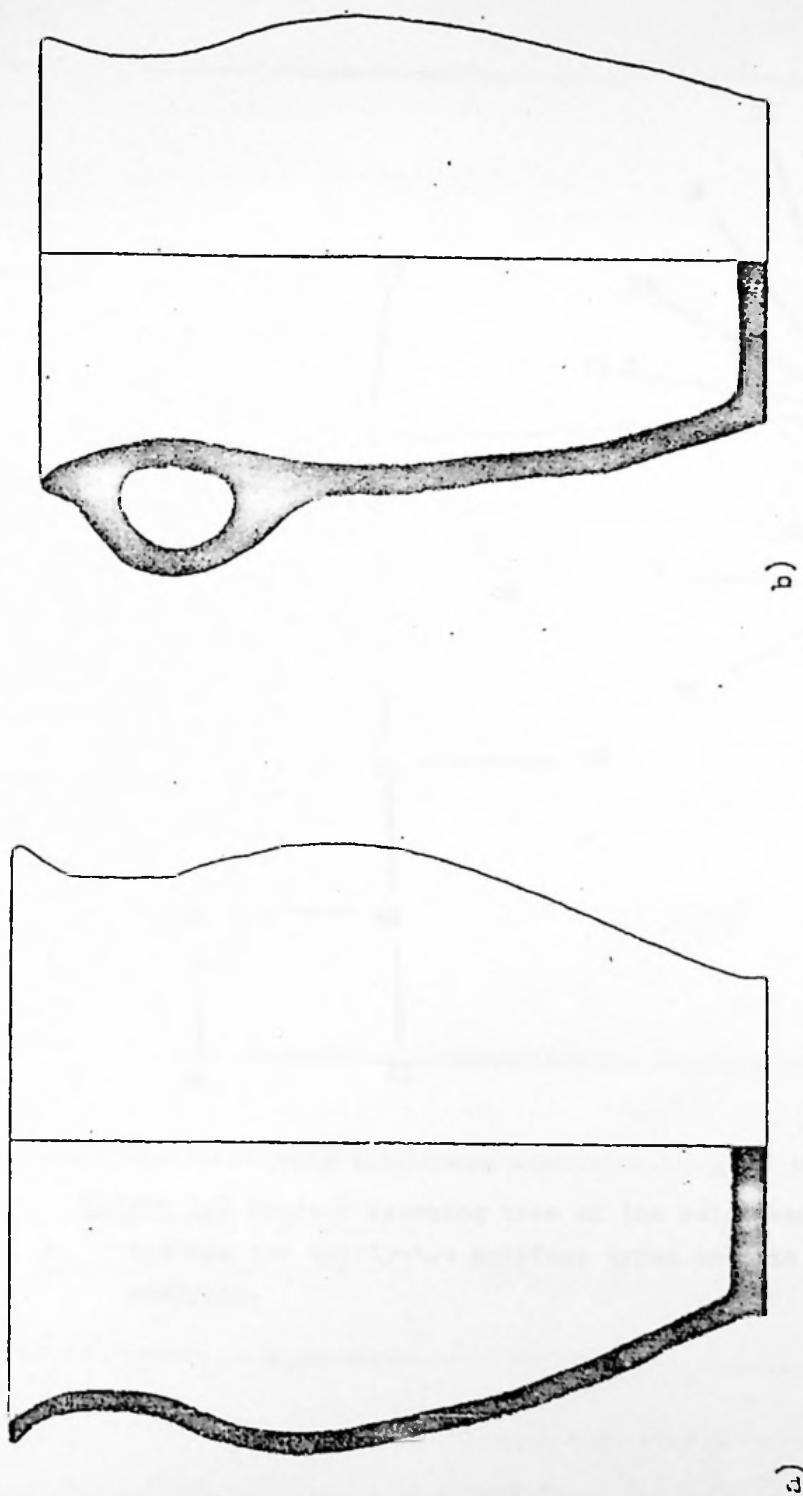


Figure 2.1 Phase definitions based on the relative abundance of artifacts. (From Plog 1974:45).



Picture 3.1 a) "Topf", Všestaty, Bohemia; National Museum, Prague, Inv. No. 51437
b) Handled "Dopf", Jenštejn, Bohemia; National Museum, Prague,
Inv. No. 49703.





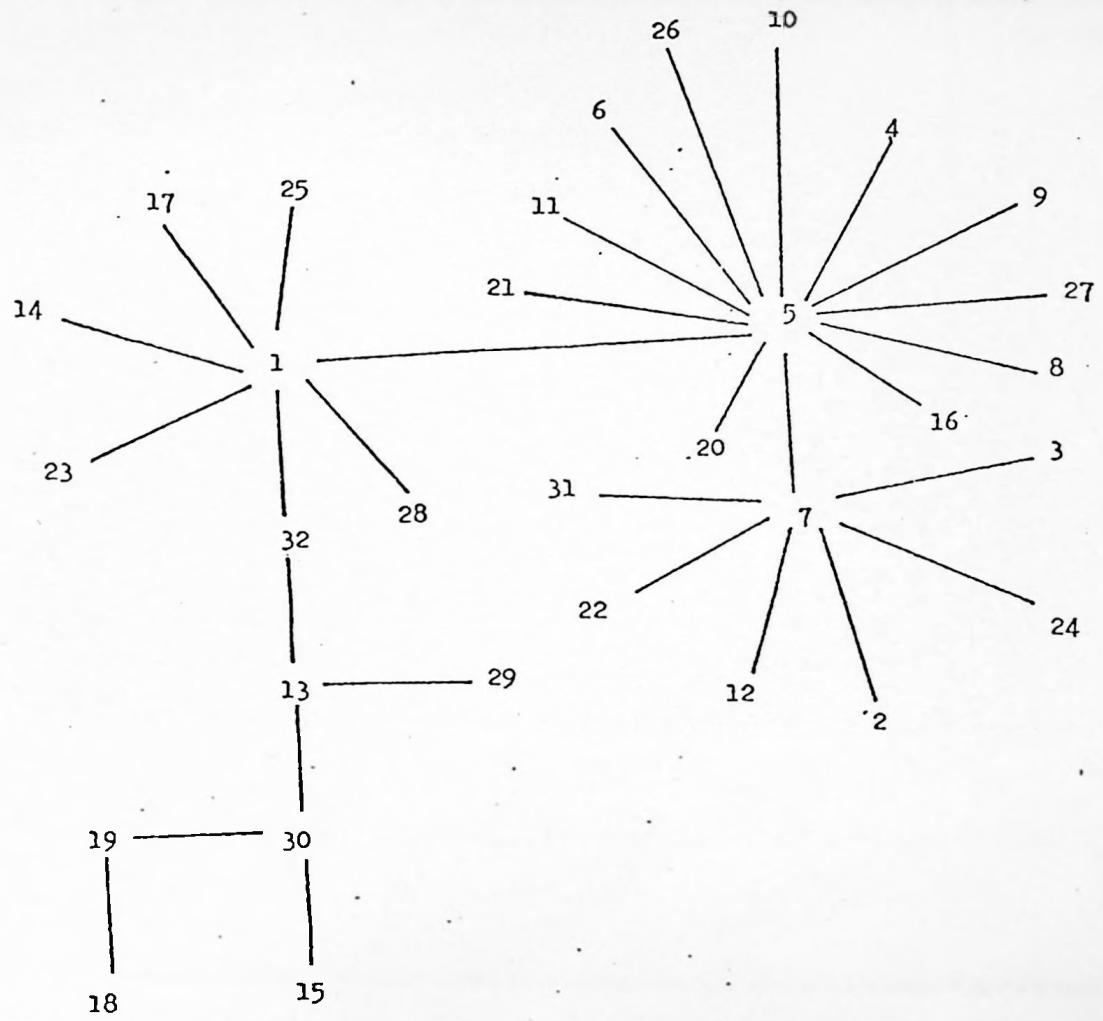


Figure 3.2 Minimum spanning tree of the relationships
between the thirty-two artifact types used in the
analysis.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

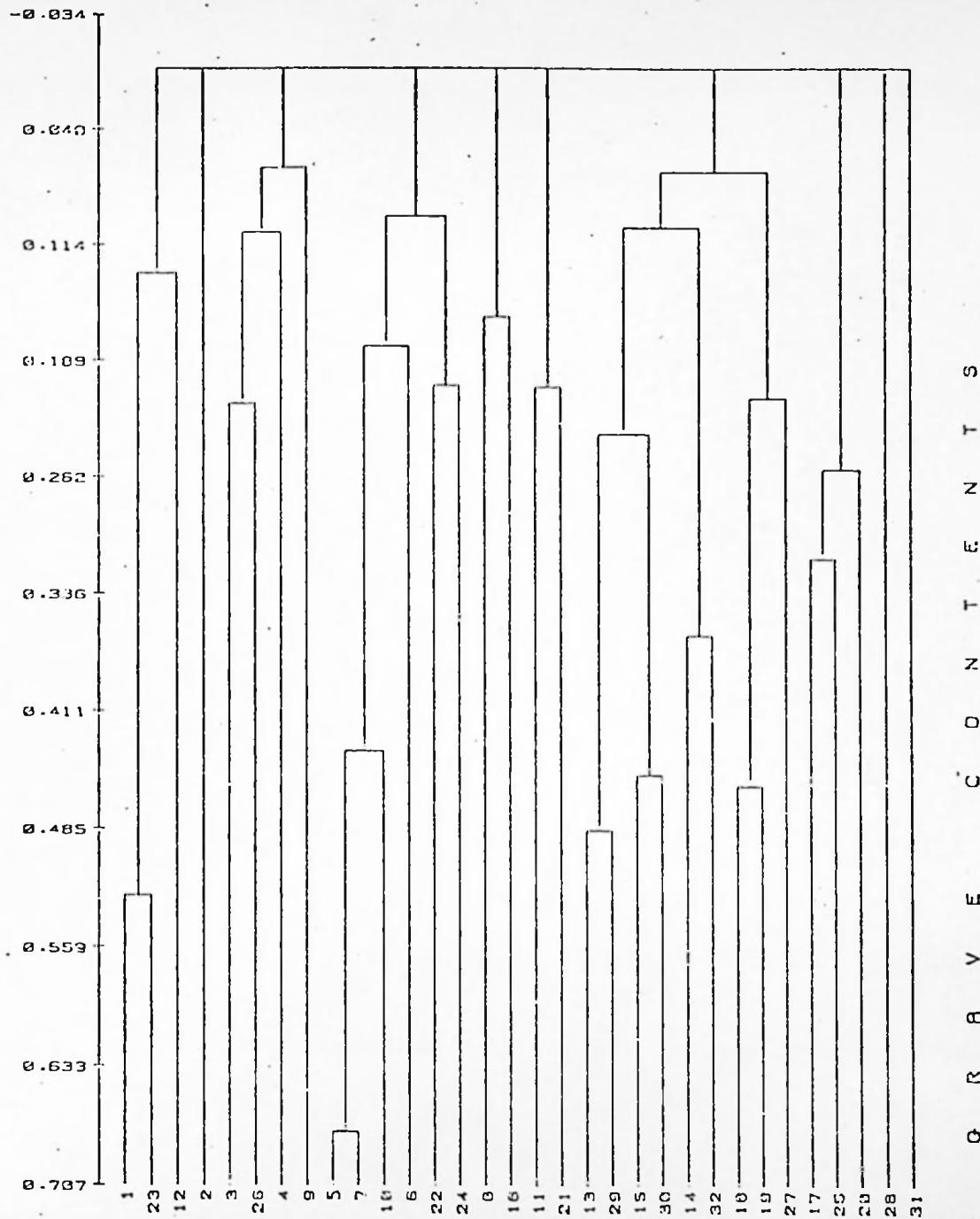


Figure 3.3 Double-linkage dendrogram of the relationships
between objects in all the graves used in the analysis.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Bar-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

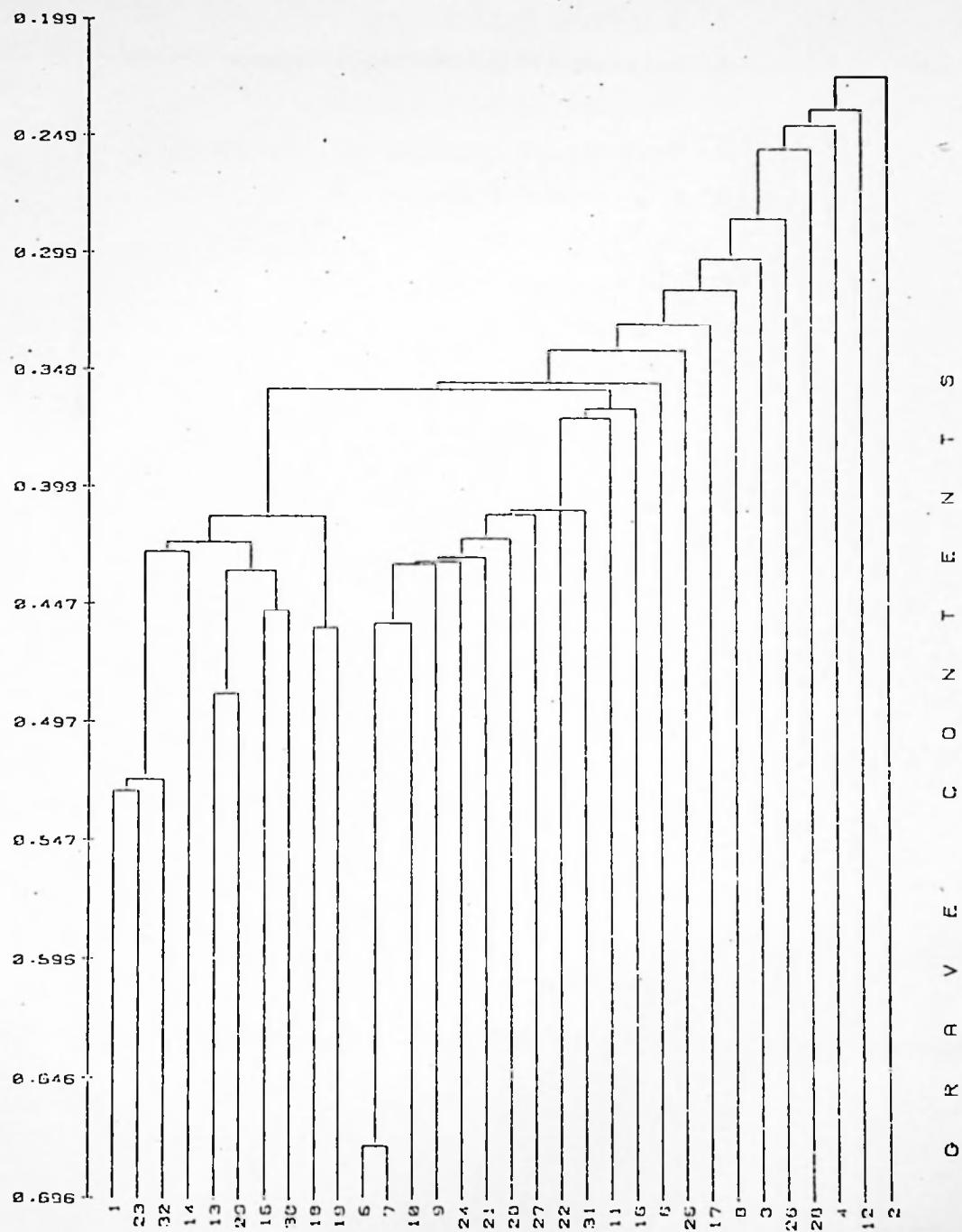


Figure 3.4 Single-link dendrogram of the relationships between objects in all the graves used in the analysis.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Shards
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

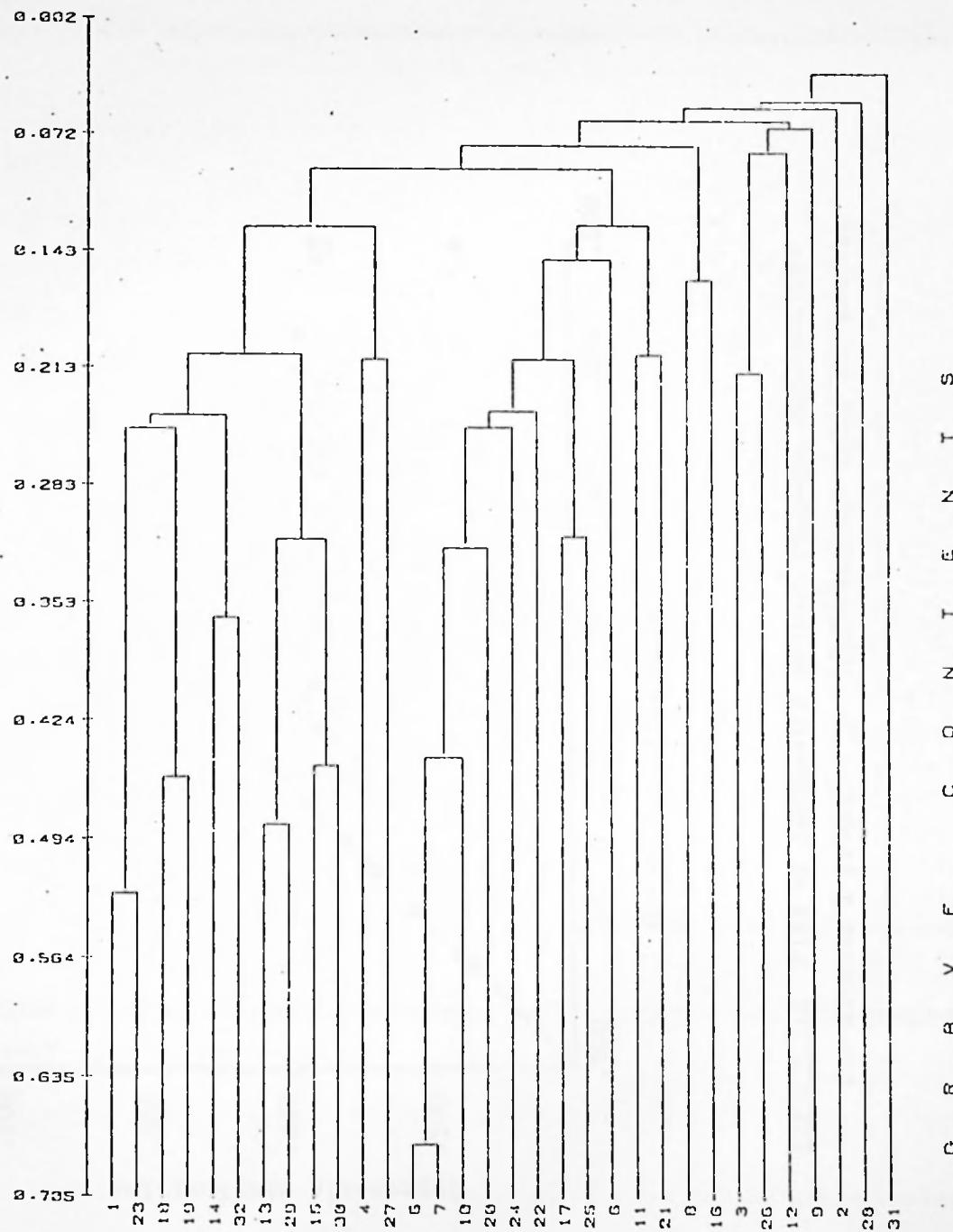
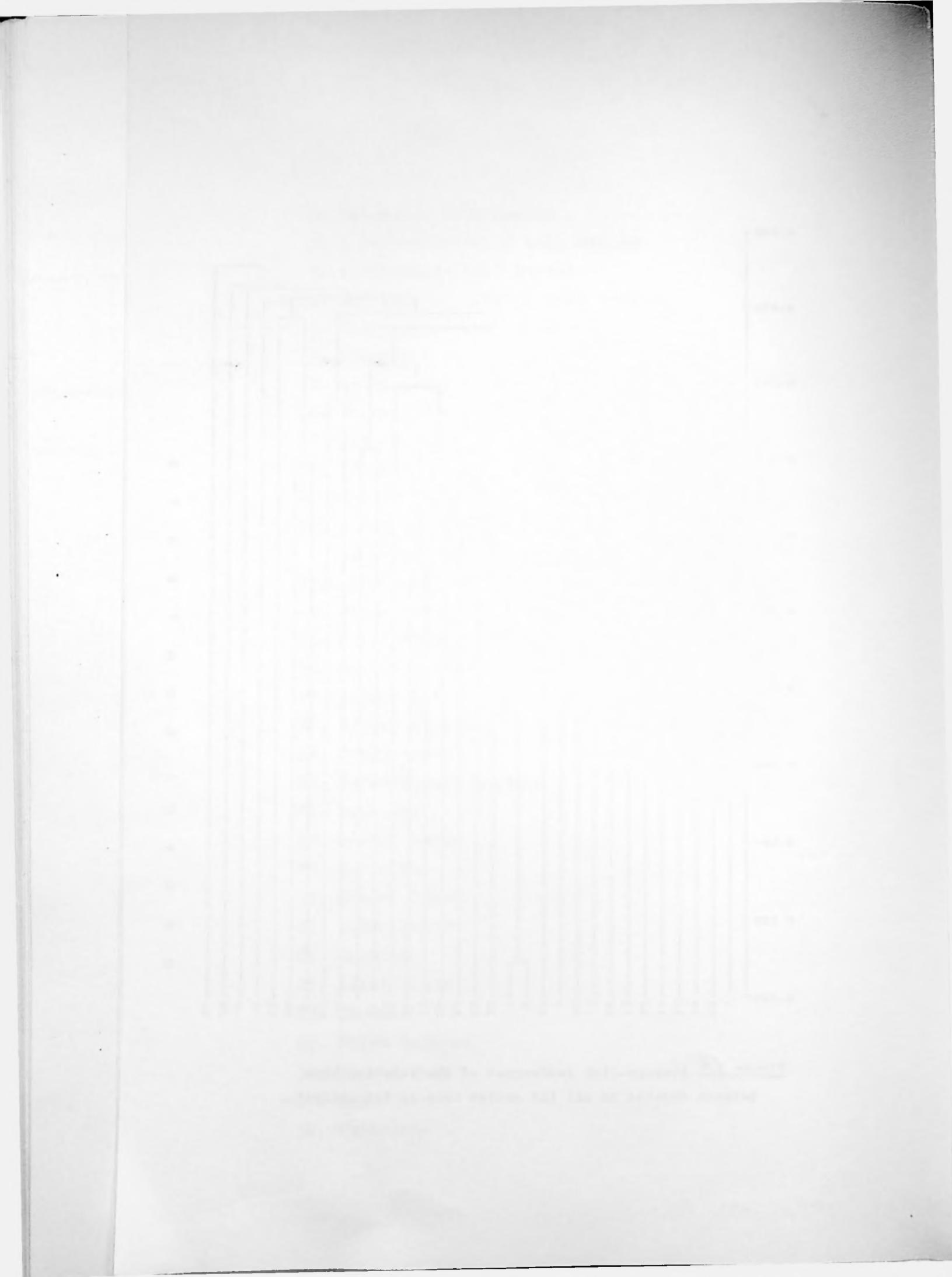


Figure 3.5 Average-link dendrogram of the relationships between objects in all the graves used in the analysis.



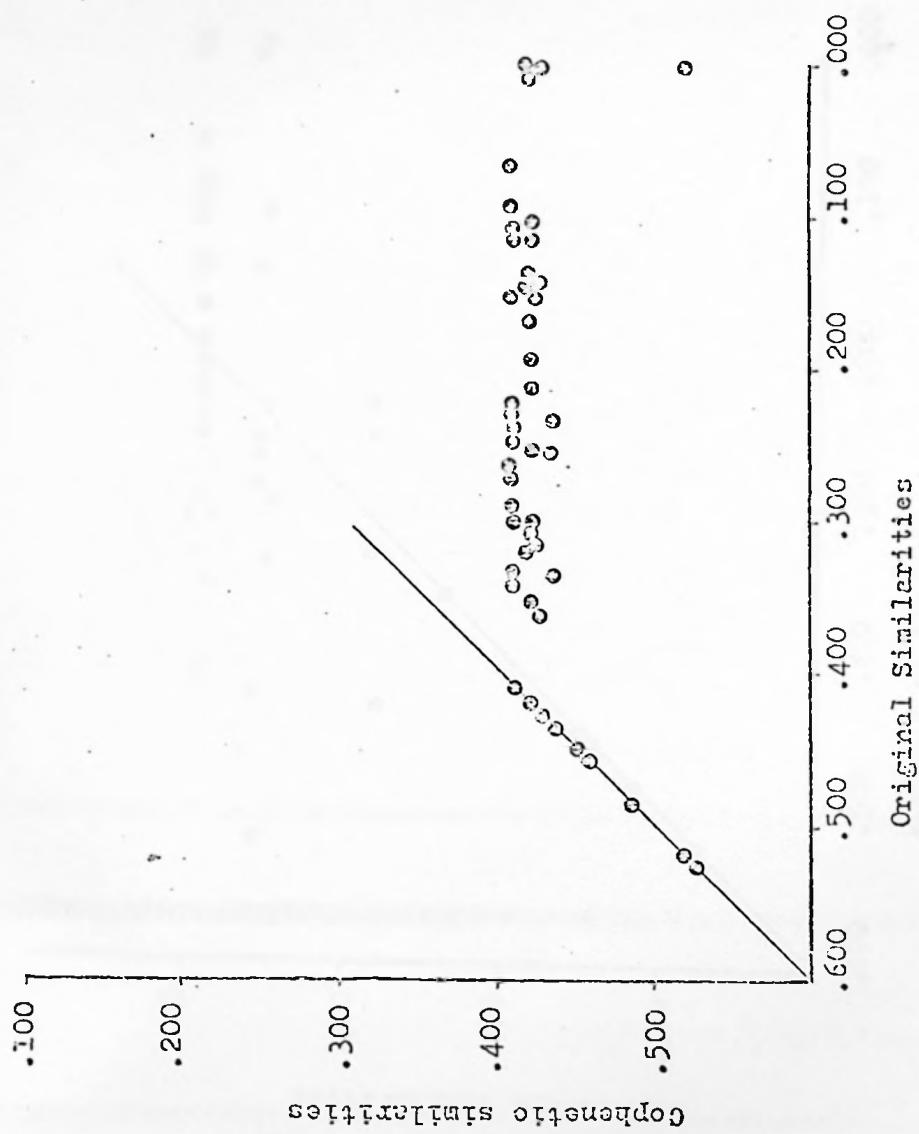


Figure 3.6 Plot of cophenetic against original similarities for Cluster 1 produced by Single-linkage using all graves.



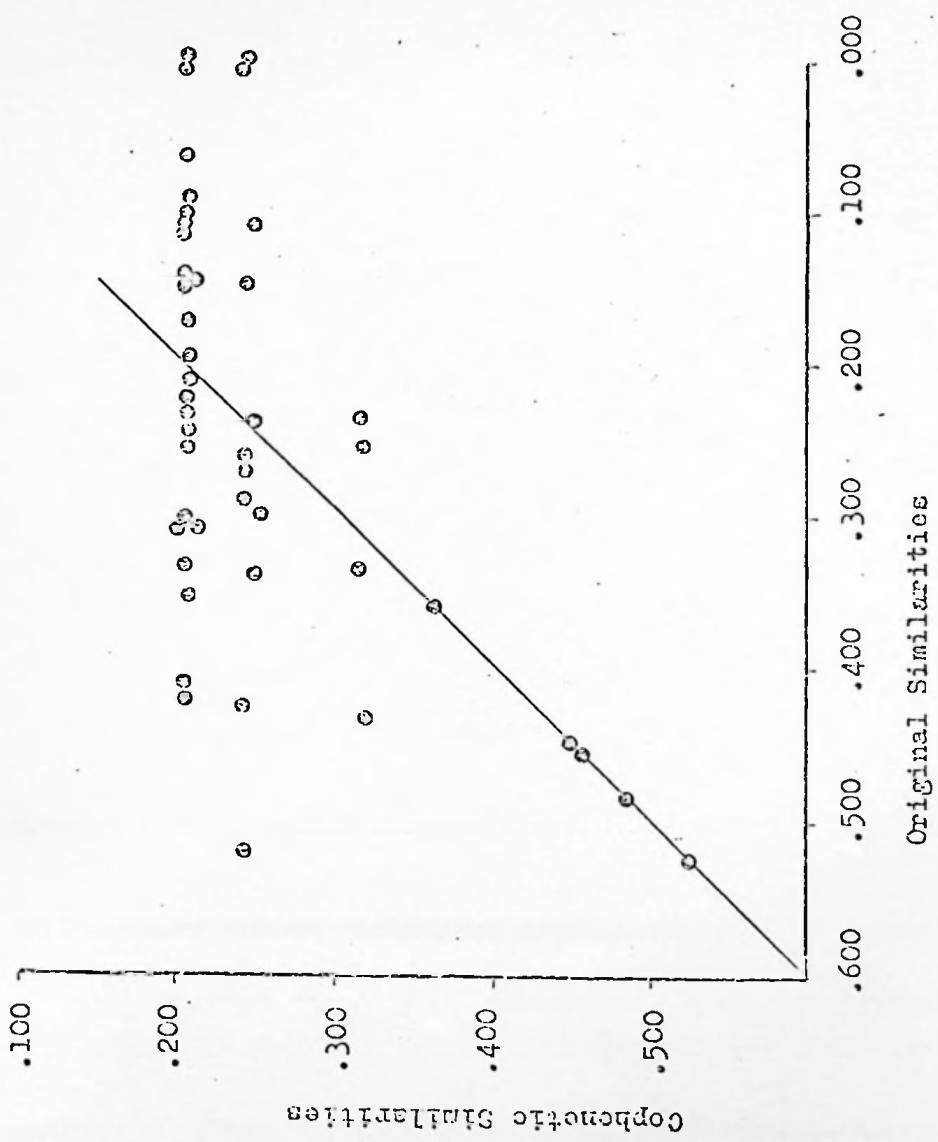


Figure 3.7 Plot of cophenetic against original similarities for Cluster 1 produced by Average-linkage using all graves.

- | | Type |
|-----|---|
| 1. | Decorated Bell Beaker |
| 2. | Decorated Handled Bell Beaker |
| 3. | Undecorated Bell Beaker |
| 4. | Undecorated Handled Bell Beaker |
| 5. | Undecorated Jug |
| 6. | Decorated Jug |
| 7. | Undecorated Bowl |
| 8. | Decorated Bowl |
| 9. | Polypod Bowl |
| 10. | 'Topf' |
| 11. | Handled 'Topf' |
| 12. | Other Vessel (not belonging
to any of the defined types) |
| 13. | Arrowhead |
| 14. | Stone Axe |
| 15. | Flint Flake |
| 16. | Bone Pendant |
| 17. | Copper Awl |
| 18. | Copper Dagger |
| 19. | Wrist-guard |
| 20. | V-perforated Button |
| 21. | Bone Awl |
| 22. | Animal Bones |
| 23. | Ear-rings |
| 24. | Copper Sheet |
| 25. | Amber Button |
| 26. | Amphora |
| 27. | Flint Blade |
| 28. | Sherds |
| 29. | Flint Scraper |
| 30. | Boar's Tusk |
| 31. | Urn |
| 32. | Whetstone |

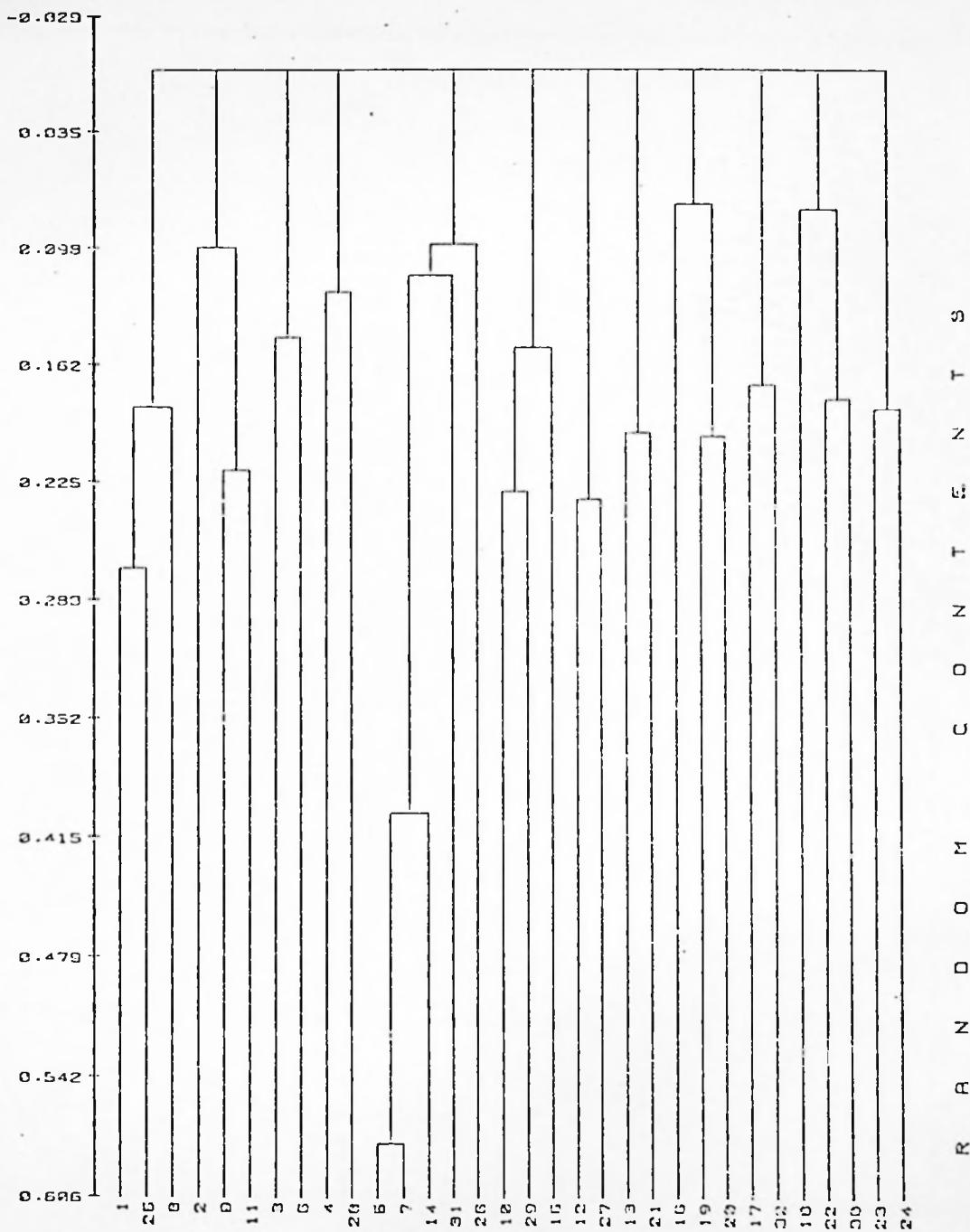


Figure 3.8 Double-link dendrogram of the relationships
between objects in randomly generated data.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Shards
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

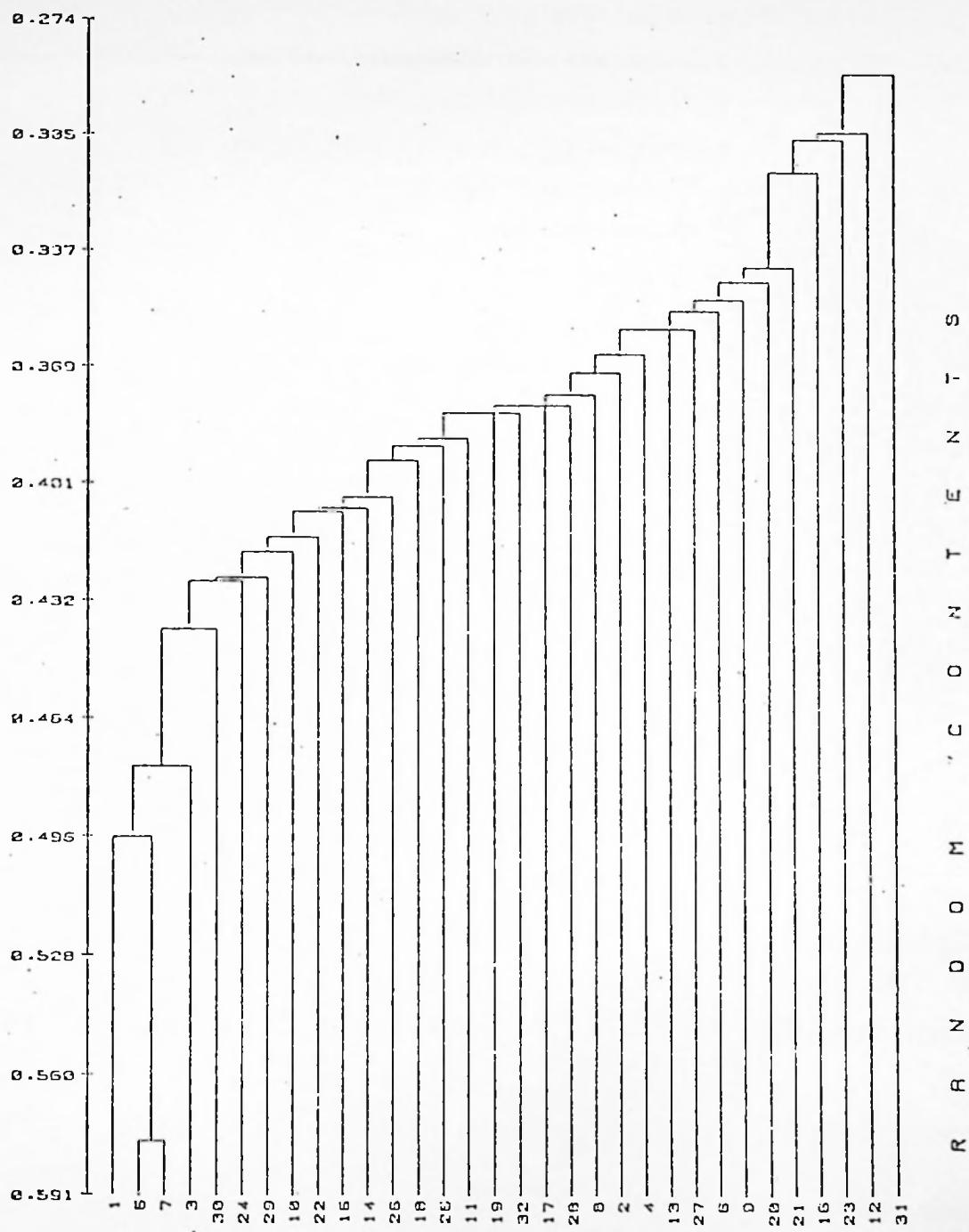


Figure 3.9 Single-link dendrogram of the relationships between objects in randomly generated data.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

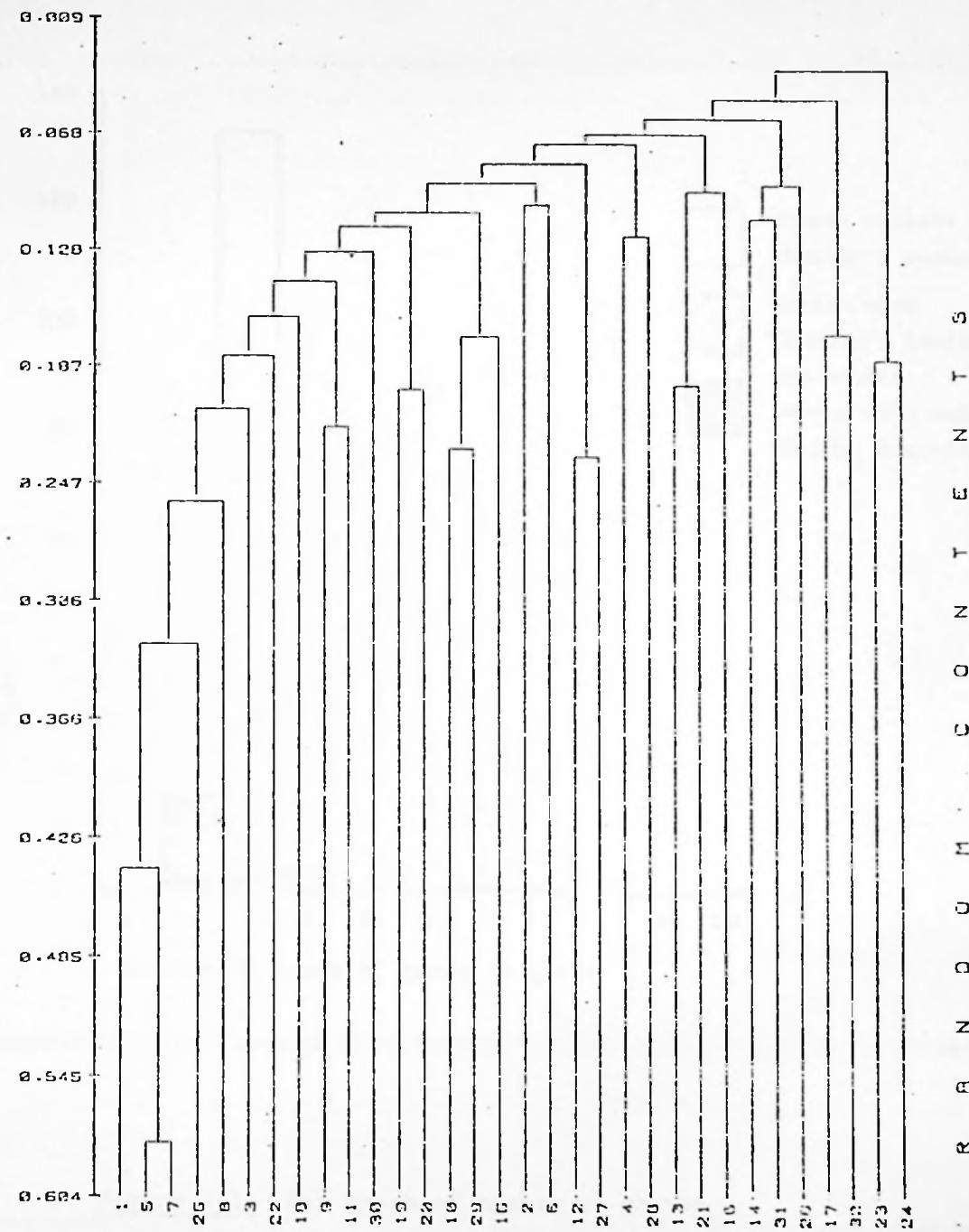


Figure 3.10 Average-link dendrogram of the relationships between objects in randomly generated data.



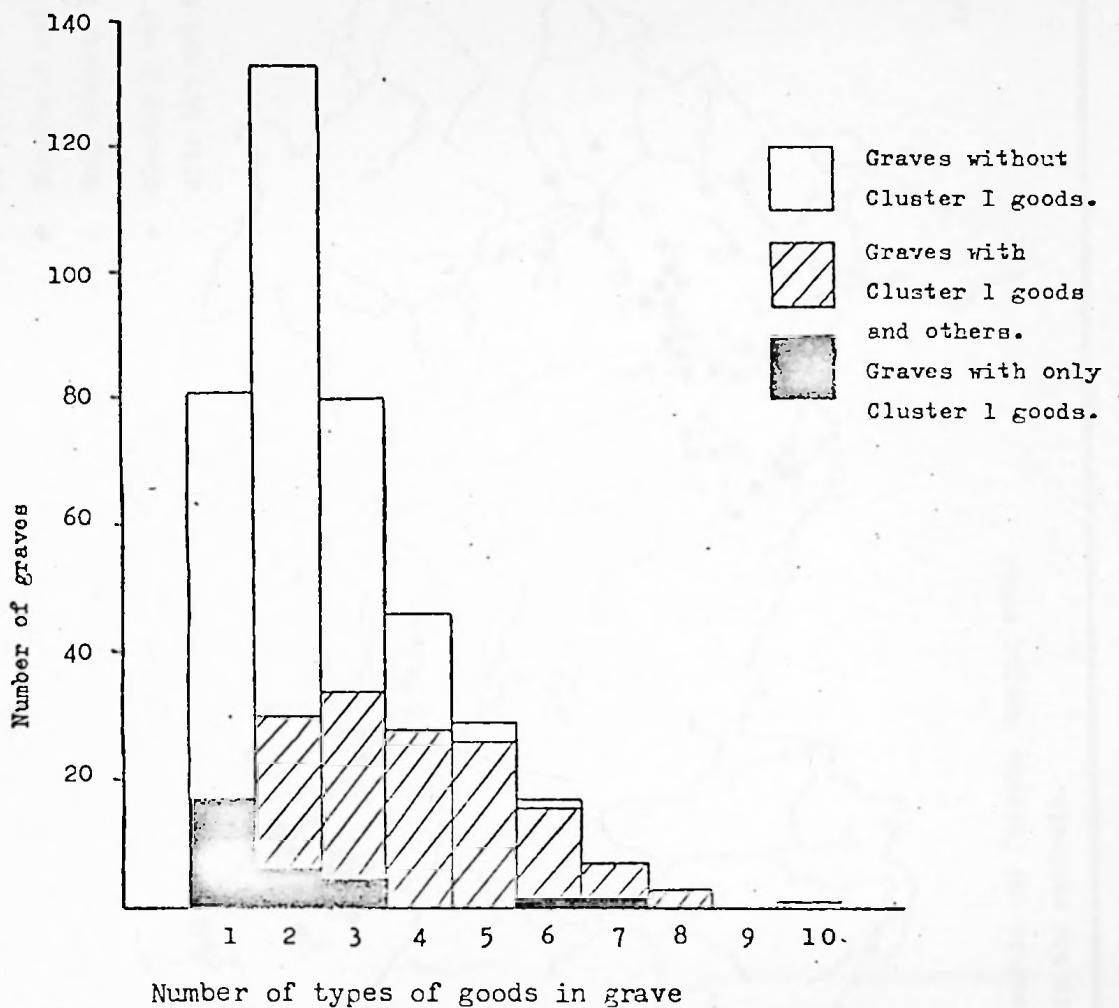
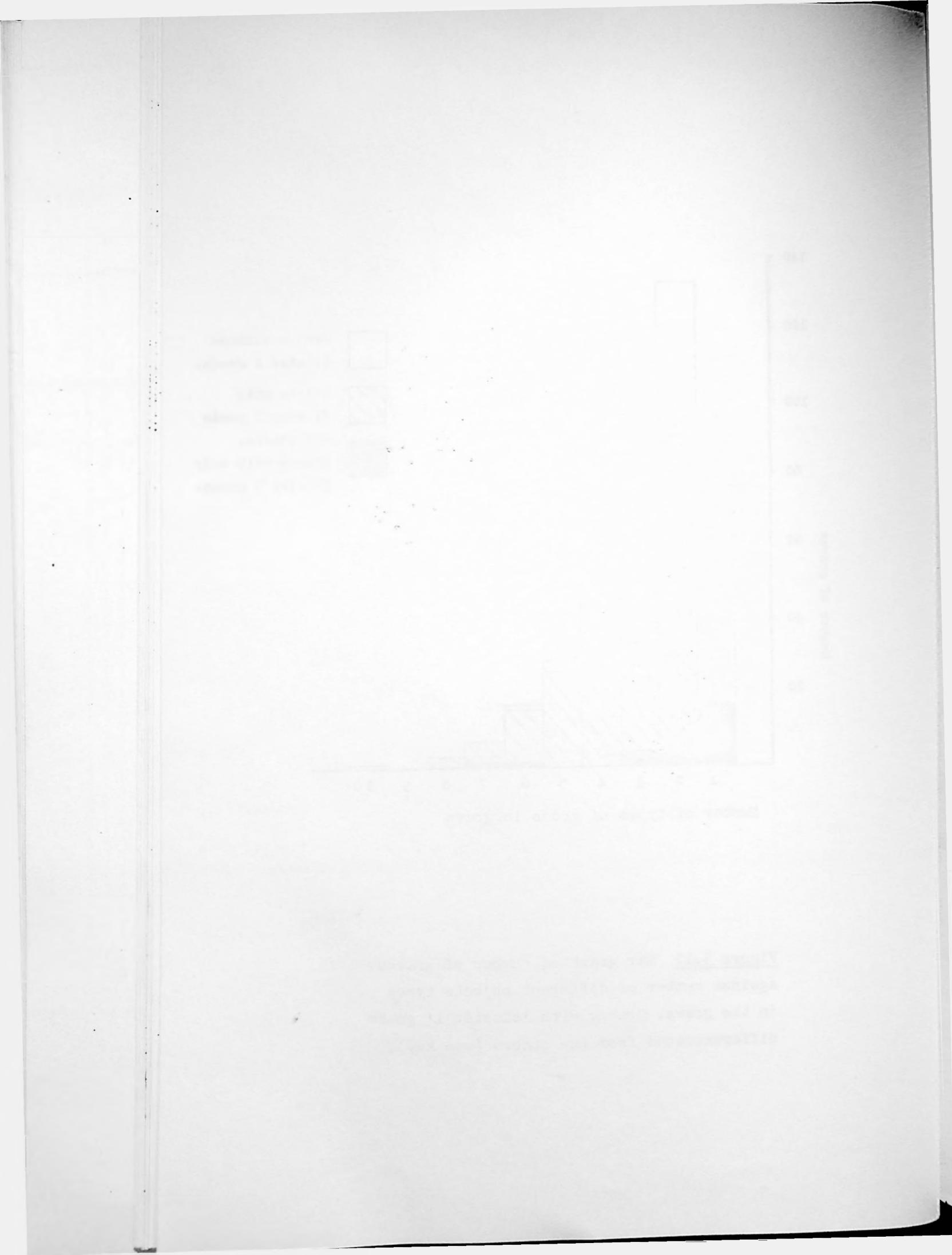
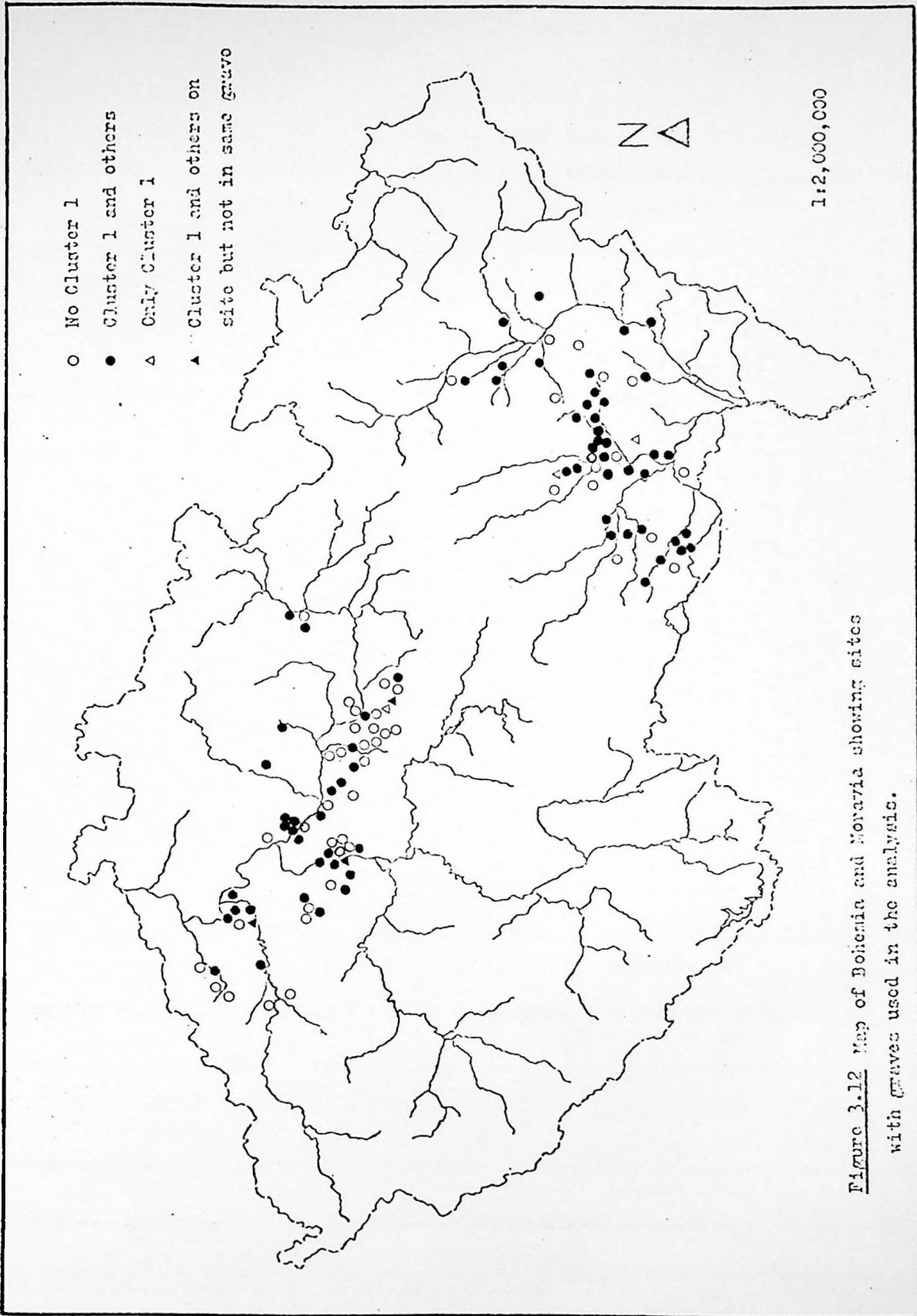


Figure 3.11 Bar graph of number of graves against number of different objects types in the grave. Graves with 'cluster 1' goods differentiated from the others (see key).





Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Shards
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

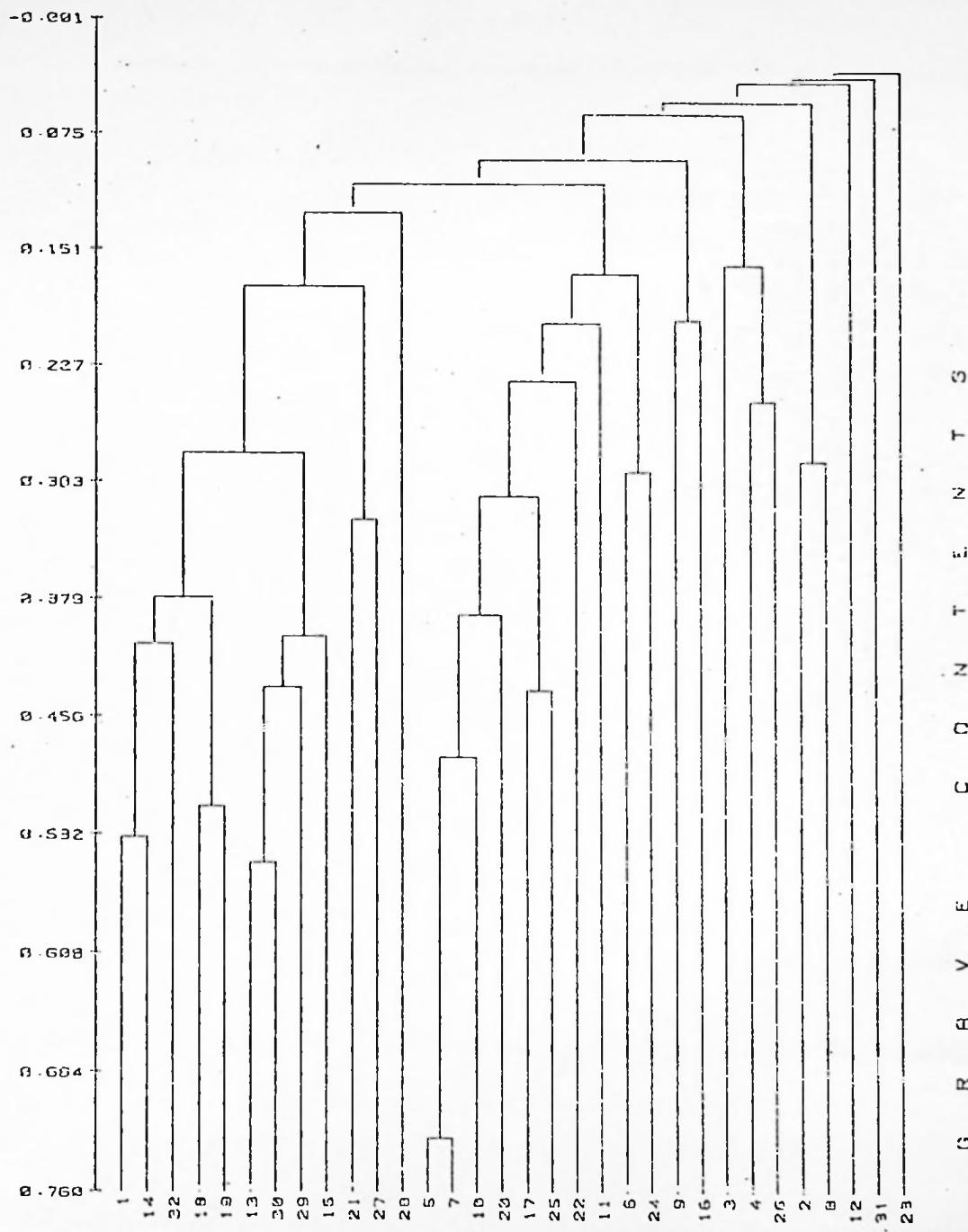


Figure 3.13 Average-link dendrogram of the relationships between objects, Moravian graves only.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Whetstone

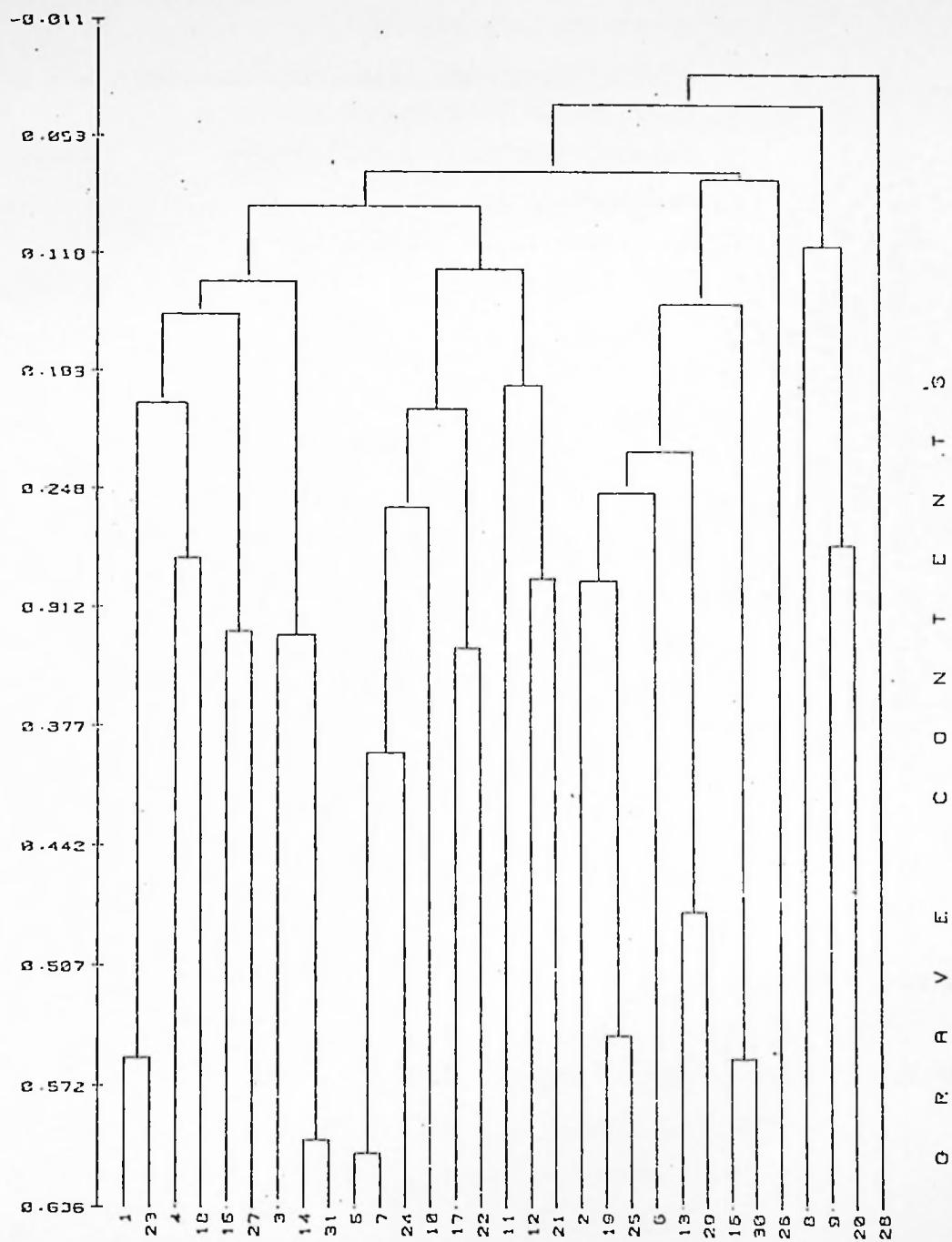


Figure 3.14 Average-link dendrogram of the relationships between objects, Bohemian graves only.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

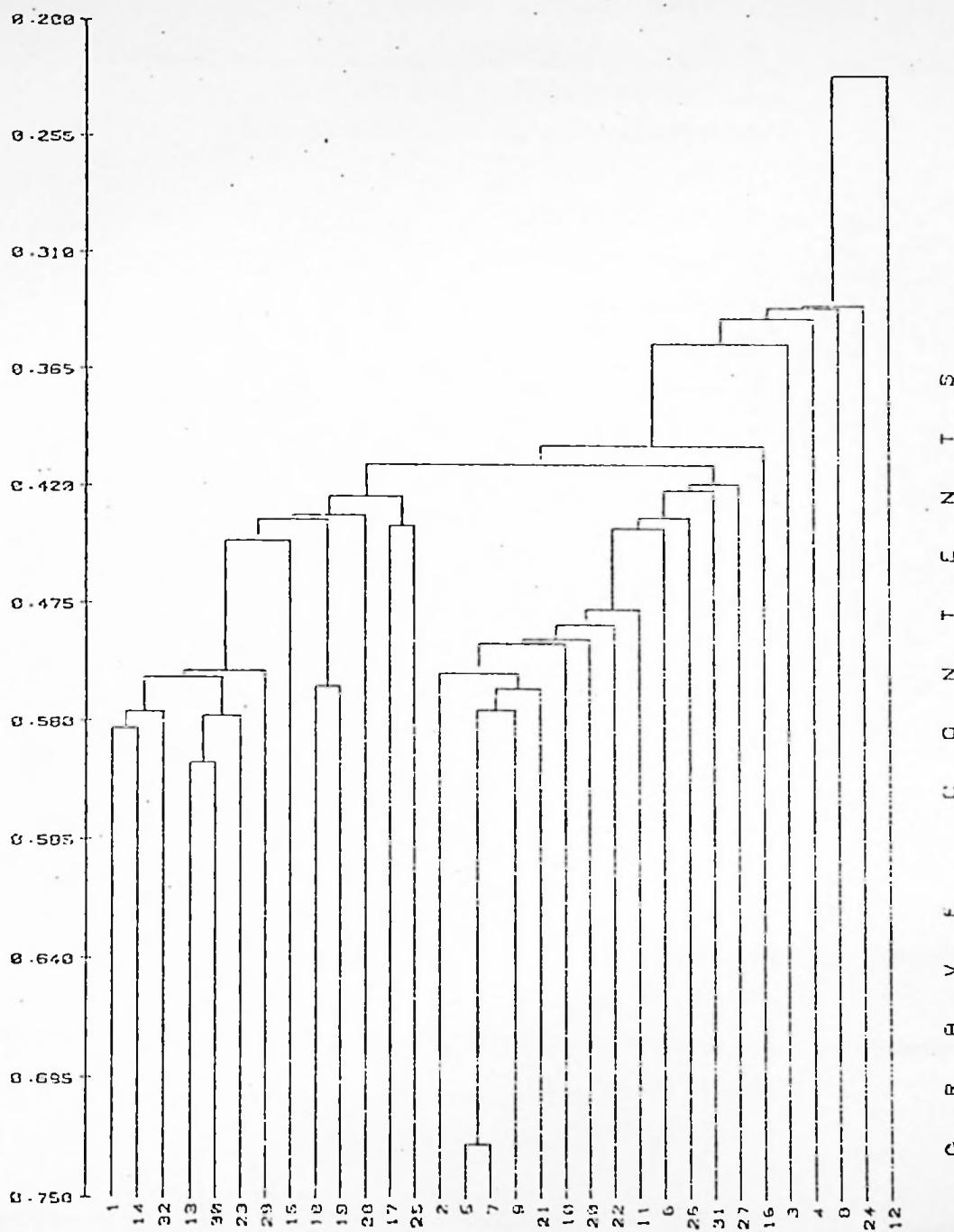


Figure 3.15 Single-link dendrogram of the relationships between objects, Moravian graves only.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polyped Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Whetstone

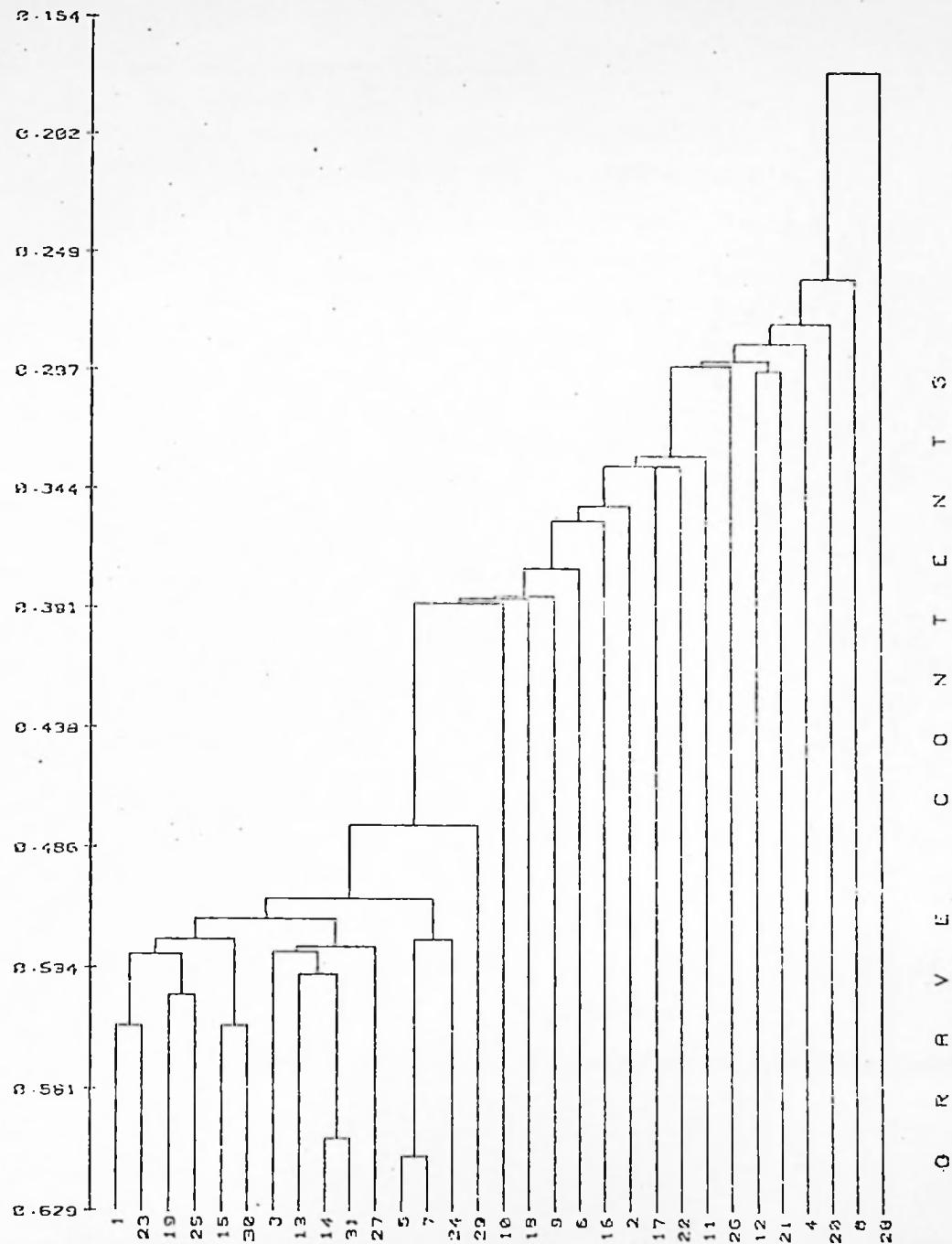


Figure 3.16 Single-link dendrogram of the relationships between objects, Bohemian graves only.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. "Topf"
11. Handled "Topf"
12. Other Vessel (not belonging to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Bar-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

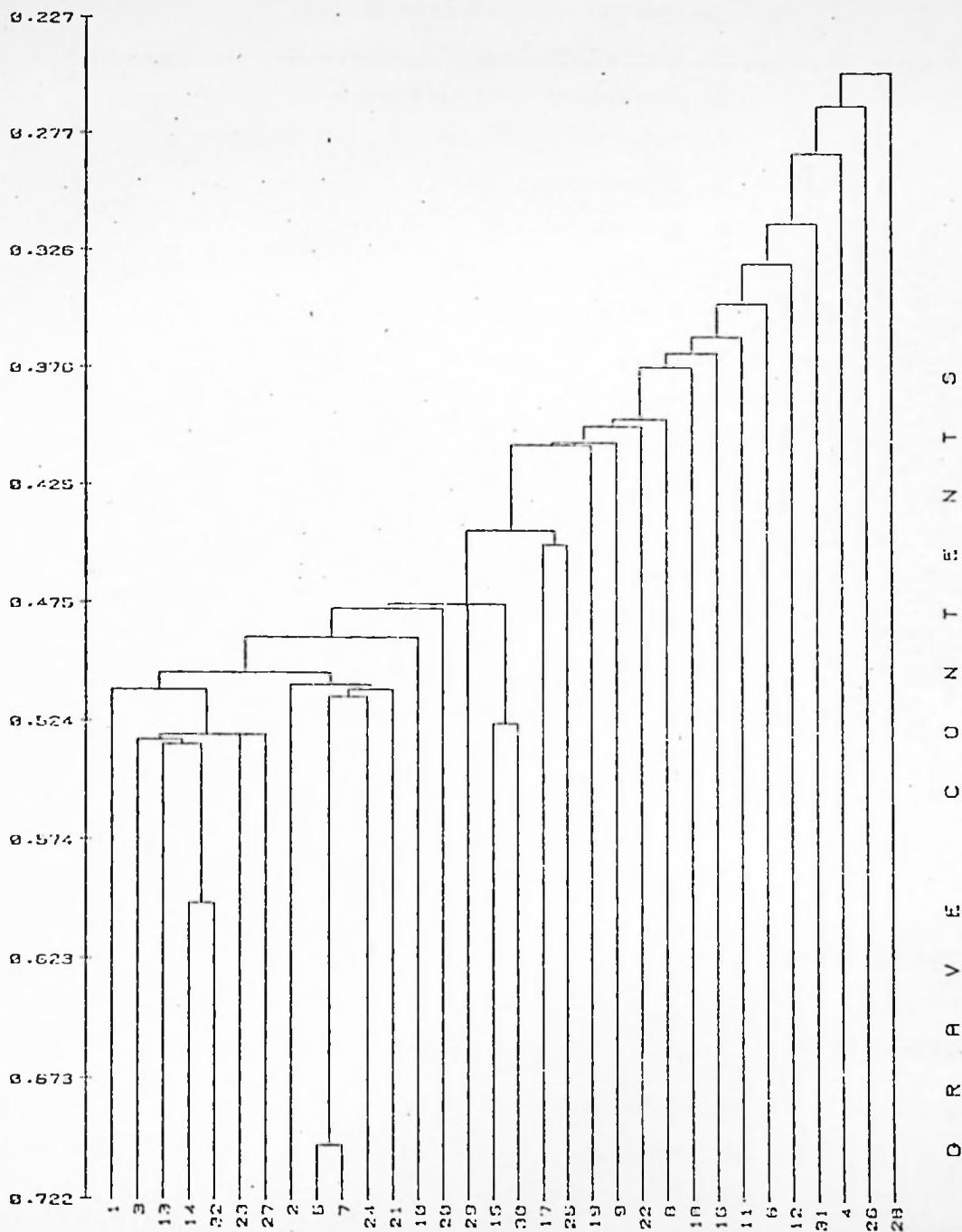


Figure 3.17 Single-link dendrogram of the relationships between objects with the graves randomly divided into two halves, Group 1.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other Vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Bone Awl
22. Animal Bones
23. Ear-rings
24. Copper Sheet
25. Amber Button
26. Amphora
27. Flint Blade
28. Sherds
29. Flint Scraper
30. Boar's Tusk
31. Urn
32. Whetstone

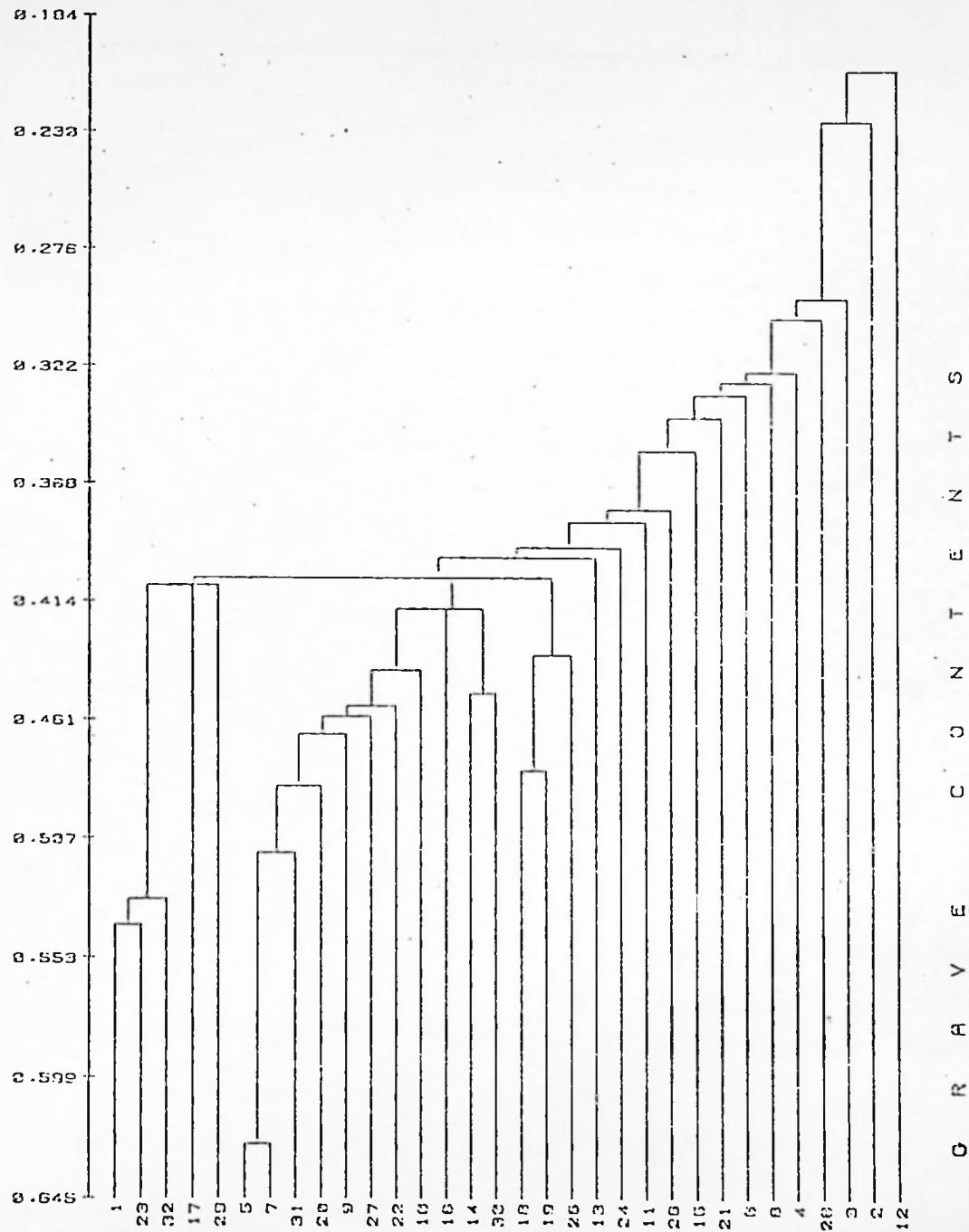


Figure 3.18 Single-link dendrogram of the relationships between objects with the graves randomly divided into two halves, Group 2.

Type

1. Decorated Bell Beaker
2. Undecorated Bell Beaker
3. Undecorated Jug
4. Decorated Jug
5. Undecorated Bowl
6. Decorated Bowl
7. Polypod Bowl
8. 'Topf'
9. Handled 'Topf'
10. Other vessel (not belonging
to any one of the defined types)
11. Arrowhead
12. Stone Axe
13. Flint Flake
14. Bone Pendant
15. Copper Awl
16. Copper Dagger
17. Wrist-guard
18. V-perforated Button
19. Bone Awl
20. Animal Bones
21. Amber Button
22. Amphora
23. Flint Blade
24. Sherds
25. Flint Scraper
26. Boar's Tusk
27. Urn

C R A V E C O N T E N T S

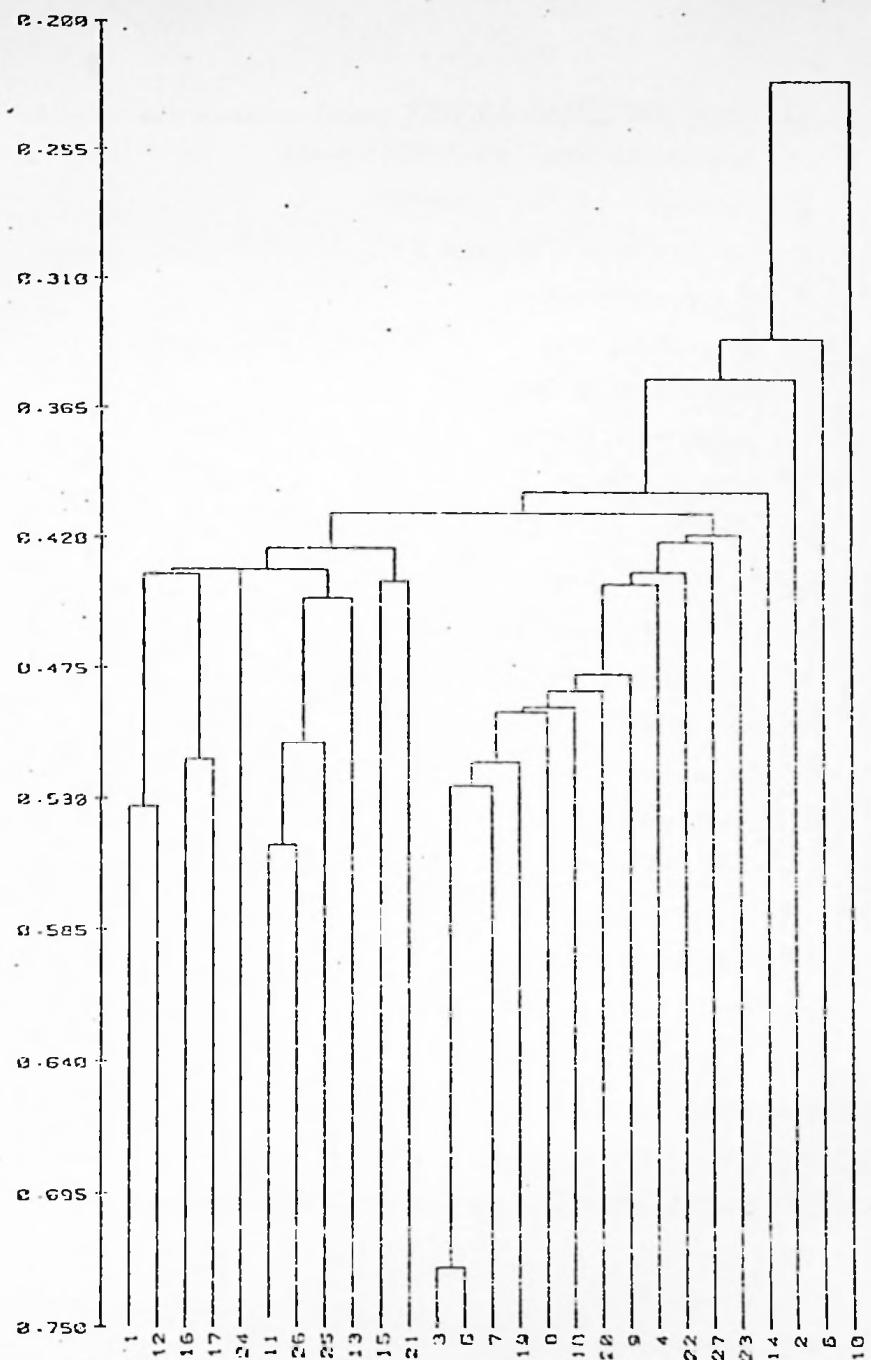


Figure 3.19 Single-link dendrogram of the relationships between objects, Moravian graves only, rare objects removed.

Type

1. Decorated Bell Beaker
2. Decorated Handled Bell Beaker
3. Undecorated Bell Beaker
4. Undecorated Handled Bell Beaker
5. Undecorated Jug
6. Decorated Jug
7. Undecorated Bowl
8. Decorated Bowl
9. Polypod Bowl
10. 'Topf'
11. Handled 'Topf'
12. Other vessel (not belonging
to any of the defined types)
13. Arrowhead
14. Stone Axe
15. Flint Flake
16. Bone Pendant
17. Copper Awl
18. Copper Dagger
19. Wrist-guard
20. V-perforated Button
21. Animal Bones
22. Ear-rings
23. Copper Sheet
24. Amphora
25. Flint Blade
26. Sherds
27. Flint Scraper

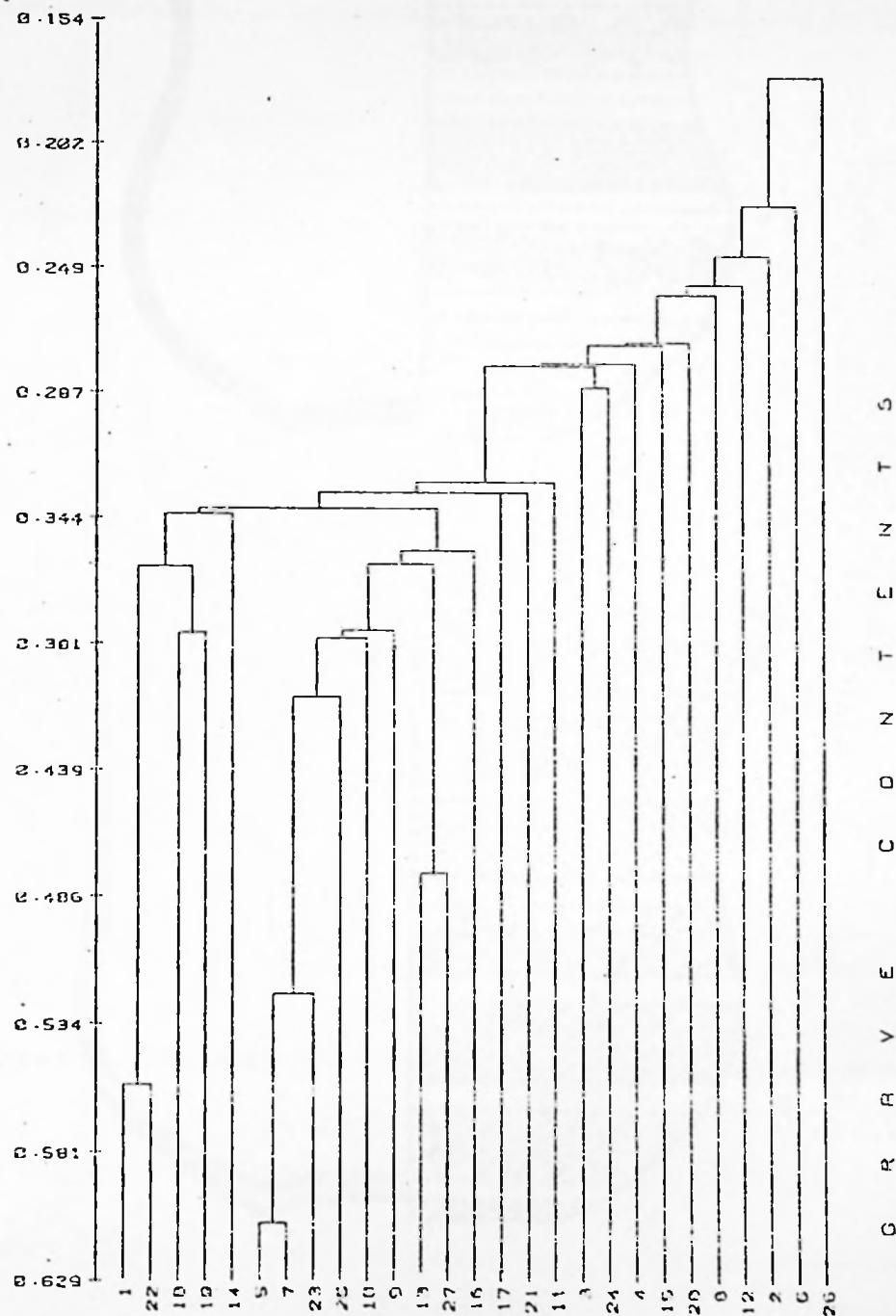
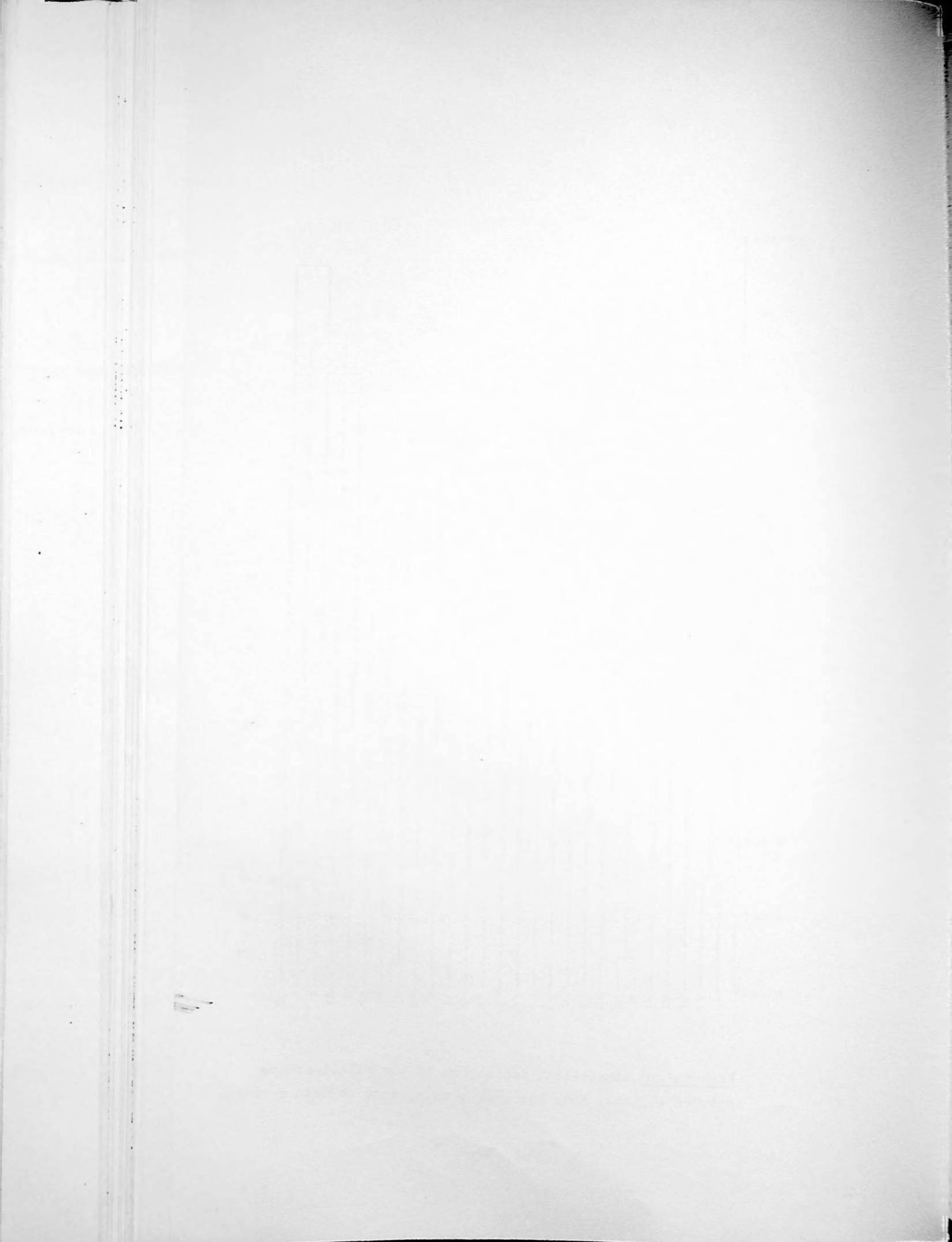


Figure 3.20 Single-link dendrogram of the relationships between objects, Bohemian graves only, rare objects removed.



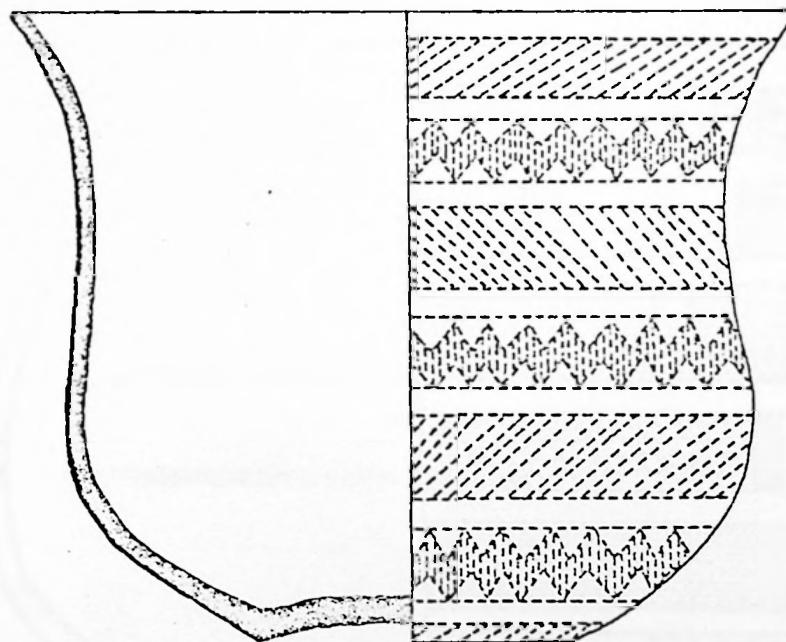
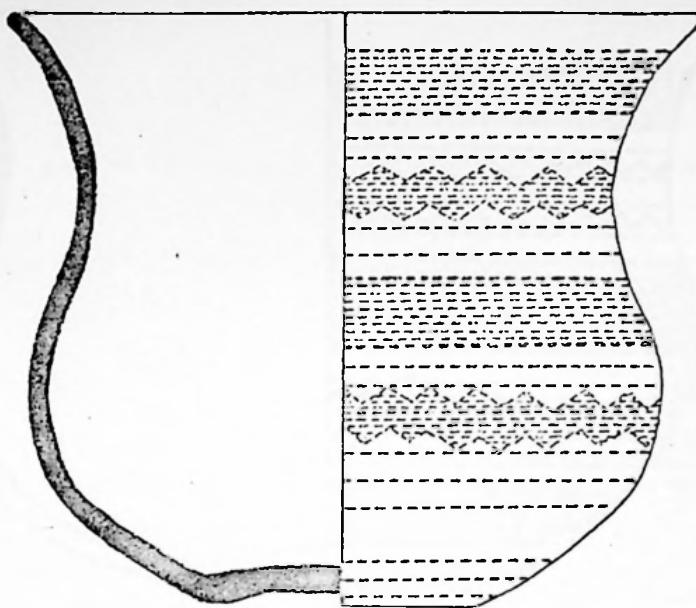


Figure 4.1 Bell Beakers from grave 2 at Bylany. Scale: both 3:4.



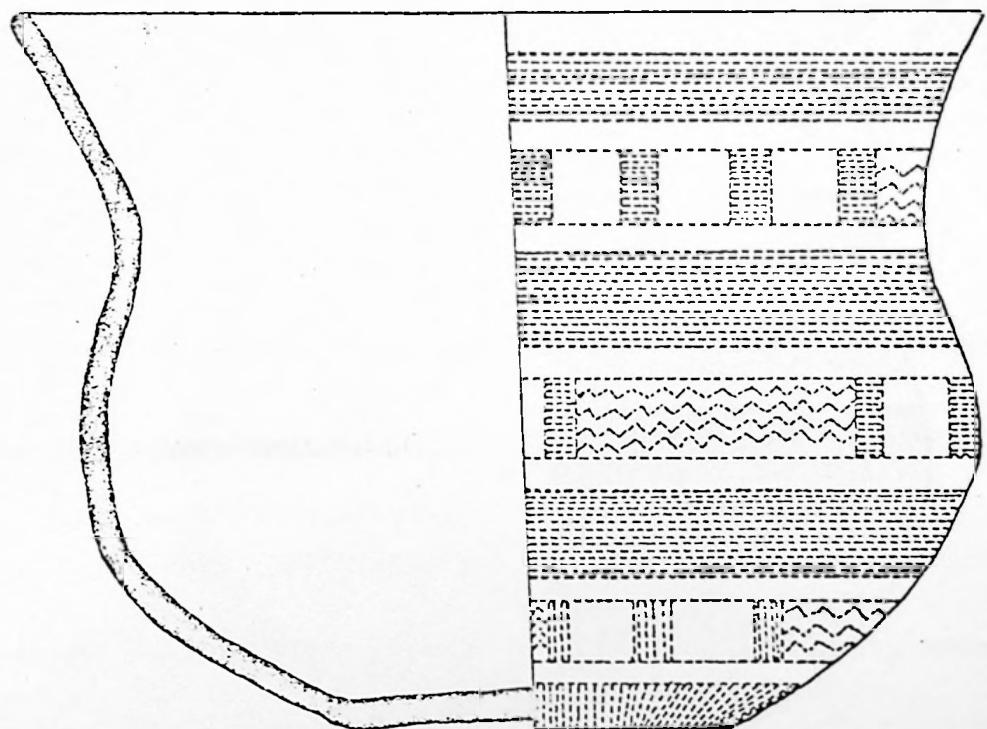
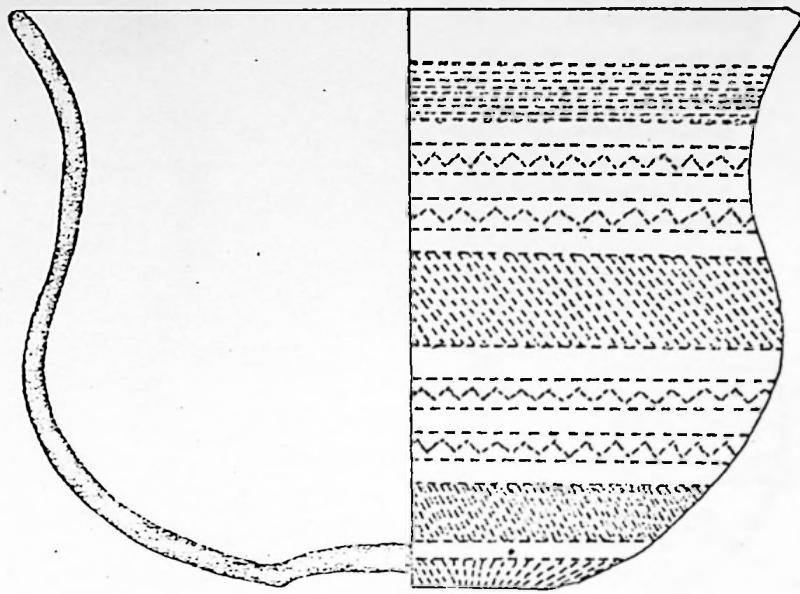


Figure 4.1 (continued) Bell Beakers from grave 2 at Bylany.
Scale: both 3:4.

... come to 5 more and another 200 (including) for most
that she called

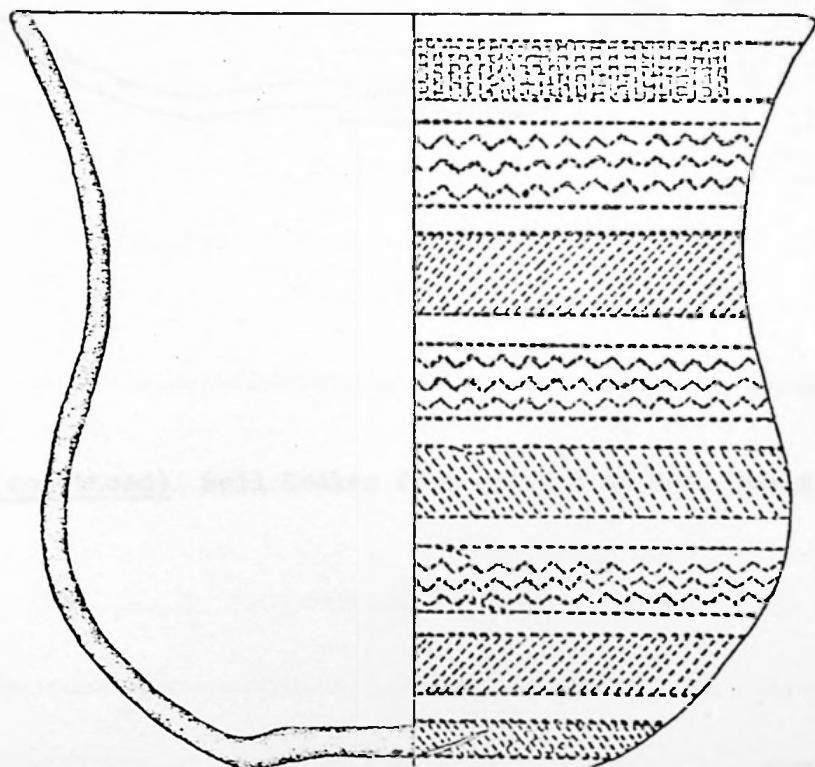
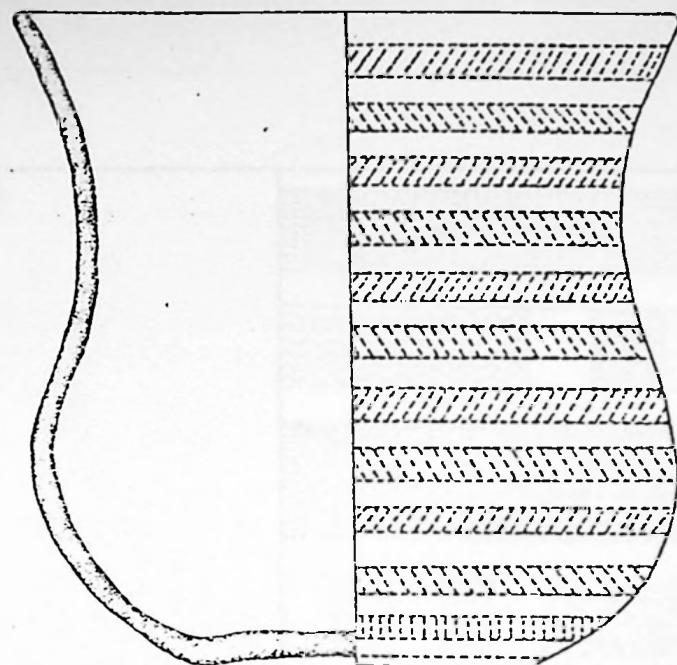
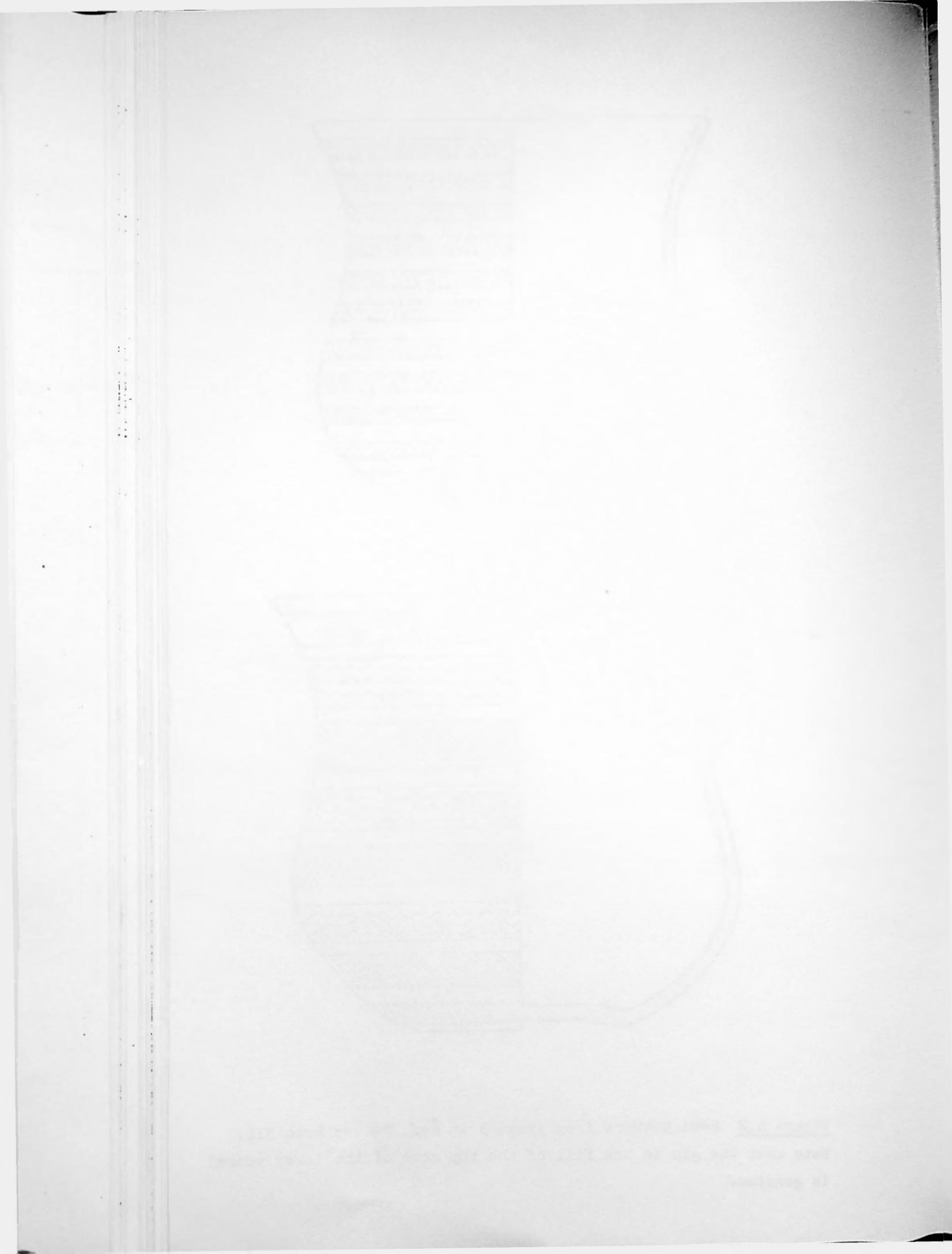


Figure 4.2 Bell Beakers from grave 3 at Rež. Scale: both 3:4.
Note that the gap in the fill of the top zone of the lower vessel
is genuine.



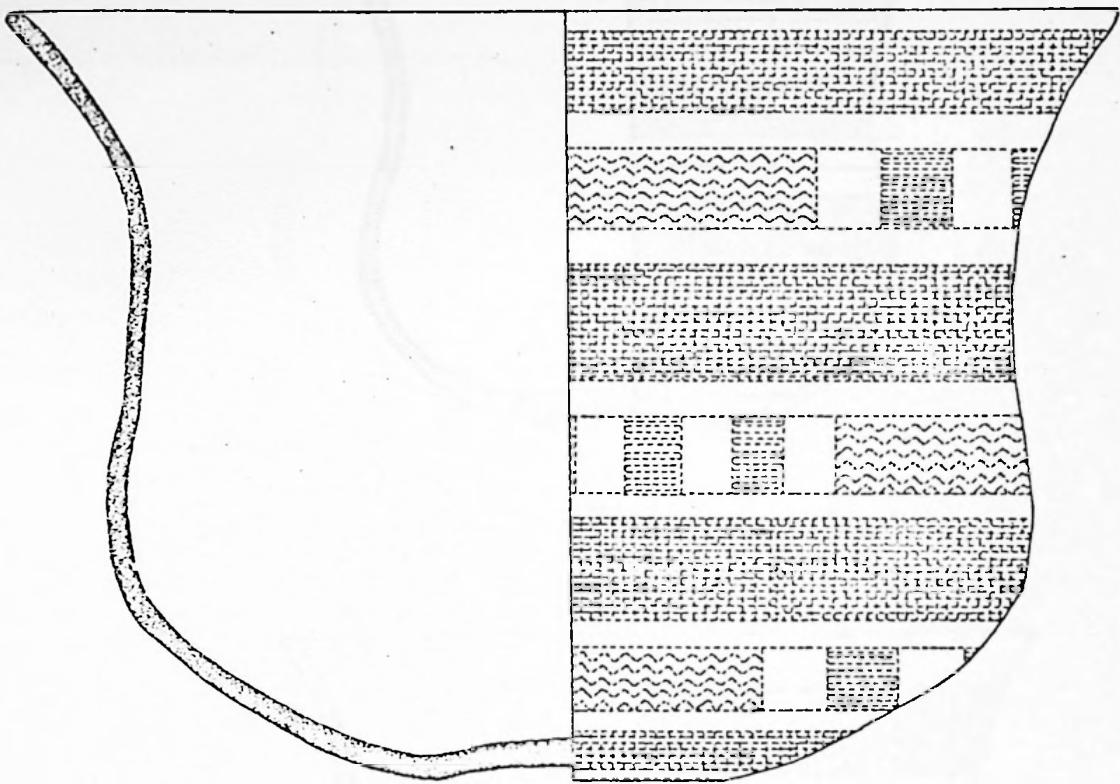


Figure 4.2 (continued) Bell Beaker from grave 3 at Rez. Scale: 3:5.



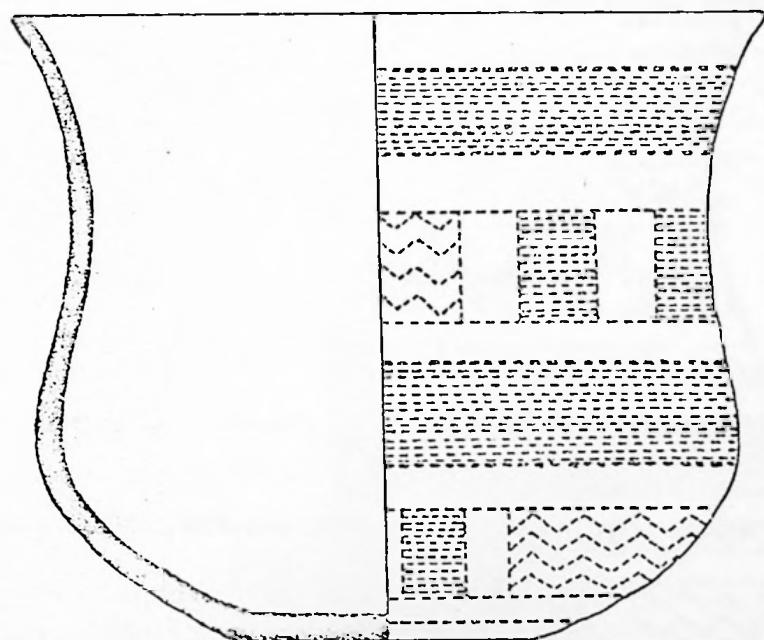
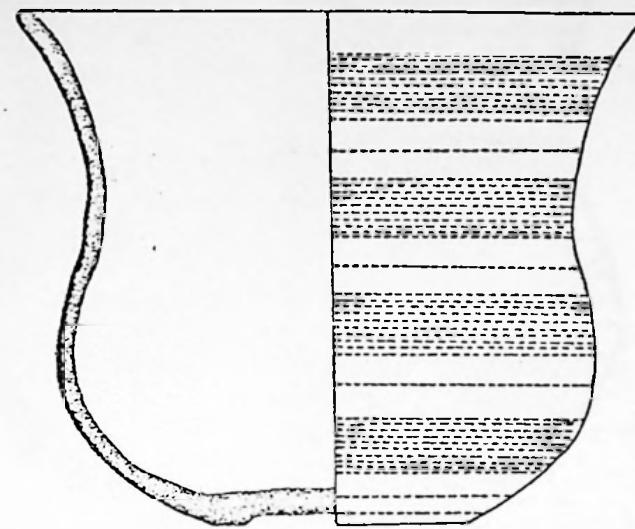
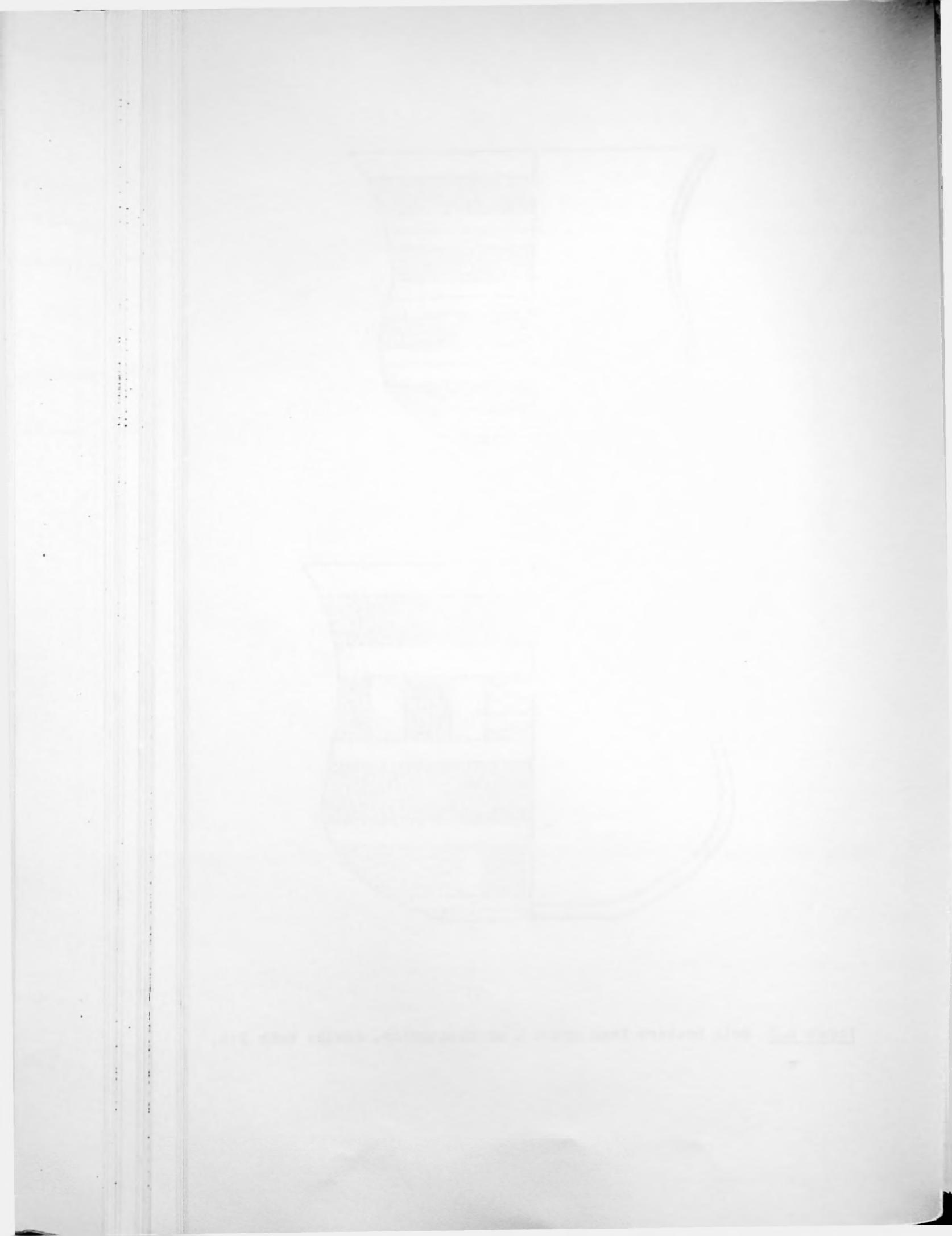


Figure 4.3 Bell Beakers from grave 4 at Neratovice. Scale: both 3:4.



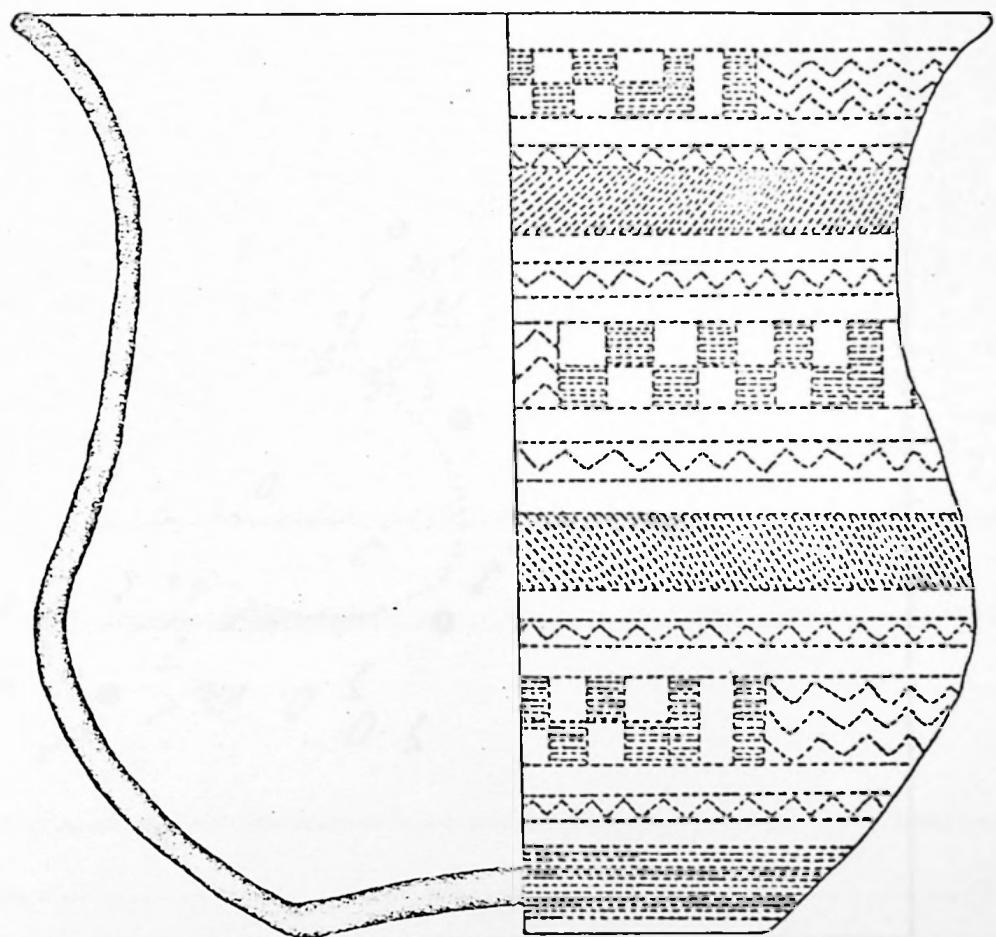
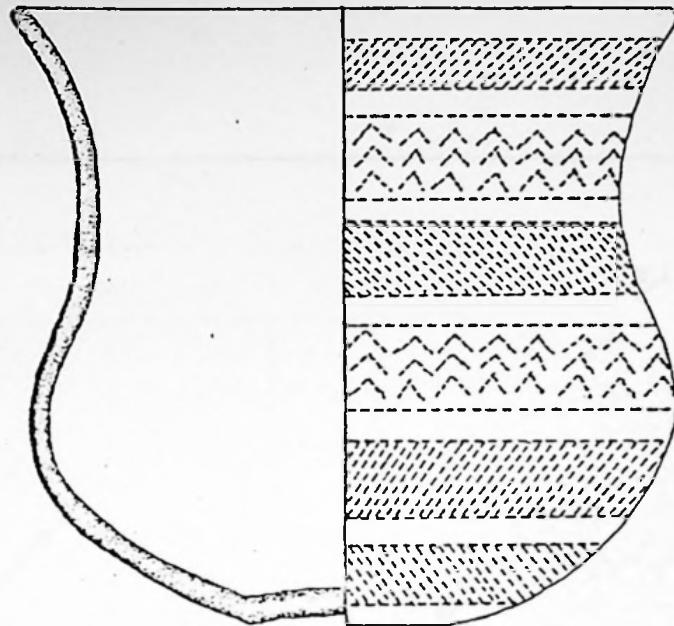


Figure 4.4 Bell Beakers from grave 5 at Bylany. Scale: both 3:4.



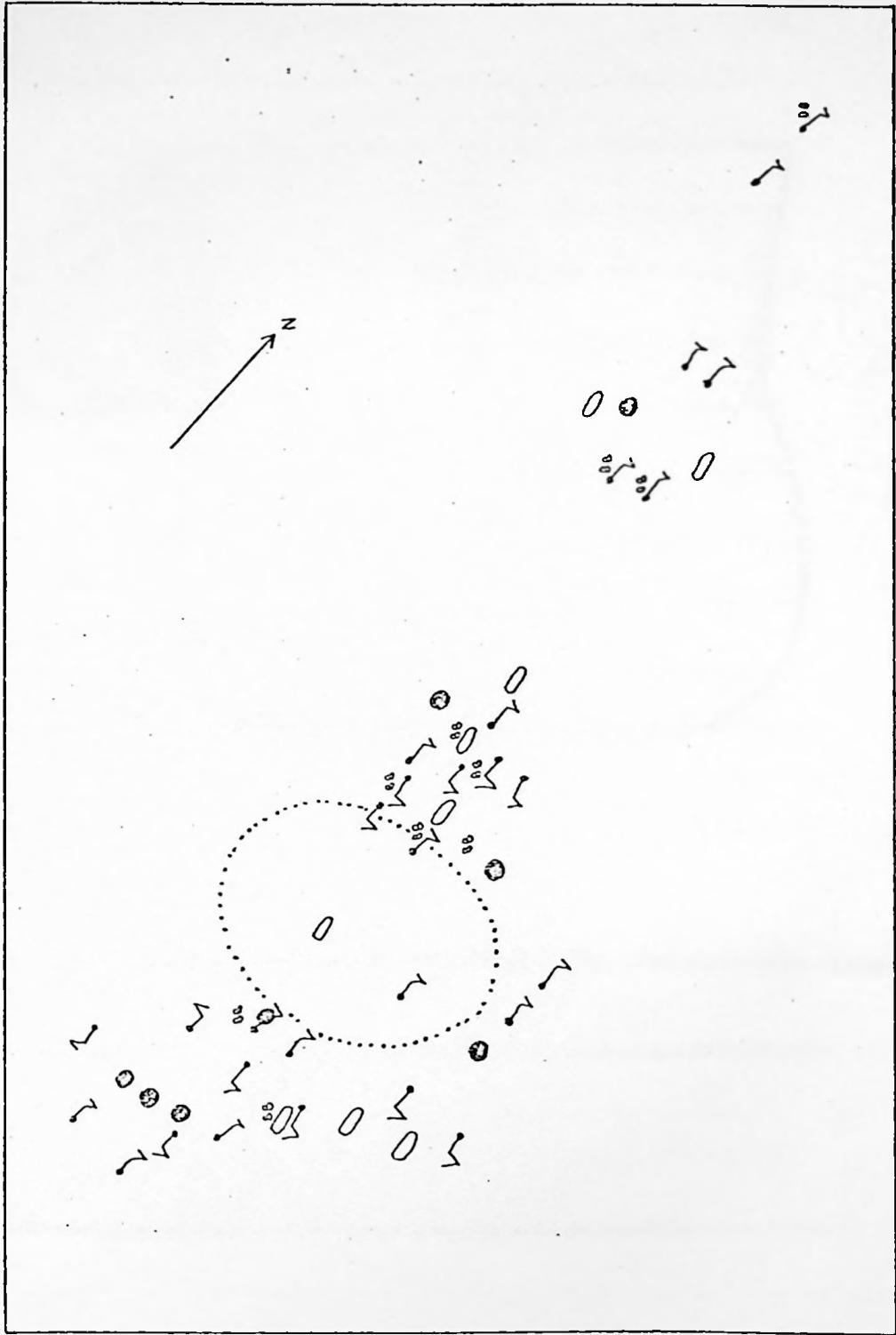
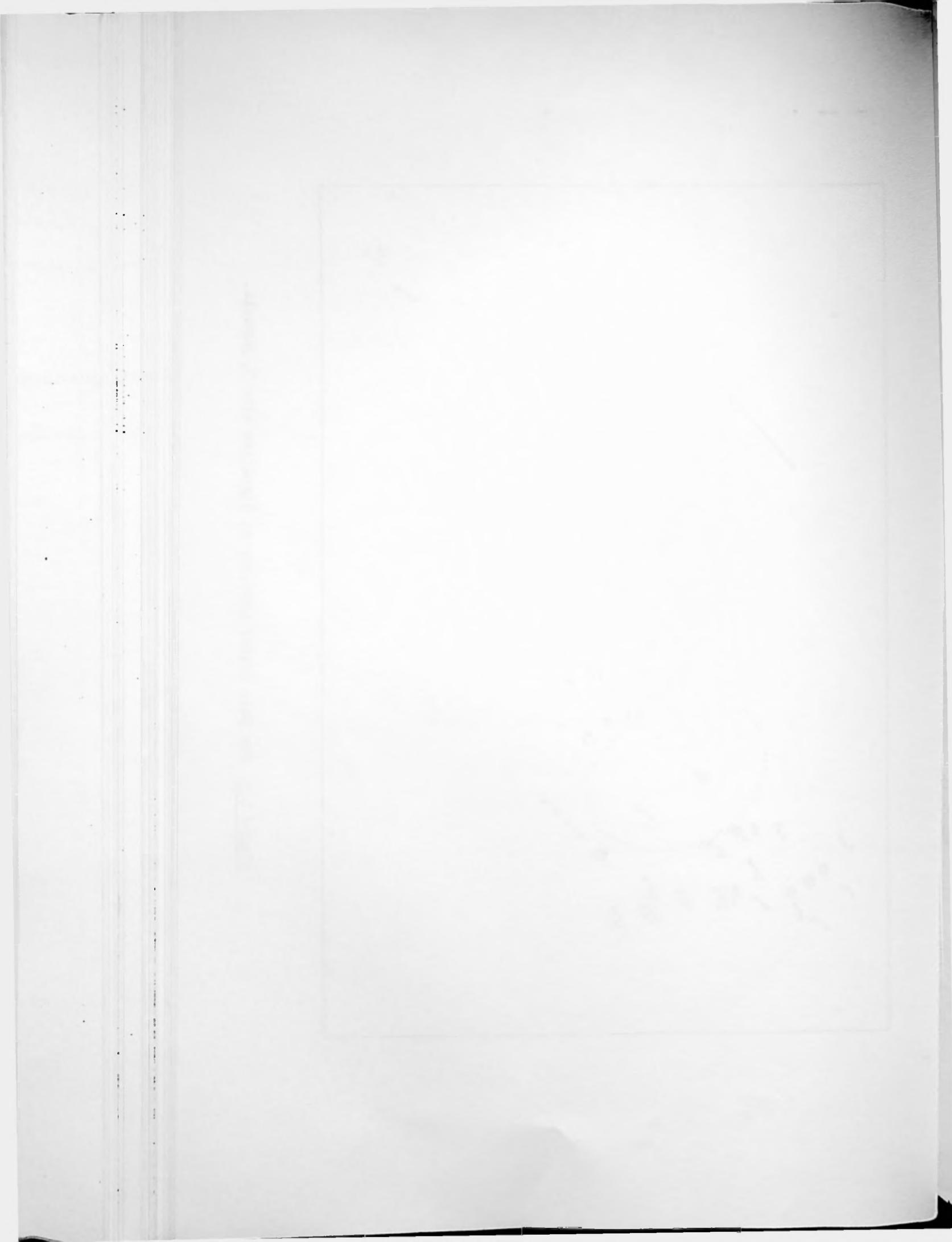


Figure 4.5 The Bell Beaker cemetery at Slapanice site 7, Moravia.



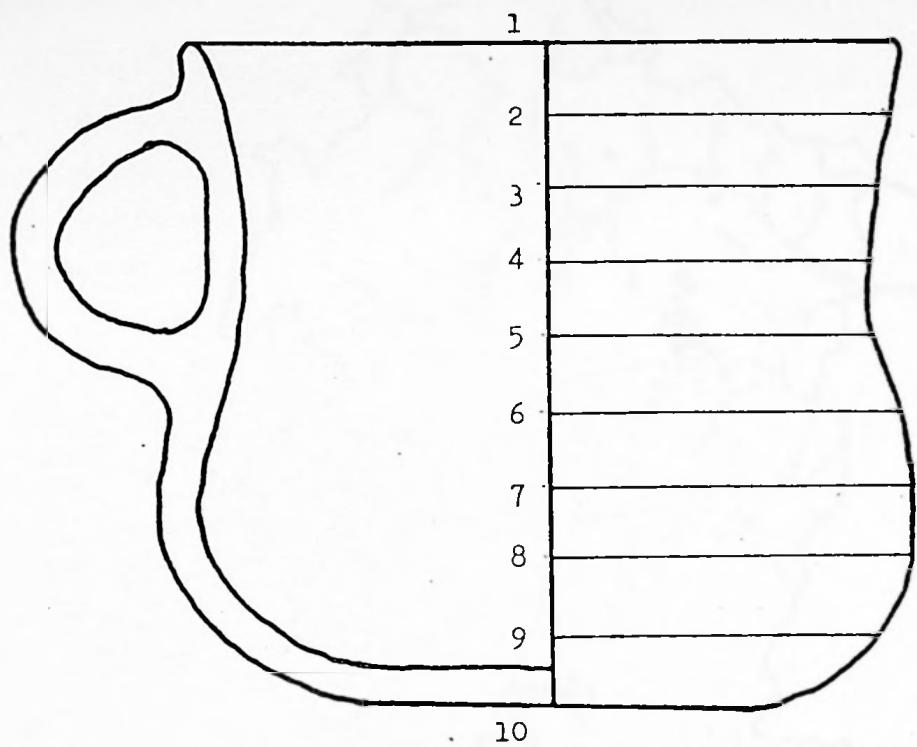


Figure 4.6 Drawing of jug to illustrate the measurements taken.



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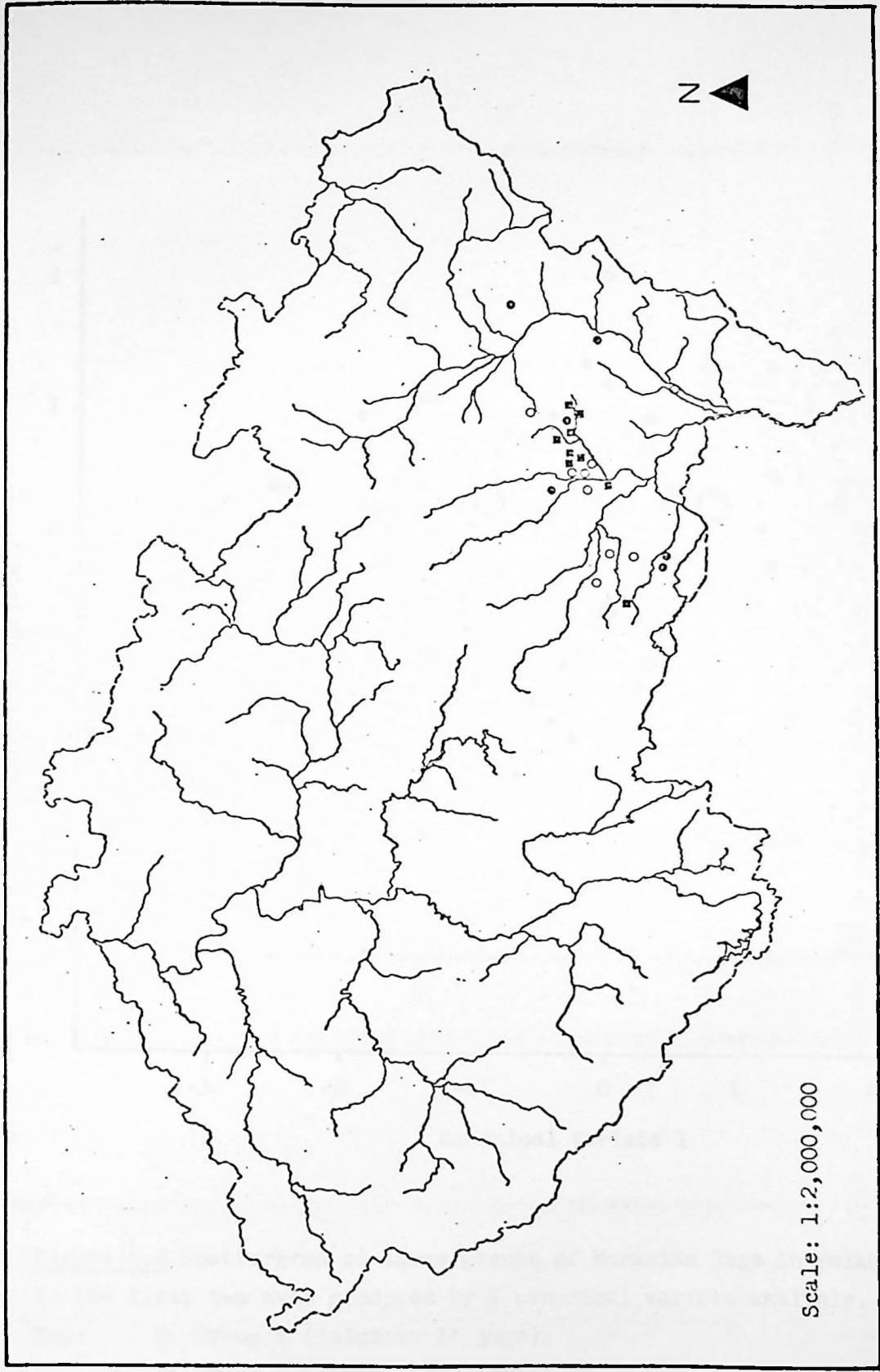


Figure 4.7 Distribution map of Moravian sites with jugs used in the statistical analyses.

- Sites with 'cluster 1' associated jugs
- Sites without 'cluster 1' associated jugs
- Sites with jugs of both groups



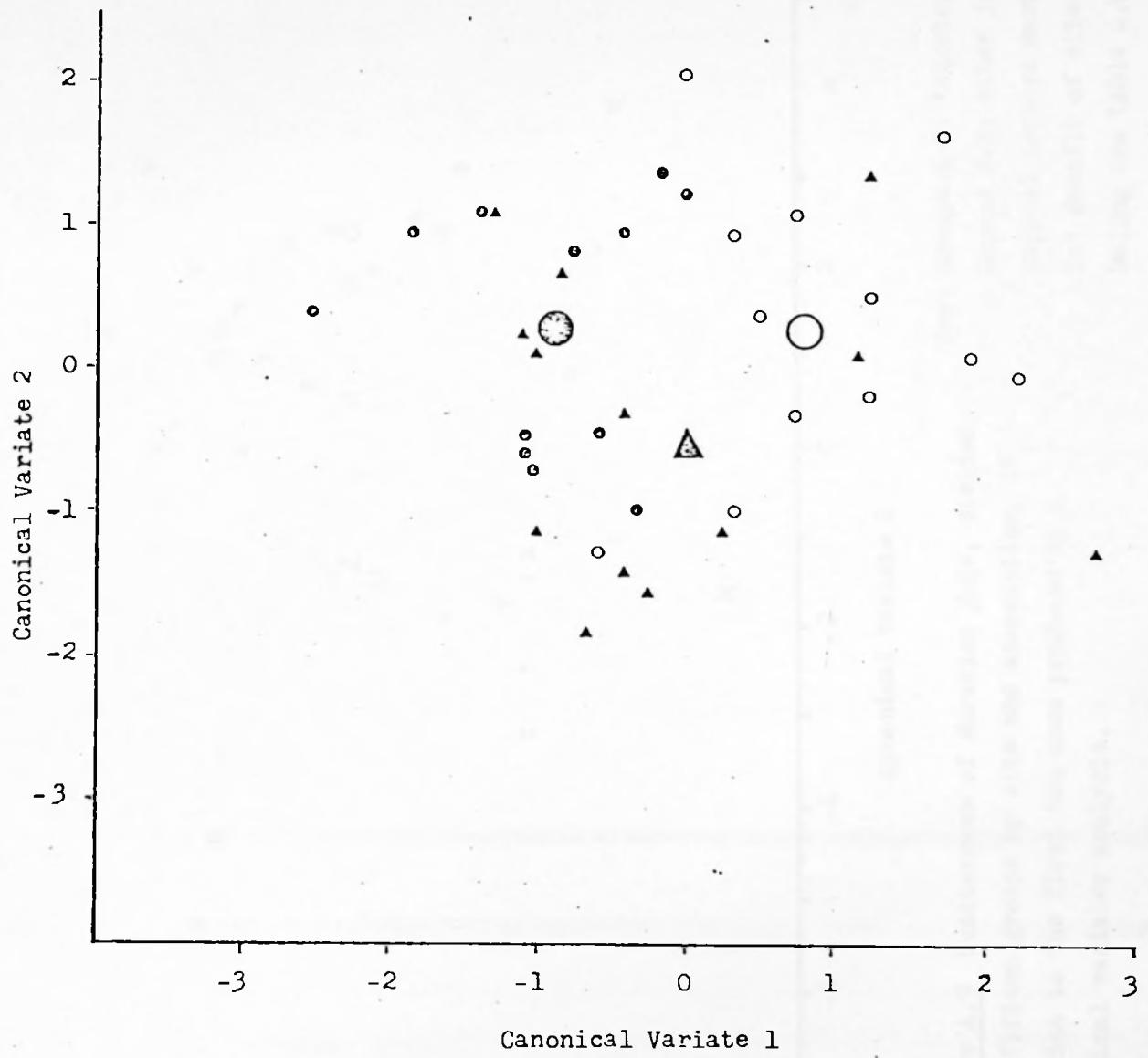


Figure 4.8 Scattergram of three groups of Moravian jugs in relation to the first two axes produced by a canonical variate analysis.

Key: ○ Group A ('cluster 1' jugs).

● Group X (other jugs, sample 1)

▲ Group Y (other jugs, sample 2)

Large symbols represent the mean of their respective groups.



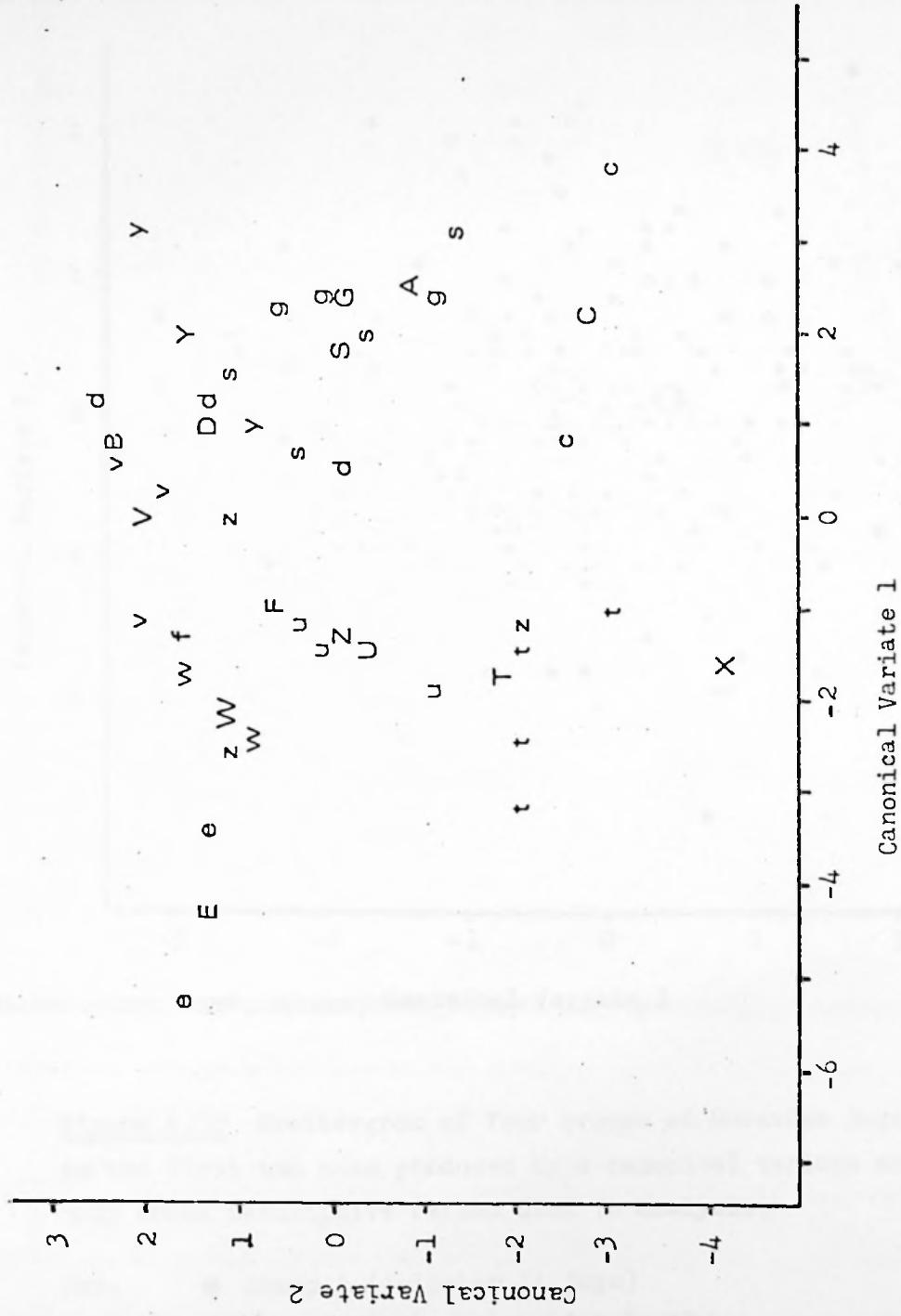


Figure 4.9 Scattergram of Moravian jugs, divided into fifteen groups by site and association, in relation to the first two axes produced by a canonical variates analysis.

Key: Groups A-G: 'cluster 1' jugs
 Groups S-Z: other jugs
 Capital letters mark group means
 For details of sites to which groups belong see table 4.VI.



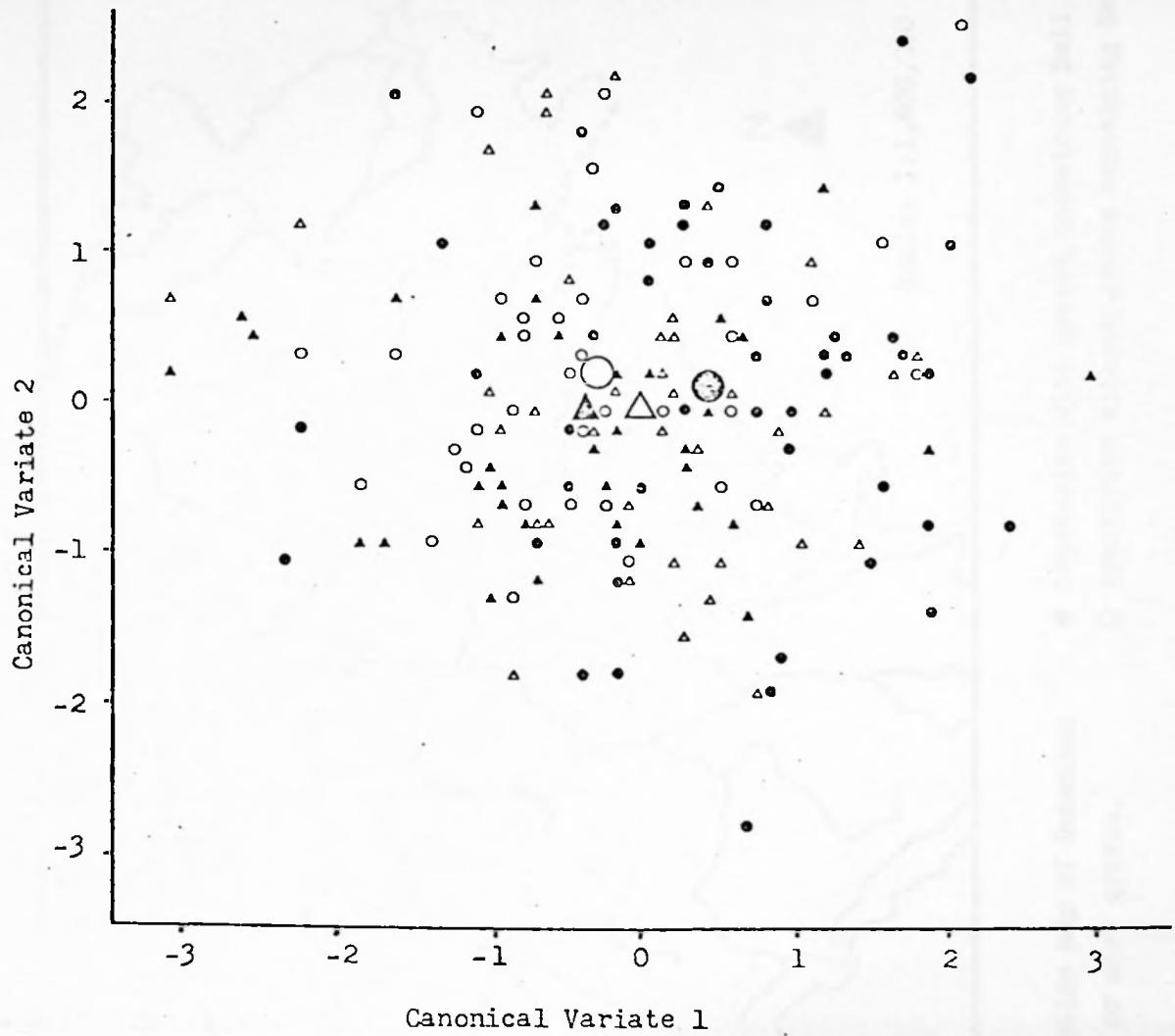


Figure 4.10 Scattergram of four groups of Moravian jugs in relation to the first two axes produced by a canonical variate analysis; only three descriptive ratios used in analysis.

Key:

- Group A ('cluster 1' jugs)
- Group X (other jugs, sample 1)
- ▲ Group Y (other jugs, sample 2)
- △ Group Z (other jugs, sample 3)

Large symbols represent the mean of their respective groups.

and when we right ourselves the world will be remade. But we must
experience suffering first before we can become who we are meant to be.
Suffering is the soil in which we grow.

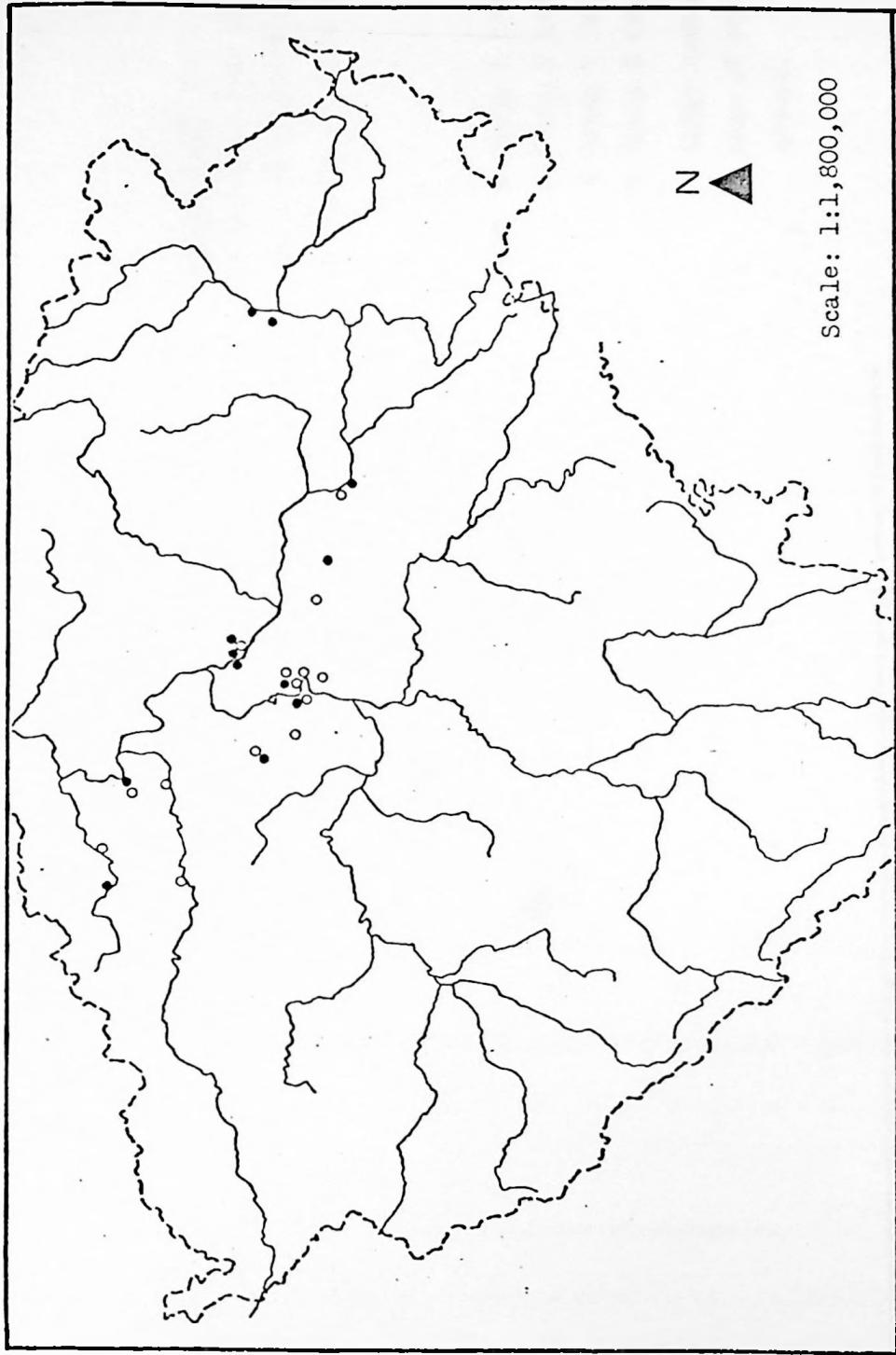


Figure 4.11 Distribution map of Bohemian cemeteries with graves containing Bell Beakers.
● Cemeteries with five or more graves.
○ Cemeteries without graves containing Bell Beakers.



Figure 4.12 Scattergram of four groups of Bohemian jugs in relation to the first two axes produced by a canonical variate analysis. 12 ratio data.

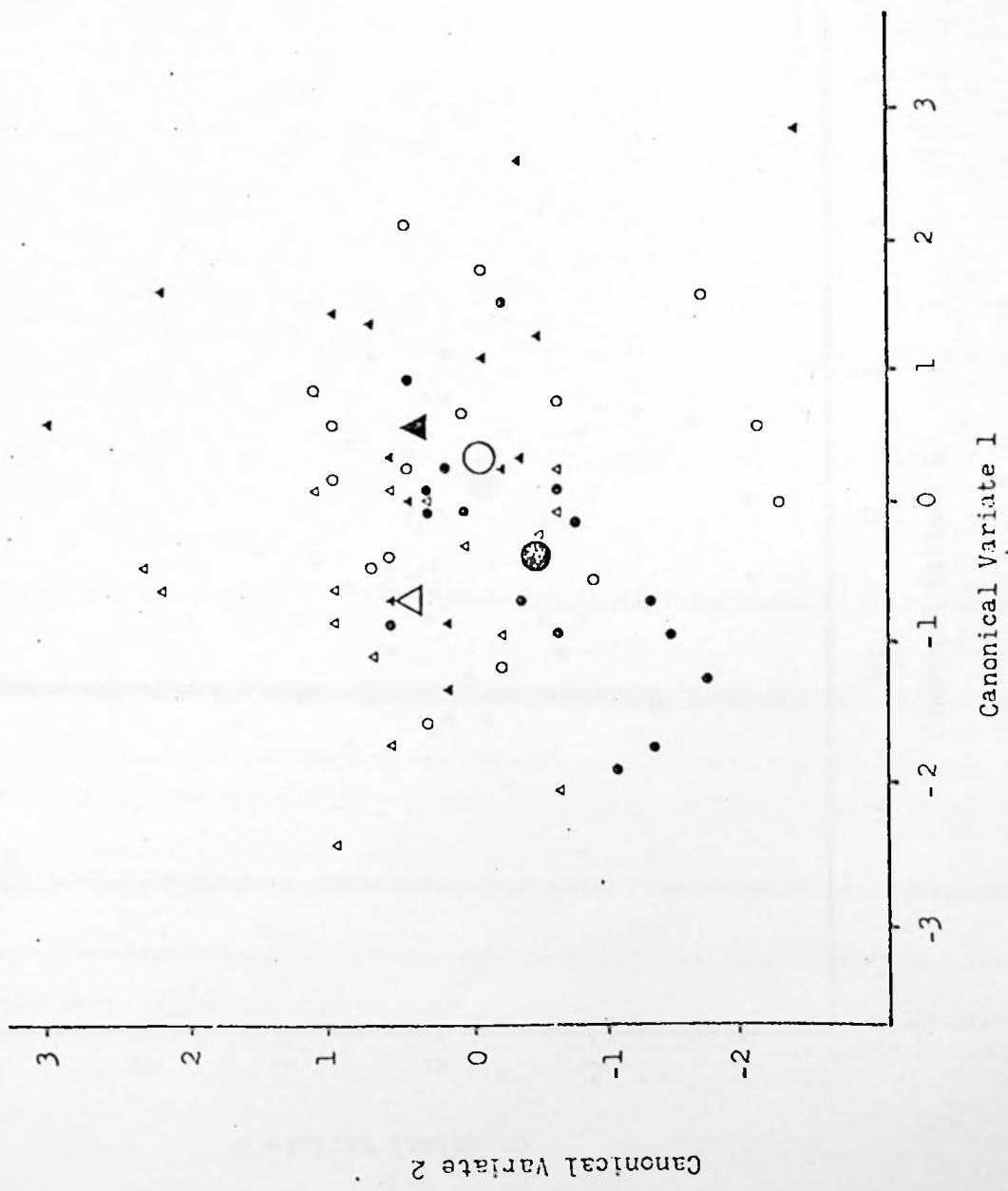
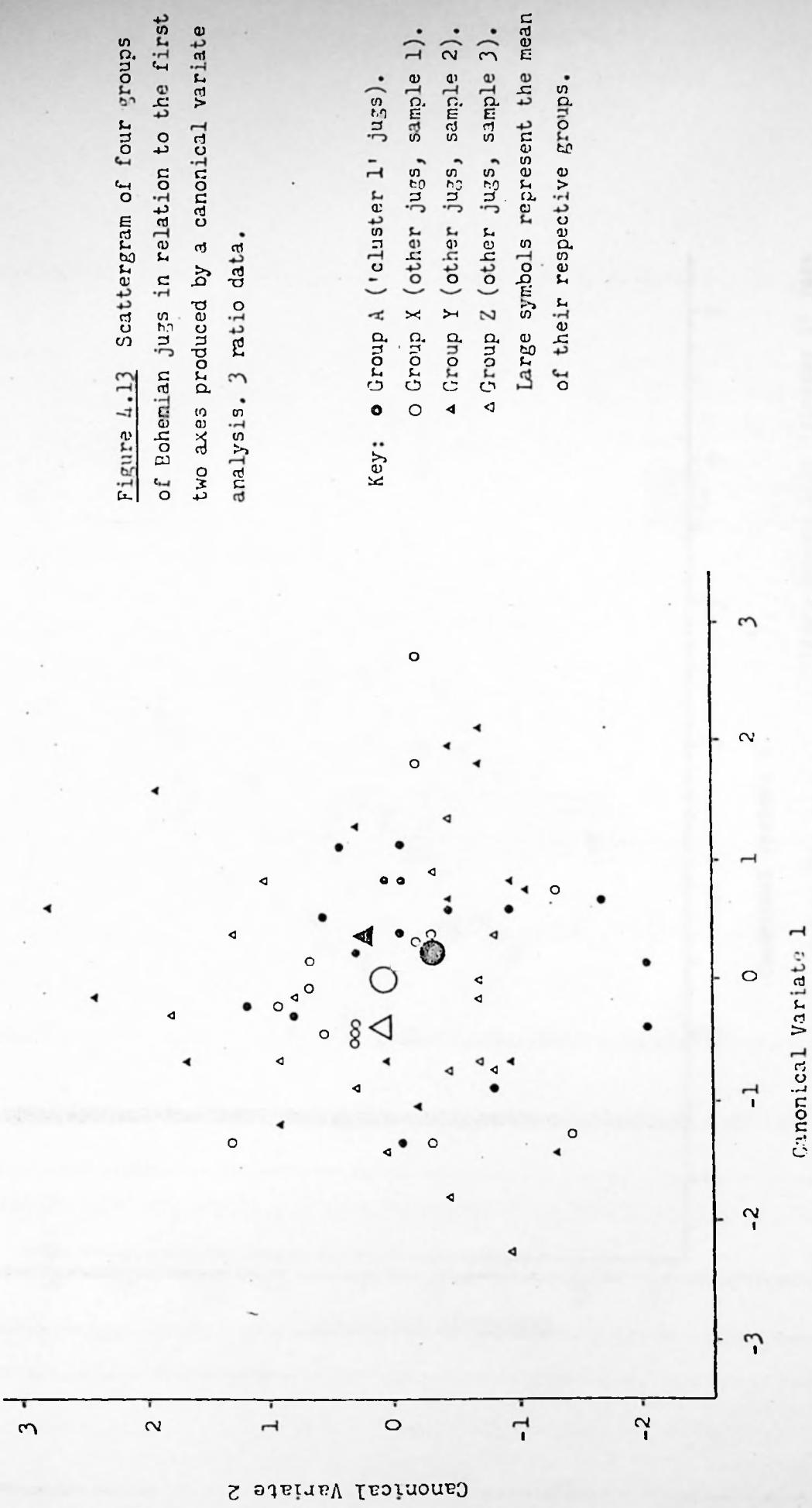




Figure 4.13 Scattergram of four groups of Bohemian jugs in relation to the first two axes produced by a canonical variate analysis. 3 ratio data.





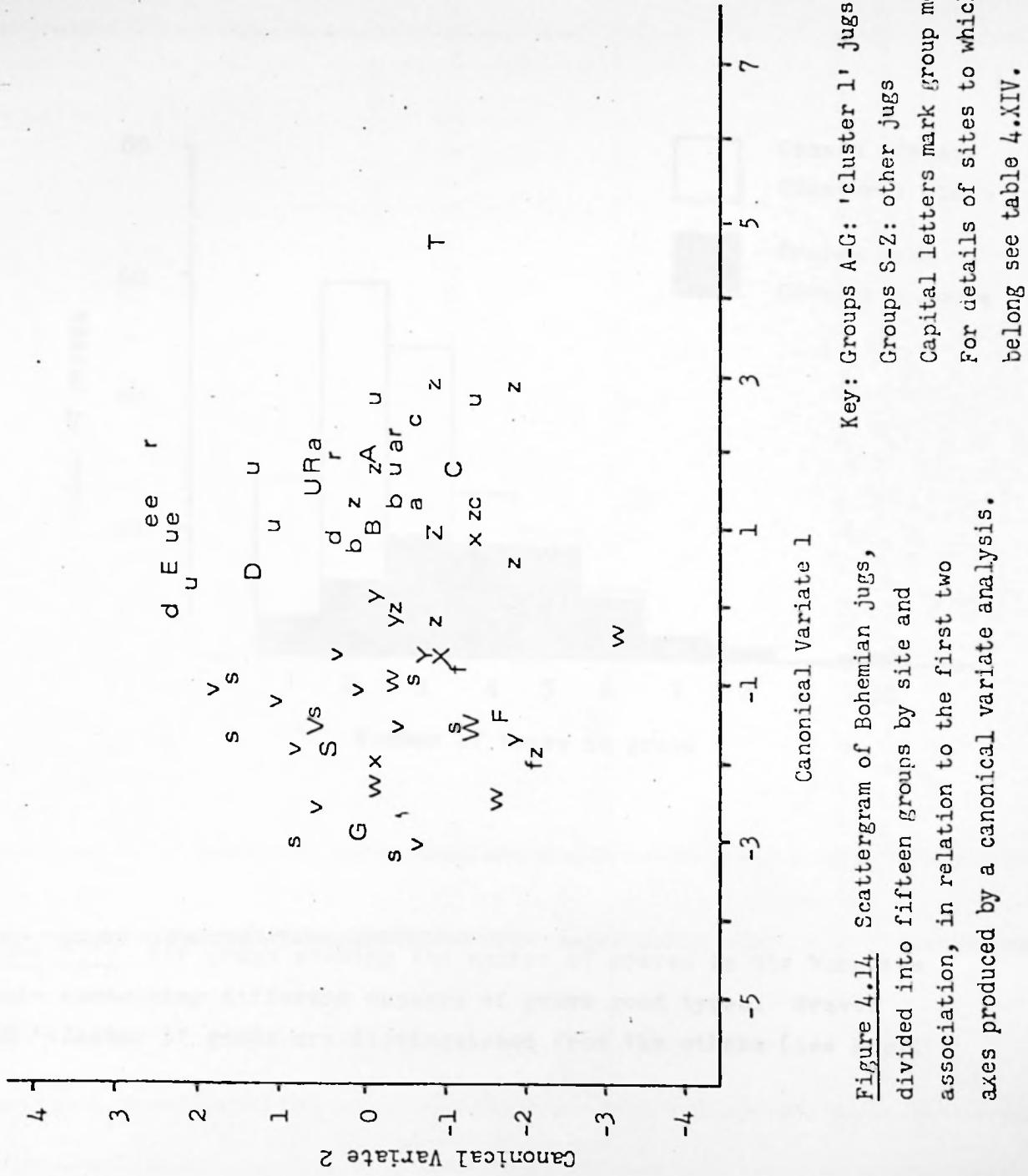
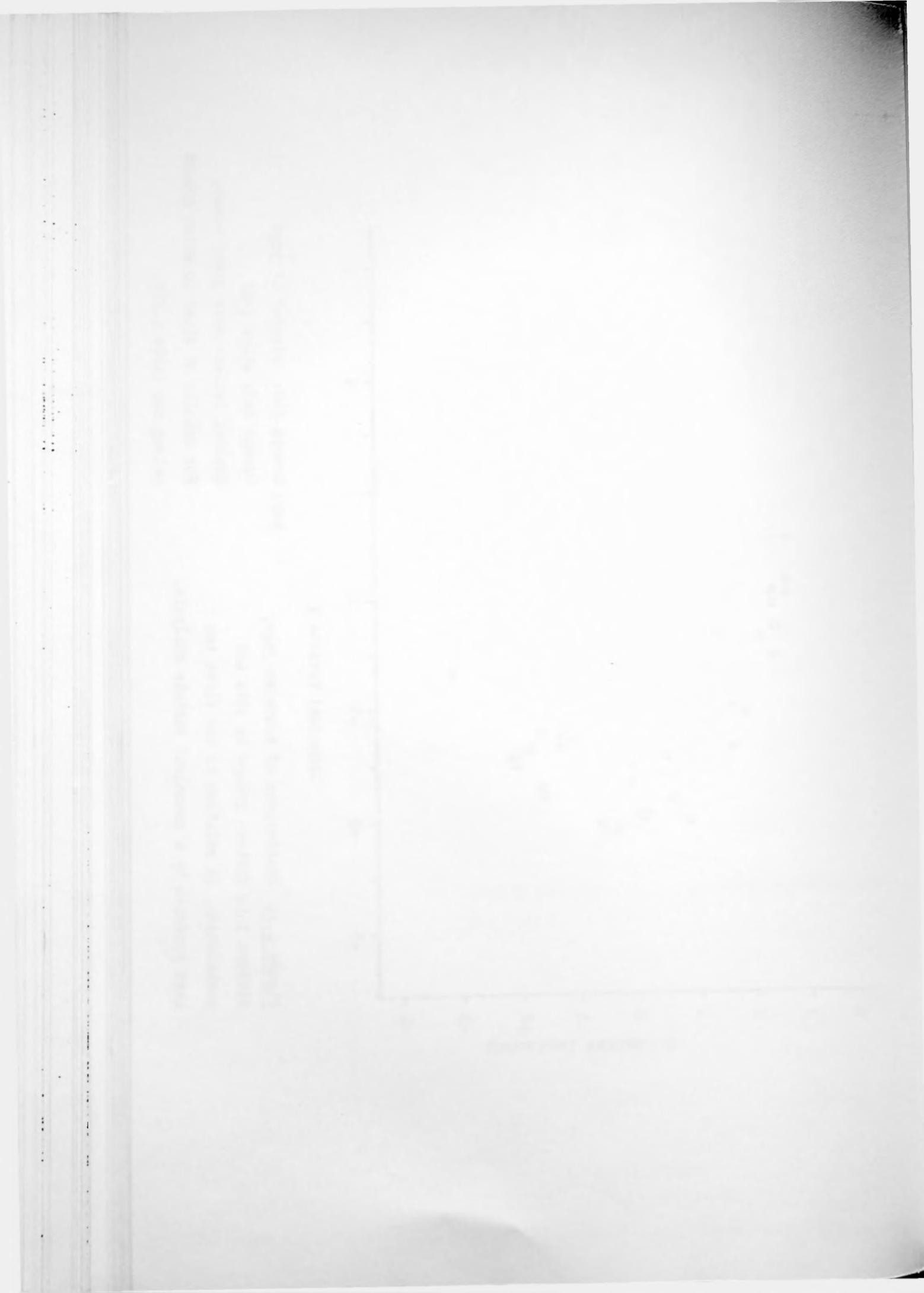


Figure 4.14 Scattergram of Bohemian jugs, divided into fifteen groups by site and association, in relation to the first two axes produced by a canonical variate analysis.



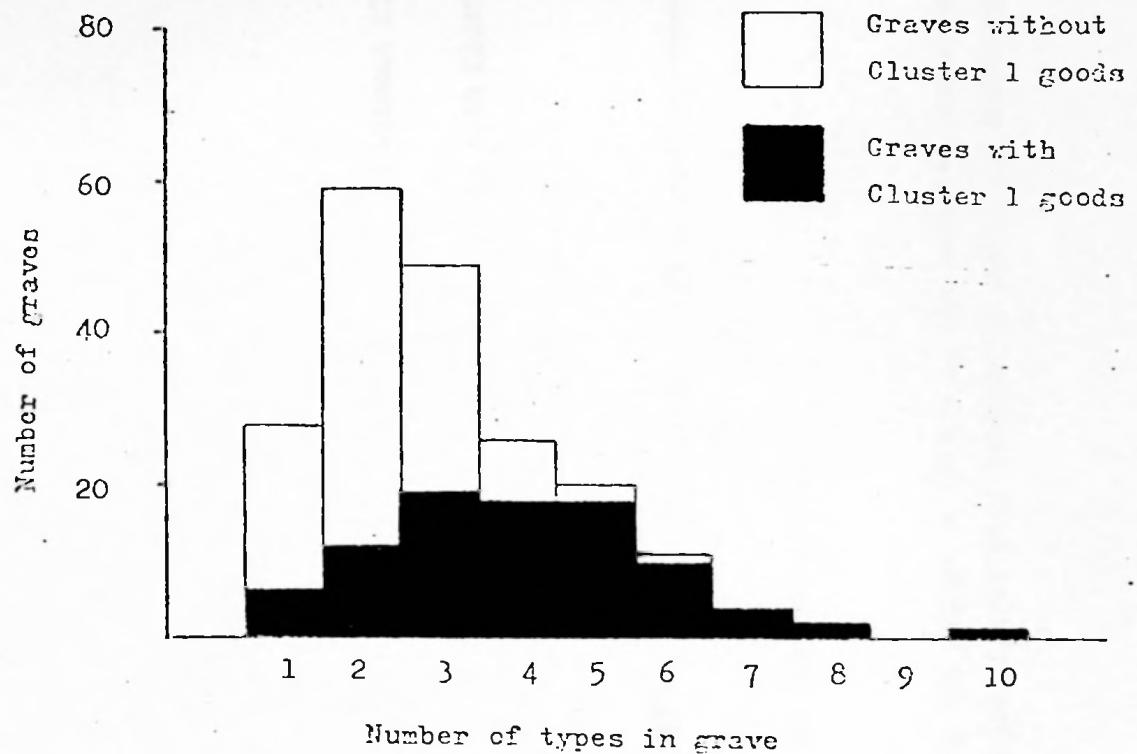


Figure 5.12 Bar graph showing the number of graves in the Moravian sample containing different numbers of grave good types. Graves with 'cluster 1' goods are distinguished from the others (see key).

Franklin Institute
Philadelphia



Franklin Institute
Philadelphia



Franklin Institute

Franklin Institute
Philadelphia
Pennsylvania

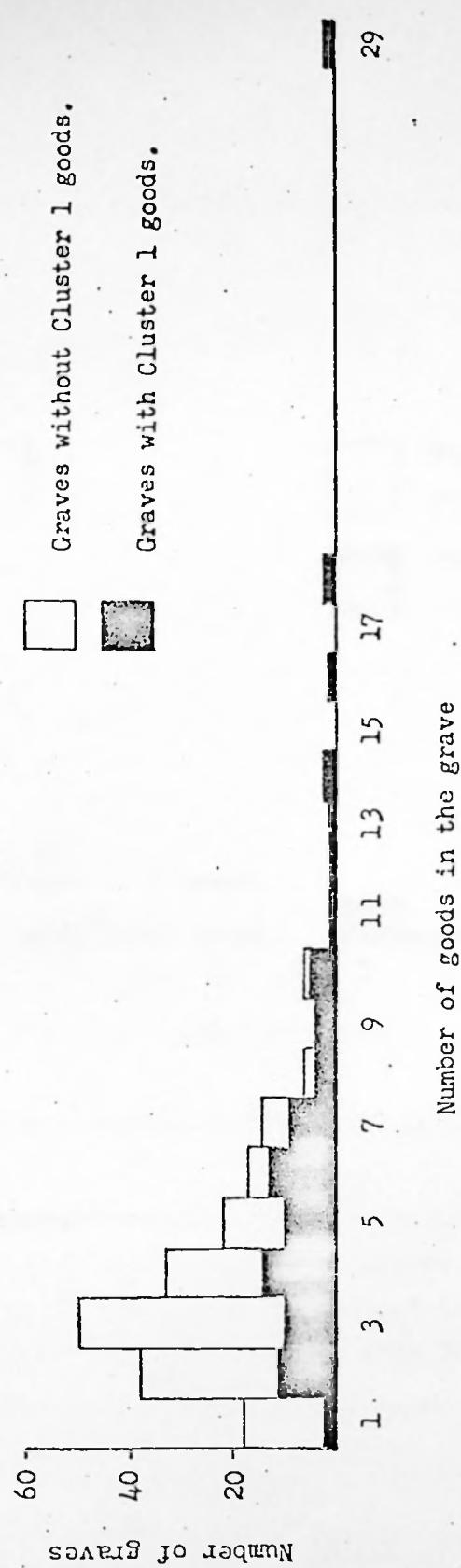
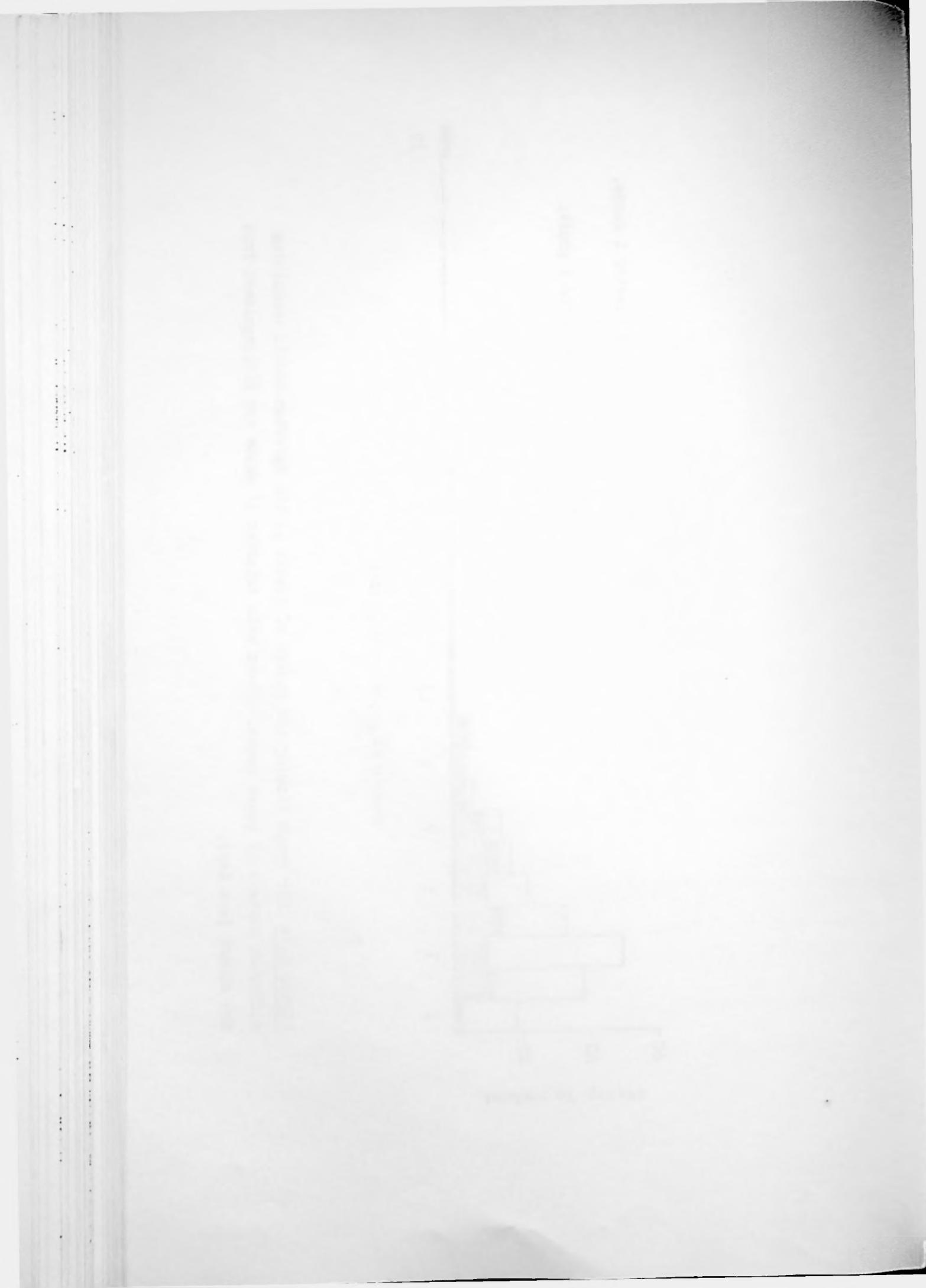


Figure 5.1b Bar graph showing the number of graves in the Moravian sample containing different numbers of grave goods. Graves with 'cluster 1' goods are distinguished from the others (see key).



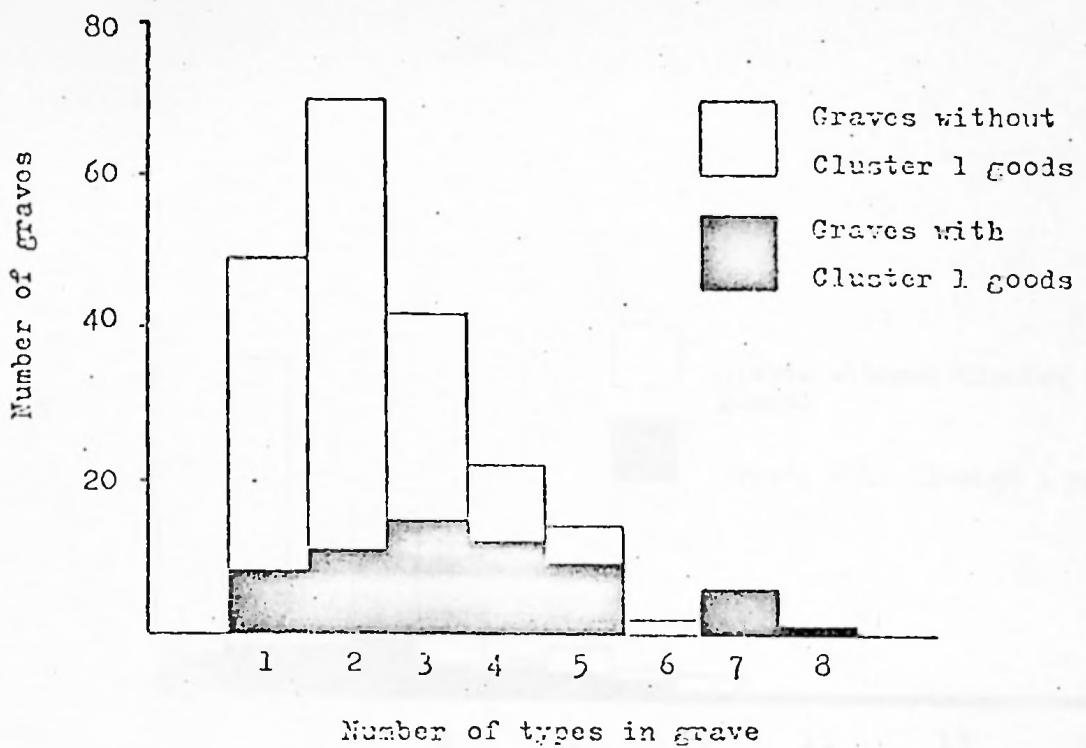
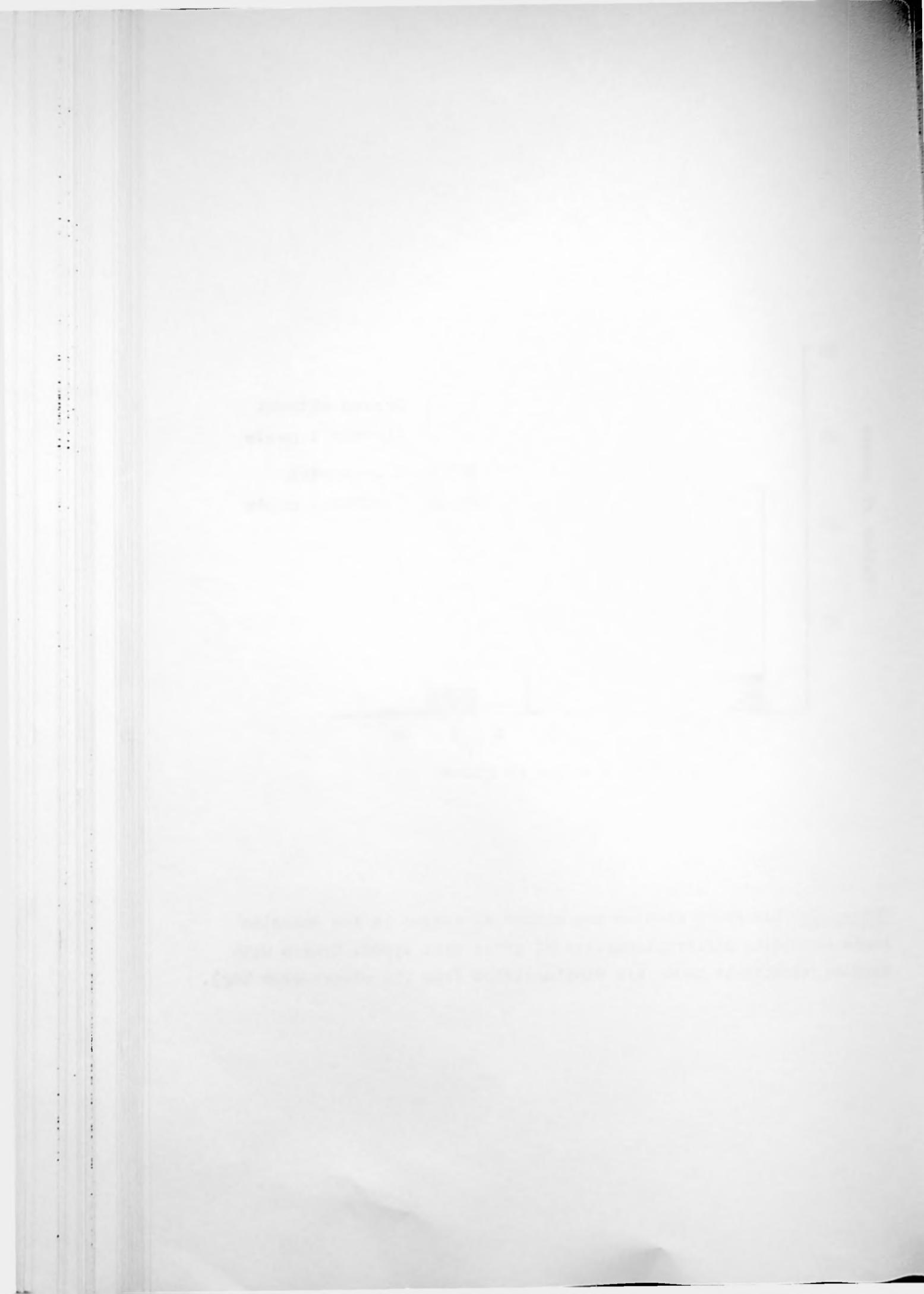


Figure 5.2a Bar graph showing the number of graves in the Bohemian sample containing different numbers of grave good types. Graves with Bohemian 'cluster 1' goods are distinguished from the others (see key).



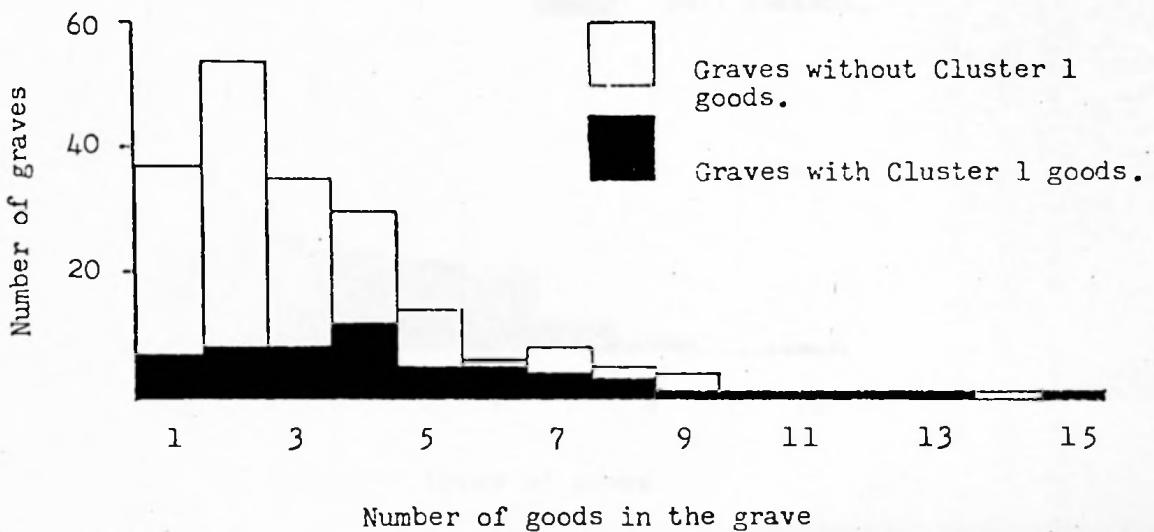


Figure 5.2b Bar graph showing the number of graves in the Bohemian sample containing different numbers of grave goods. Graves with Bohemian 'cluster 1' goods are distinguished from the others (see key).

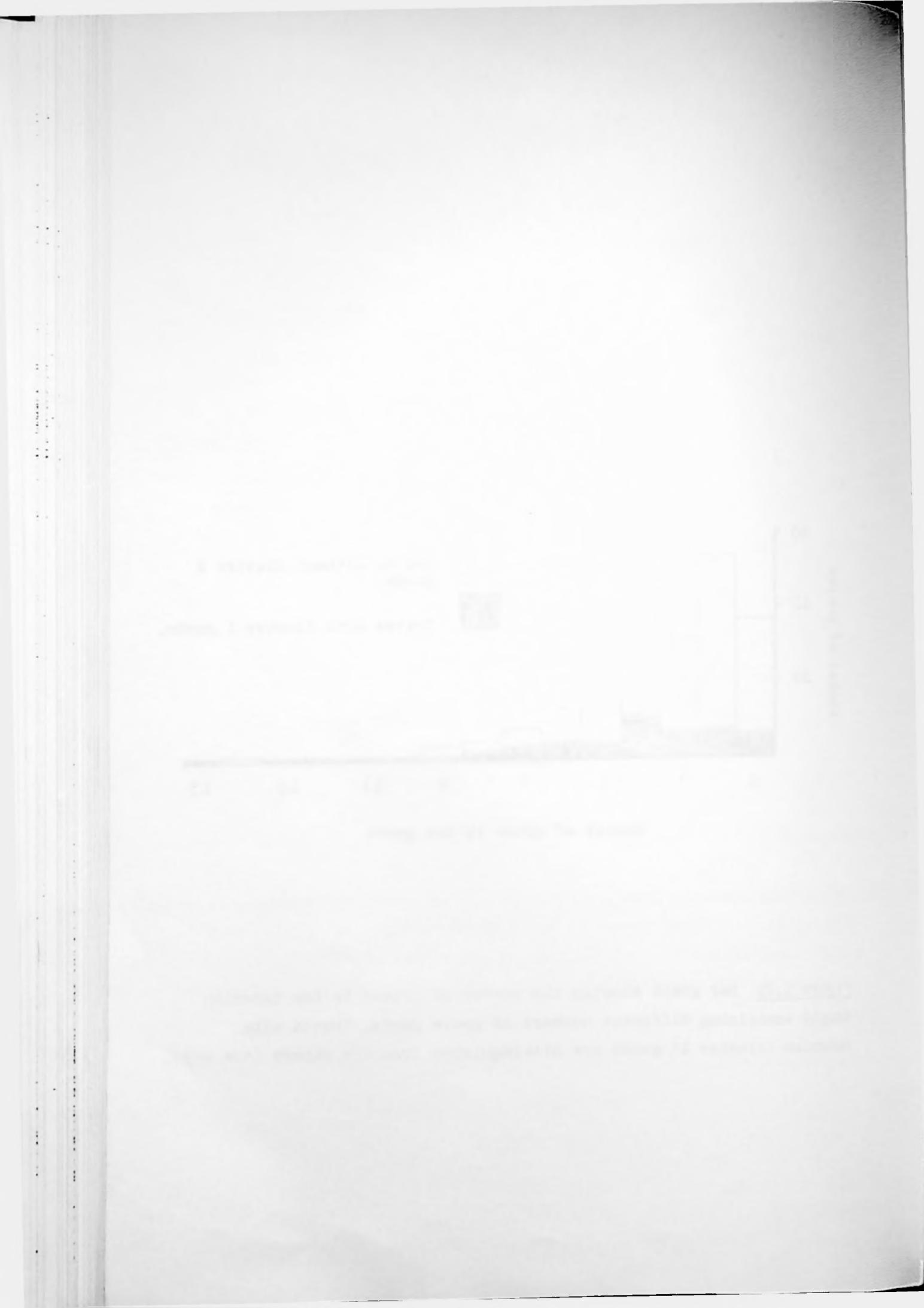
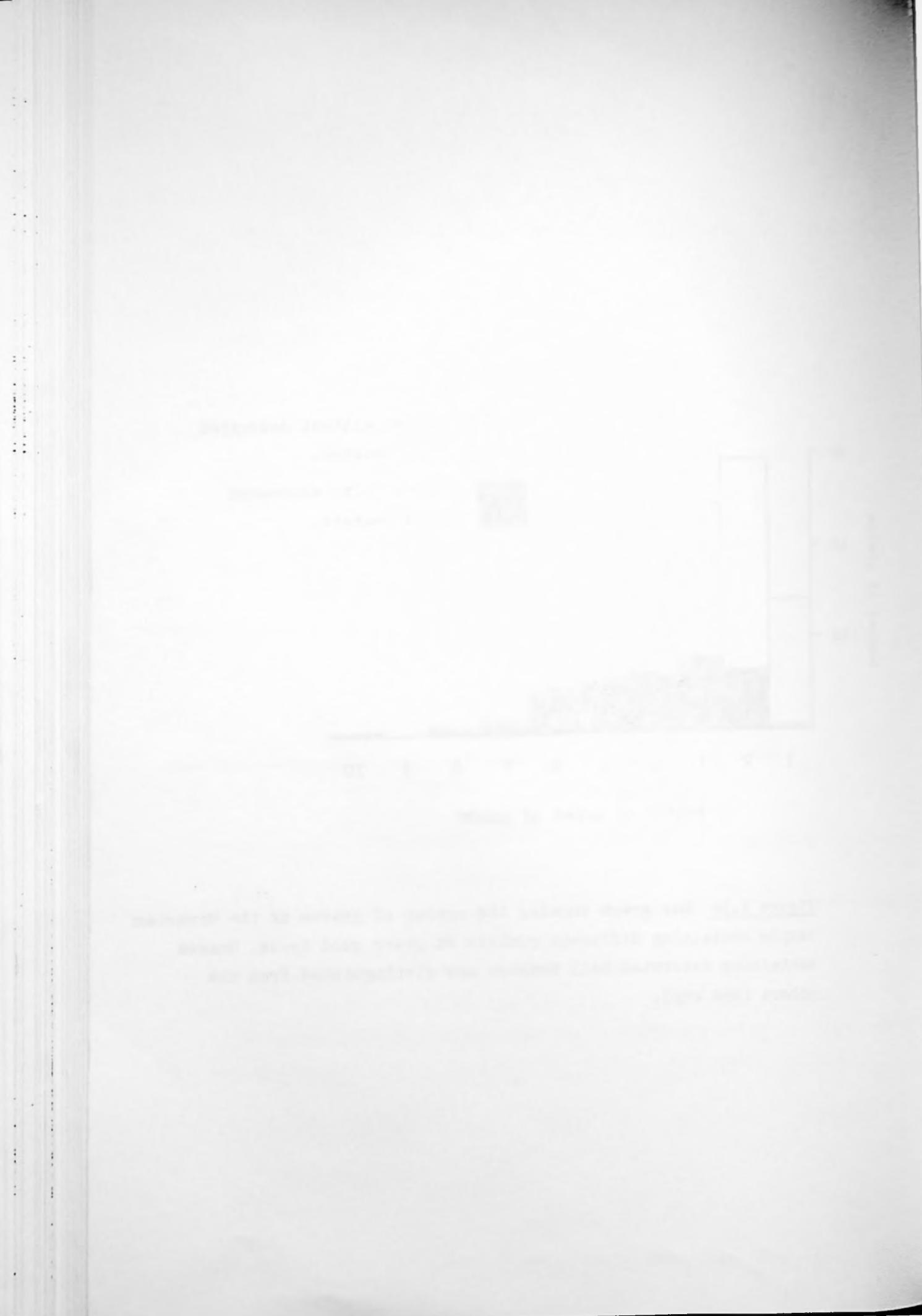




Figure 5.3a Bar graph showing the number of graves in the Moravian sample containing different numbers of grave good types. Graves containing decorated Bell Beakers are distinguished from the others (see key).



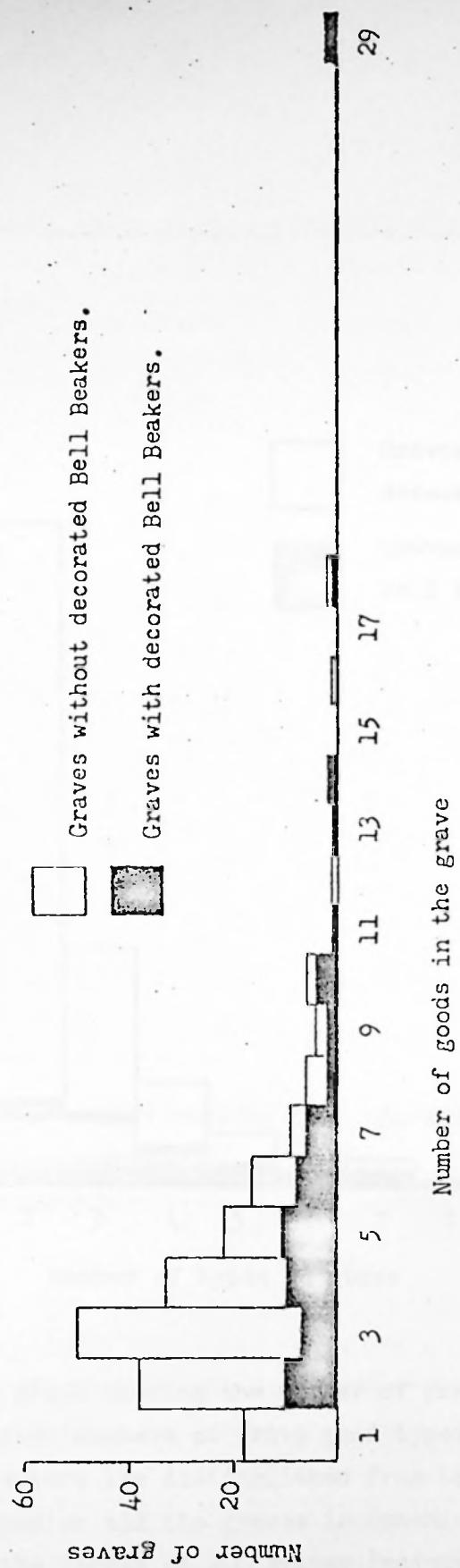


Figure 5.3b Bar graph showing the number of graves in the Moravian sample containing different numbers of grave goods. Graves containing decorated Bell Beakers are distinguished from the others (see key).



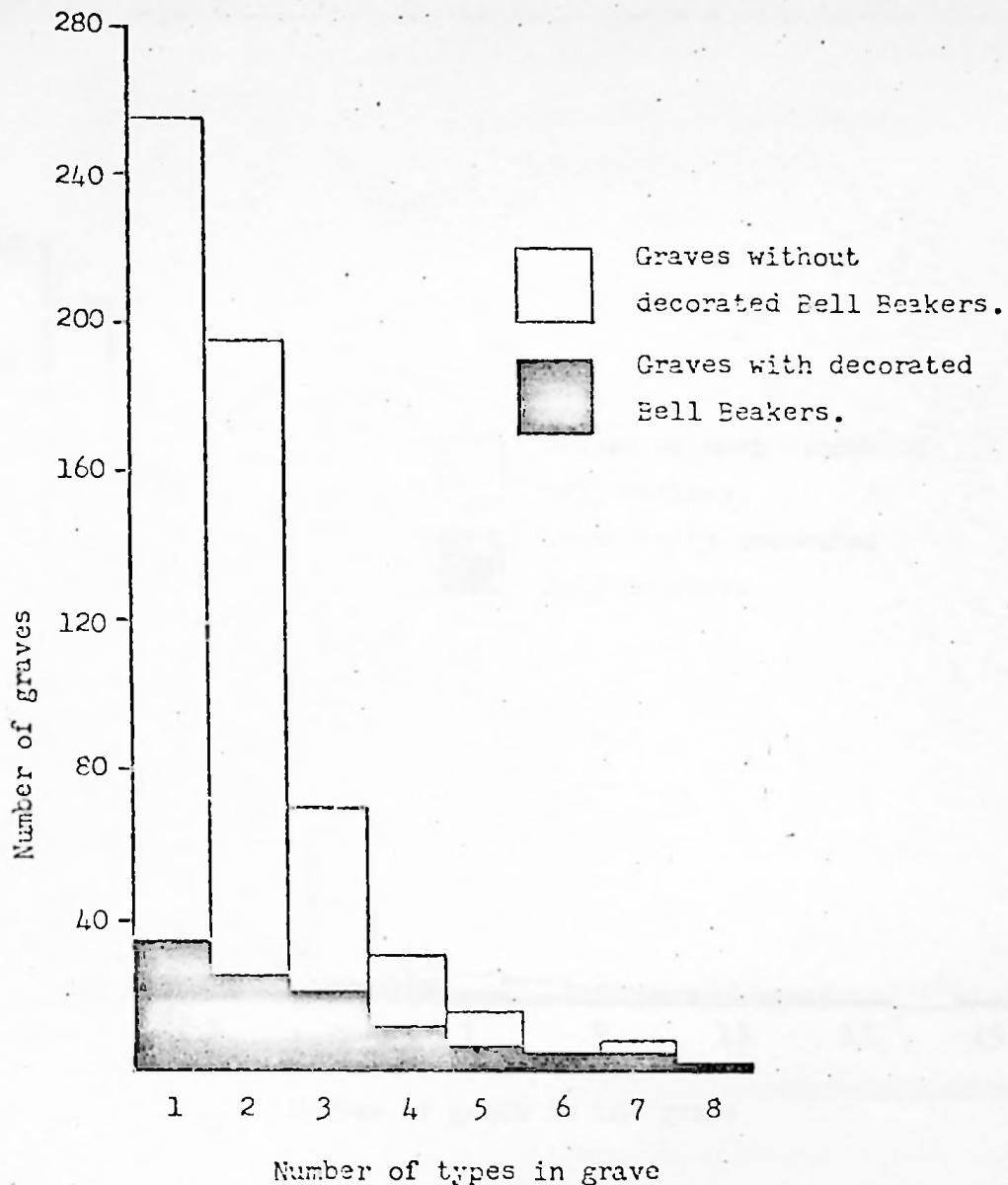
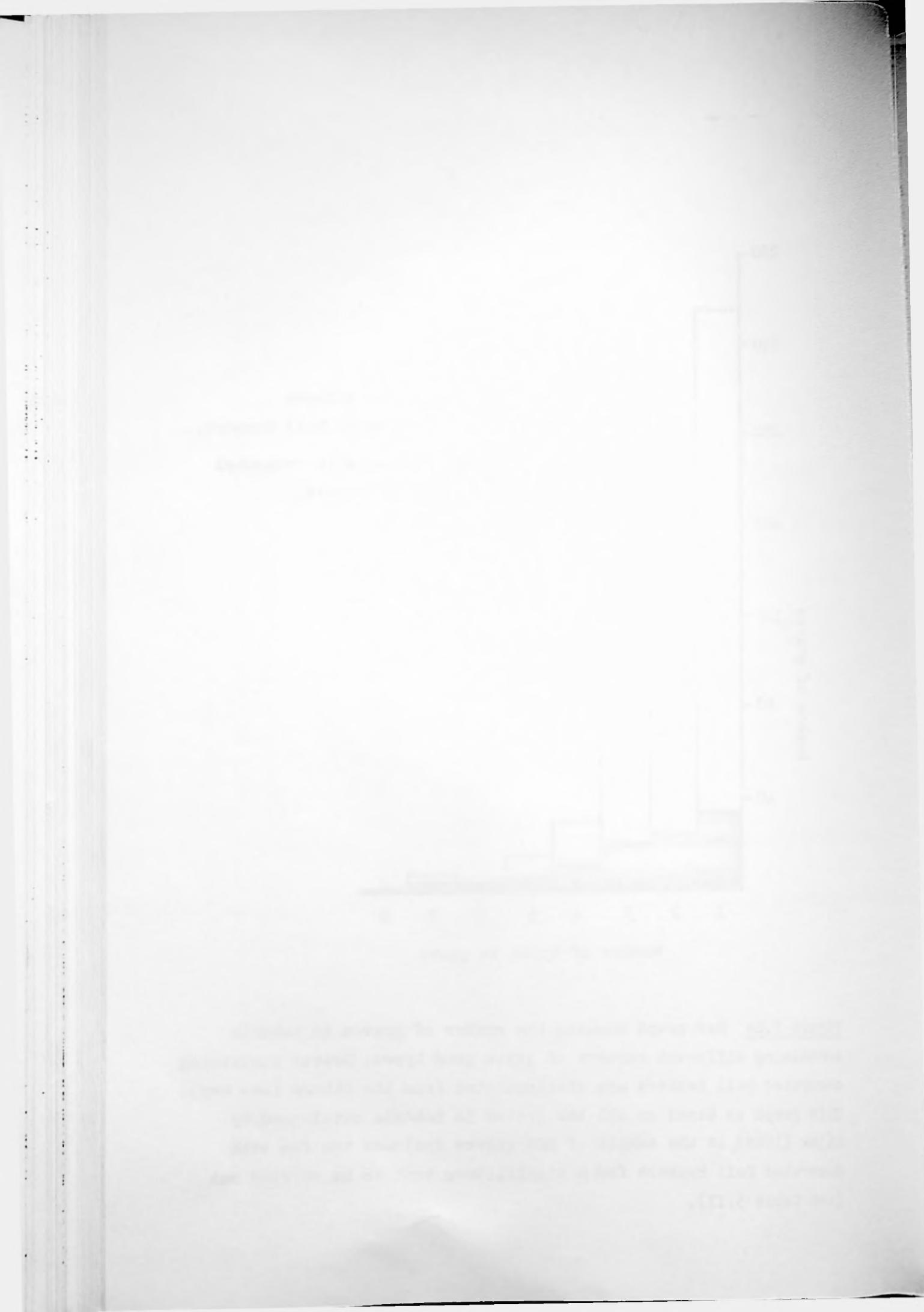


Figure 5.4a Bar graph showing the number of graves in Bohemia containing different numbers of grave good types. Graves containing decorated Bell Beakers are distinguished from the others (see key). This graph is based on all the graves in Bohemia catalogued by Hájek (1968), as the sample of 200 graves included too few with decorated Bell Beakers for a significance test to be carried out (see table 5.II).



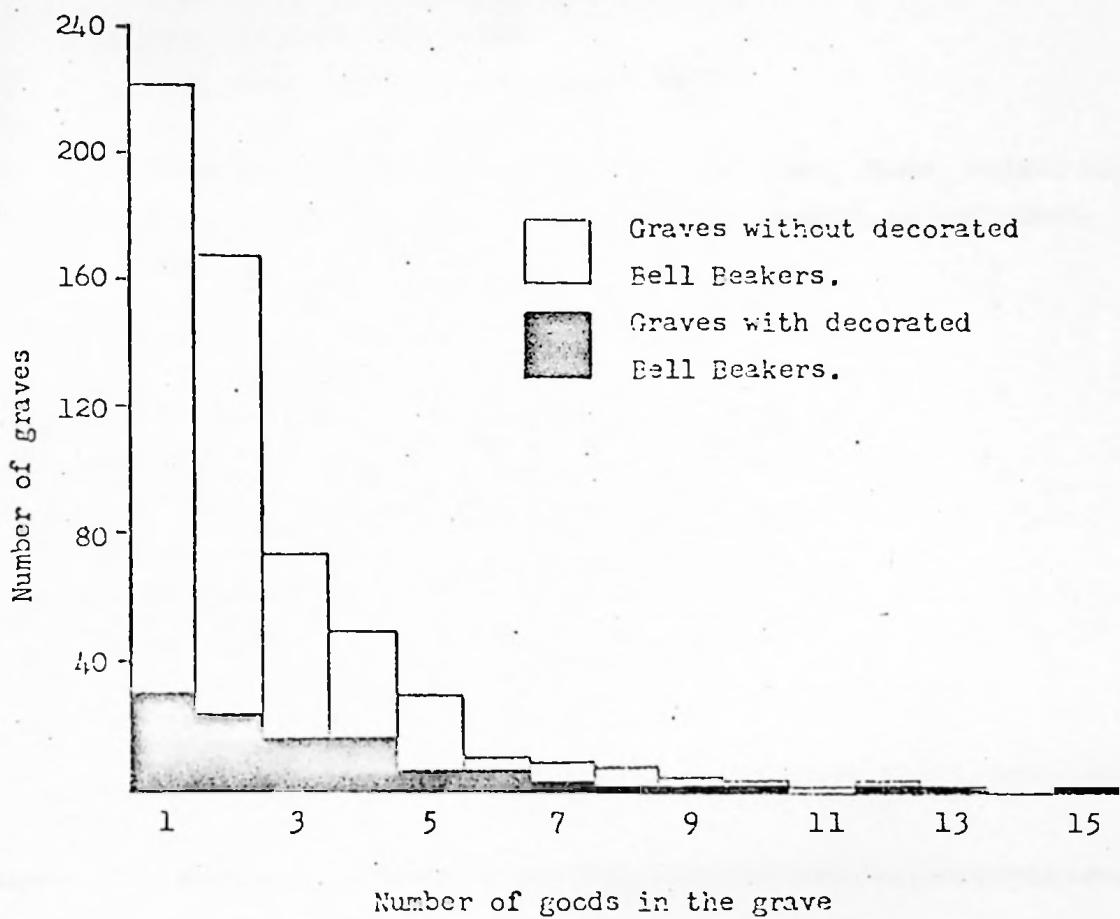


Figure 5.4b Bar graph showing the number of graves in Bohemia containing different numbers of grave goods. Graves with decorated Bell Beakers are distinguished from the others (see key). This graph is based on all the graves in Bohemia catalogued by Hájek (1968), as the sample of 200 graves included too few with decorated Bell Beakers for a significance test to be carried out (see table 5.II).

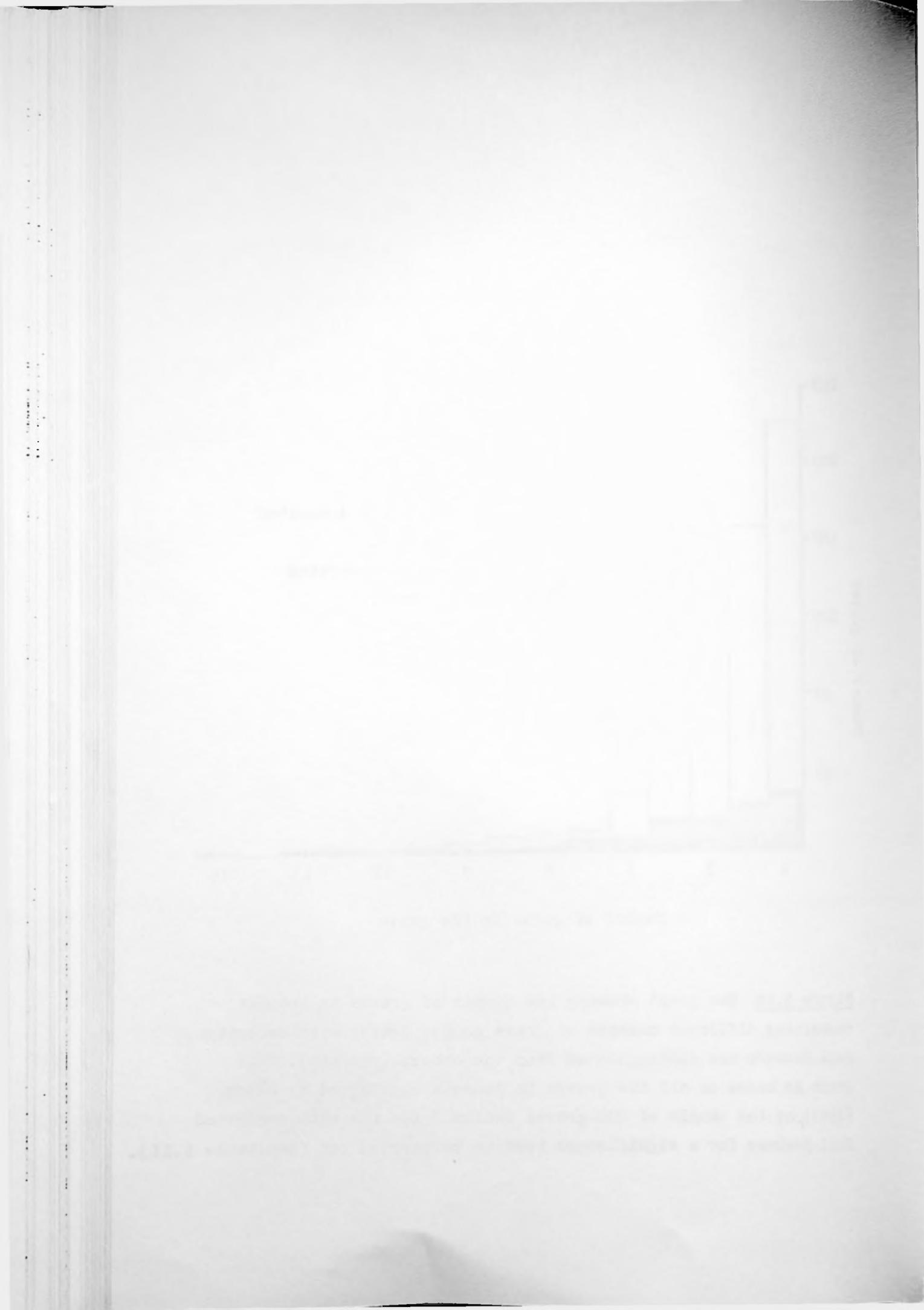


Figure 5.5 Dendrogram produced by average-link cluster analysis of the relations between Bell Beaker graves, together with a list of the contents of the graves in the clusters. Moravia.

Cluster 1

<u>Grave No.</u>	<u>Contents</u>
1	Decorated Bell Beaker, jug, bowl, Topf, animal bones.
46	Decorated Bell Beaker, jug, bowl, animal bones.
94	Jug, bowl, Topf, animal bones.
127	Jug, bowl, animal bones.
182	Jug, bowl, animal bones, amber beads.
187	Jug, bowl, animal bones, urn.
88	Undecorated handled Bell Beaker, jug, bowl, flake, animal bones.
190	Jug, bowl, Topf, handled Topf, copper dagger, animal bones, amber beads.

Cluster 2

<u>Grave No.</u>	<u>Contents</u>
13	Jug, bowl.
20	" "
29	" "
32	" "
57	" "
59	" "
61	" "
78	" "
84	" "
175	" "
180	" "
184	" "
87	" "
122	" "
126	" "
131	" "
135	" "
144	" "
145	" "
148	" "
150	" "

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Fig. 5.5 (continued)

Cluster 2 (continued)

<u>Grave No.</u>	<u>Contents</u>
151	Jug, bowl.
153	" "
155	" "
157	" "
161	" "
168	" "
169	" "
170	" "
171	" "
31	Jug, bowl, amphora.
188	" " "
97	Decorated handled Bell Beaker, jug, bowl.
124	Jug, bowl, handled Topf.
133	" " " "
156	" " " "
164	" " " "
17	Jug, bowl, wrist-guard.
166	" " " "
167	Jug, bowl, wrist-guard, boar's tusk.
21	Undecorated Bell Beaker, jug, bowl.
75	" " " " "
89	Undecorated Bell Beaker, jug, bowl, flake.
23	Jug, bowl, Topf.
26	" " "
60	" " "
102	" " "
103	" " "
104	" " "
123	" " "
139	" " "
148	" " "
38	Jug, bowl, Topf, flake.
90	Undecorated Bell Beaker, jug, bowl, Topf.
27	Jug, bowl, Topf, V-perforated button.
165	" " " " "
194	Jug, Topf, V-perforated button.
58	Bowl, Topf.

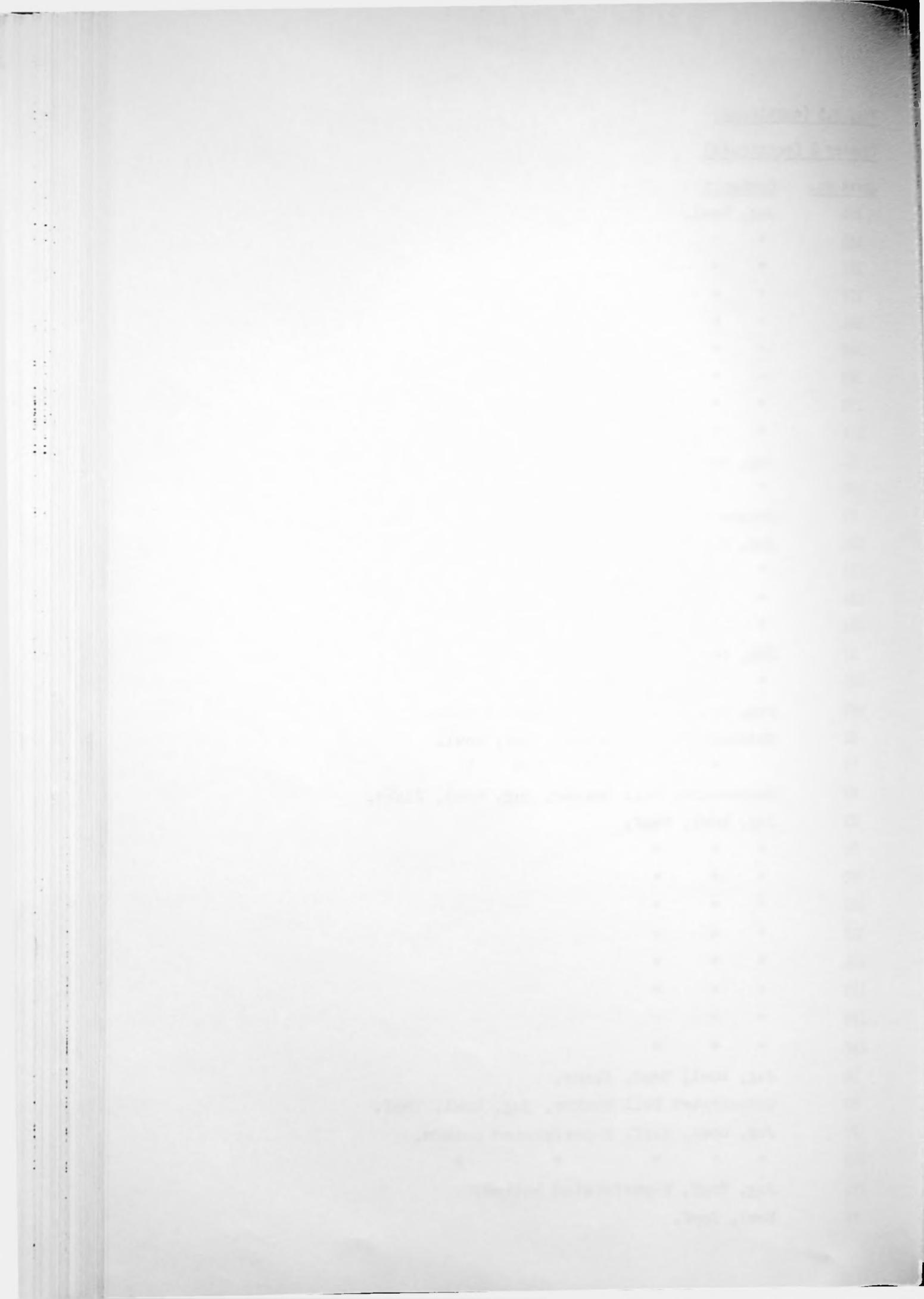


Fig. 5.5 (continued)

Cluster 3

<u>Grave No.</u>	<u>Contents</u>
121	Jug, decorated jug.
141	" " "
128	Jug, decorated jug, bowl.
142	" " " "
149	Jug, decorated jug, bowl, Topf.
158	" " " " "

Cluster 4

<u>Grave No.</u>	<u>Contents</u>
3	Decorated Bell Beaker, jug.
39	" " " "
72	" " " "
113	" " " "
134	" " " "
11	Decorated Bell Beaker, jug, bowl.
49	" " " " "
55	" " " " "
152	" " " " "
74	" " " " "
98	" " " " "
140	" " " " "
48	Decorated Bell Beaker, jug, bowl, Topf.
112	" " " " " "
193	Decorated Bell Beaker, jug, bowl, urn.
111	Decorated Bell Beaker, undecorated Bell Beaker, jug, bowl.
159	Decorated Bell Beaker, undecorated Bell Beaker, jug, bowl, wrist-guard.
30	Decorated Bell Beaker, jug, V-perforated button.
64	Decorated Bell Beaker, jug, bowl, V-perforated button.
137	Decorated Bell Beaker, jug, Topf, V-perforated button.

that about one-third of the population
are Negroes. About 1700 Negroes
and 1000 Chinese live in the city.
About 2200 Negroes live in the
suburbs. Negroes are scattered through
the city, but are concentrated in the
central business district, the northern
part of the city, and the southern

Fig. 5.5 (continued)

Cluster 5

<u>Grave No.</u>	<u>Contents</u>
12	Jug
14	"
28	"
183	"
34	"
50	"
51	"
53	"
77	"
80	"
95	"
100	"
106	"
163	"
173	"
174	"
52	Jug, polypod bowl.
107	" " "
176	" " "
117	Jug, V-perforated button.
160	Jug, polypod bowl, V-perforated button.

Cluster 6

<u>Grave No.</u>	<u>Contents</u>
9	Jug, bowl, vessel.
177	Bowl, vessel.
185	Jug, vessel.

Cluster 7

<u>Grave No.</u>	<u>Contents</u>
36	Jug, arrowhead.
40	Jug, bowl, arrowhead.
76	Decorated Bell Beaker, jug, bowl, arrowhead, wrist-guard, blade.
130	Decorated Bell Beaker, jug, bowl, arrowhead, pendant.
73	Jug, bowl, arrowhead, flake, blade.

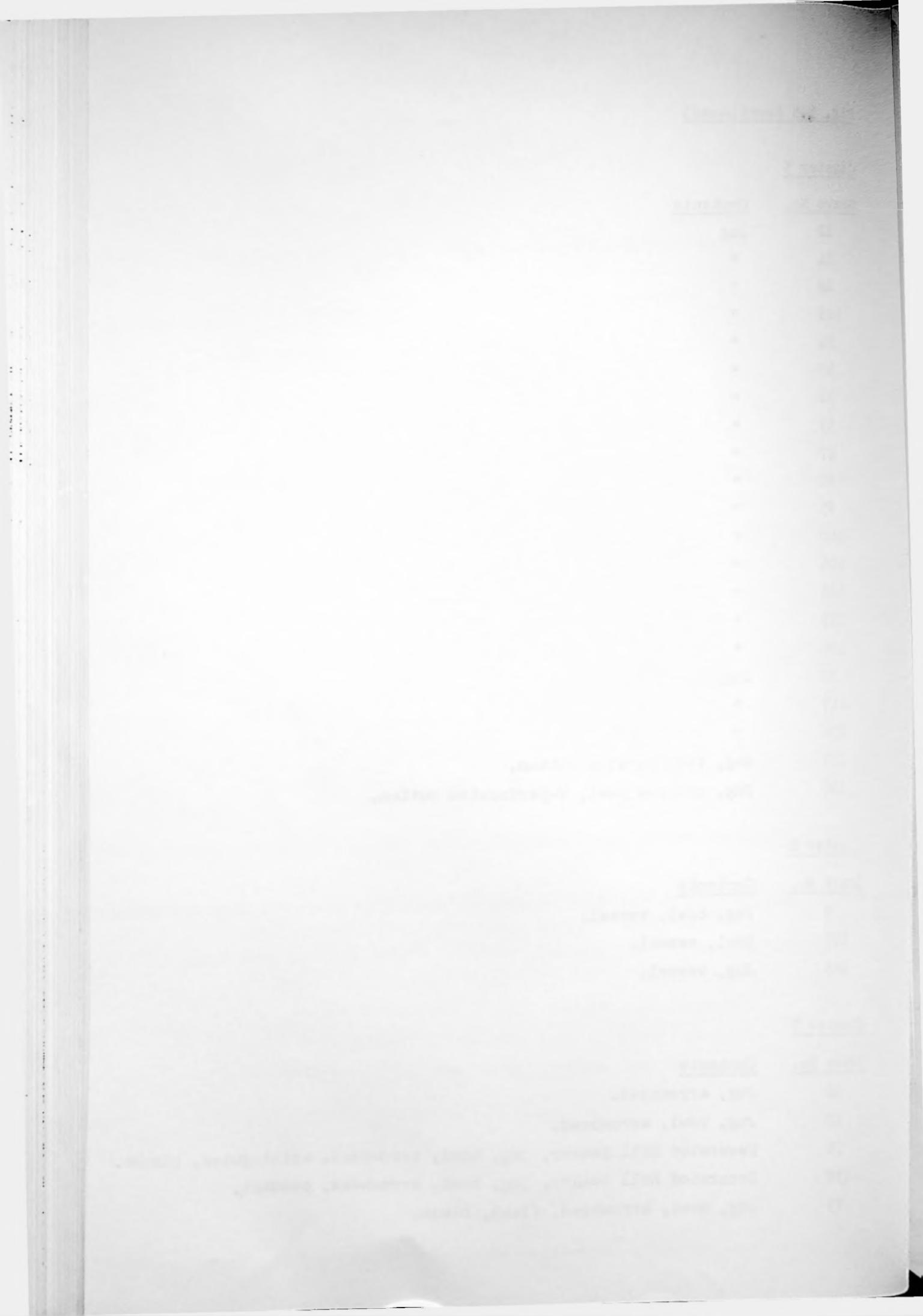


Fig. 5.5 (continued)

Cluster 7 (continued)

<u>Grave No.</u>	<u>Contents</u>
86	Jug, bowl, arrowhead, flake, wrist-guard, animal bones, blade, scraper.
105	Jug, bowl, arrowhead, copper dagger, wrist-guard, bone awl, animal bones blade.
118	Jug, arrowhead, copper dagger, wrist-guard, animal bones, blade.

Cluster 8

<u>Grave No.</u>	<u>Contents</u>
67	Jug, arrowhead, flake, awl, boar's tusk.
154	Jug, decorated jug, bowl, flake, pendant, copper dagger.
16	Decorated Bell Beaker, jug, flake, awl, blade.
79	Jug, blade.
125	Decorated Bell Beaker, jug, blade.
35	Jug, Topf, blade, sherds.

Cluster 9

<u>Grave No.</u>	<u>Contents</u>
66	Decorated Bell Beaker, jug, handled Topf, arrowhead, flake.
71	Decorated Bell Beaker, jug, handled Topf.
200	" " " "
132	Jug, handled Topf.
143	Jug, handled Topf, amphora.
116	Undecorated Bell Beaker, jug, handled Topf, copper awl, bone awl, V-perforated button.
120	Jug, decorated jug, Topf, handled Topf, V-perforated button.
192	Jug, handled Topf, V-perforated button.

Cluster 10

<u>Grave No.</u>	<u>Contents</u>
4	Jug, decorated bowl, animal bones.
63	Jug, decorated bowl.
99	" " "
129	Decorated handled Bell Beaker, jug, decorated bowl.
191	Undecorated Bell Beaker, jug, decorated bowl.
101	Decorated Bell Beaker, jug, decorated bowl, polypod bowl, pendant

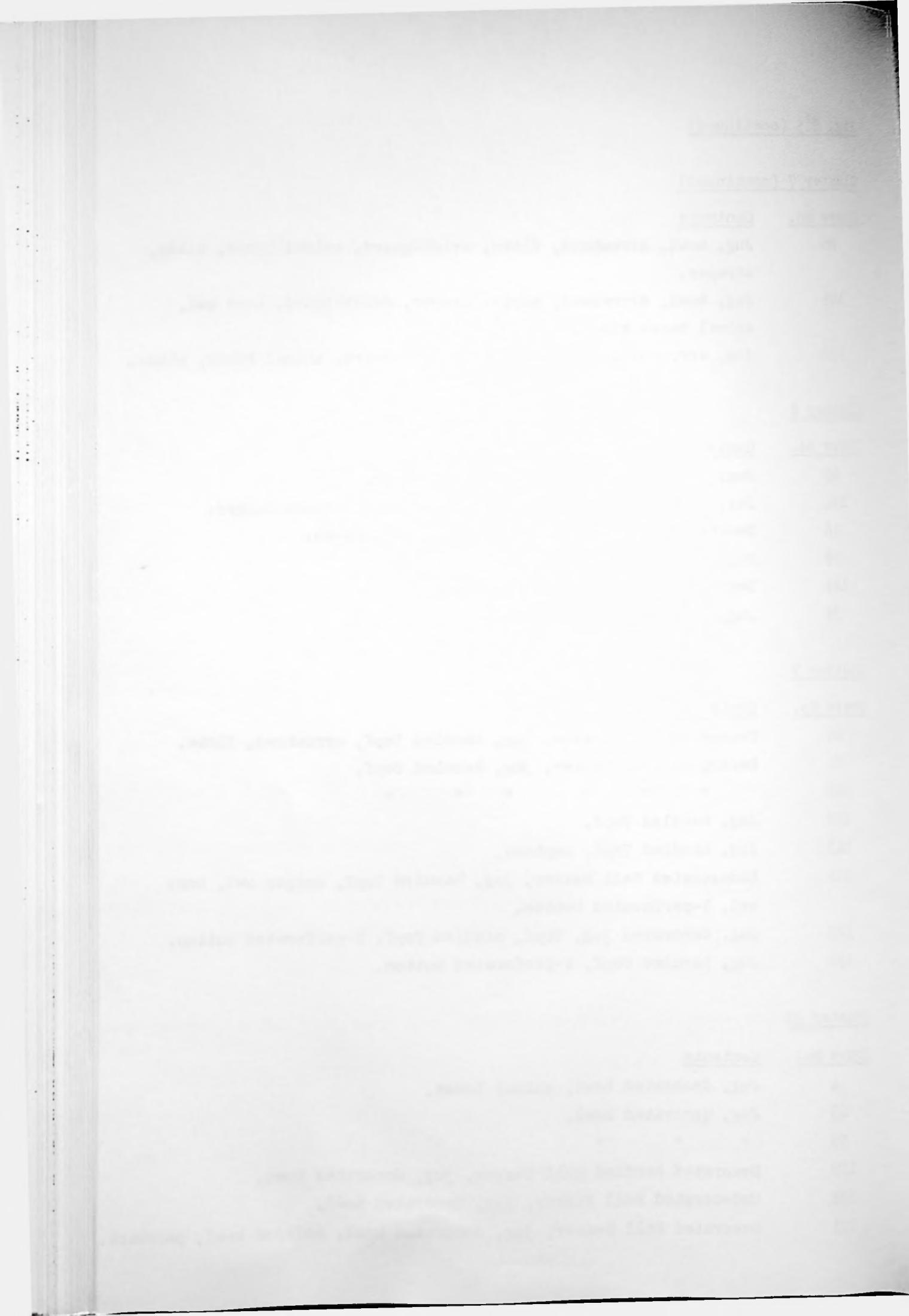


Fig. 5.5 (continued)

Cluster 11

<u>Grave No.</u>	<u>Contents</u>
2	Decorated Bell Beaker, jug, bowl, Topf, copper awl, scraper, V-perforated button.
68	Decorated Bell Beaker, Topf, copper awl, copper dagger, V-perforated button, amber button.
136	Decorated Bell Beaker, jug, Topf, copper awl, wrist-guard, V-perforated button, amber button.
69	Jug, bowl, Topf, V-perforated button, amber button, copper sheet.
146	Jug, decorated jug, bowl, Topf, V-perforated button, animal bones.

Cluster 12

<u>Grave No.</u>	<u>Contents</u>
15	Decorated Bell Beaker, bowl, animal bones.
42	Decorated Bell Beaker, bowl.
108	" " " "
196	Decorated Bell Beaker, bowl, copper awl, amber beads.
18	Bowl.
96	"
22	Bowl, blade.
115	Undecorated Bell Beaker, bowl, animal bones.
195	Decorated Bell Beaker, undecorated Bell Beaker, bowl, copper dagger, blade.

Cluster 13

<u>Grave No.</u>	<u>Contents</u>
24	Bowl, urn.
47	" "
83	Bowl, urn, copper awl.
119	Bowl, decorated bowl, handled Topf, urn.
186	Urn.

Cluster 14

<u>Grave No.</u>	<u>Contents</u>
41	Bowl, Topf, handled Topf, flake.
91	Topf.
110	"

generalization of the concept of function from the domain of sets to the domain of functions. In this paper we will consider the problem of defining the concept of function in the domain of sets. We will also consider the problem of defining the concept of function in the domain of functions.

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Fig. 5.5 (continued)

Cluster 15

<u>Grave No.</u>	<u>Contents</u>
5	Decorated Bell Beaker, arrowhead, ear-rings.
181	Arrowhead.
62	Decorated Bell Beaker, decorated bowl, arrowhead, copper dagger.

Cluster 16

<u>Grave No.</u>	<u>Contents</u>
6	Decorated Bell Beaker
7	" " "
178	" " "
10	Decorated Bell Beaker, stone axe.
19	Decorated Bell Beaker, flake.
179	Decorated Bell Beaker, undecorated Bell Beaker.
56	Decorated Bell Beaker, copper dagger, whetstone.
198	Decorated Bell Beaker, copper dagger.
54	Decorated Bell Beaker, decorated jug, decorated bowl.
162	Decorated Bell Beaker, undecorated handled Bell Beaker, decorated bowl.

Cluster 17

<u>Grave No.</u>	<u>Contents</u>
8	Decorated Bell Beaker, jug, flake, copper awl, wrist-guard, sherds.
37	Decorated Bell Beaker, bowl, flake, wrist-guard, sherds, V-perforated button.
45	Decorated Bell Beaker, decorated bowl, Topf, flake, wrist-guard.
44	Decorated Bell Beaker, jug, polypod bowl, arrowhead, stone axe, flake, wrist-guard, scraper, boar's tusk, whetstone.
92	Decorated Bell Beaker, arrowhead, stone axe, flake, copper dagger, wrist-guard, boar's tusk.
114	Decorated Bell Beaker, arrowhead, flake, blade,scraper, boar's tusk.
65	Decorated Bell Beaker, arrowhead, pendant, wrist-guard, boar's tusk.

John Adams, the author of the Declaration of Independence, was a prominent figure in American history. He served as the second President of the United States from 1797 to 1801. Adams was born in Braintree, Massachusetts, in 1735. He studied law and became a lawyer. He was a member of the Continental Congress and signed the Declaration of Independence. After his term as president, he returned to Massachusetts and continued to serve in the state legislature. He died in 1826 at the age of 90.

Fig. 5.5 (continued)

Cluster 17 (continued)

<u>Grave No.</u>	<u>Contents</u>
199	Decorated Bell Beaker, arrowhead, copper awl, copper dagger, wrist-guard.
197	Decorated Bell Beaker, Topf, arrowhead, sherds, scraper.

Cluster 18

<u>Grave No.</u>	<u>Contents</u>
33	Bowl, copper dagger, wrist-guard.
172	Decorated jug, copper dagger, wrist-guard, copper sheet.
70	Decorated Bell Beaker, jug, copper dagger, wrist-guard, blade.
81	Jug, decorated bowl, copper dagger, wrist-guard.
82	Decorated Bell Beaker, decorated bowl, copper dagger, wrist-guard.
93	Decorated Bell Beaker, vessel, stone axe, copper dagger, wrist-guard.
85	Wrist-guard.
189	" "

Cluster 19

<u>Grave No.</u>	<u>Contents</u>
25	Undecorated Bell Beaker, urn.
109	Undecorated Bell Beaker.
138	Undecorated Bell Beaker, undecorated handled Bell Beaker, jug, polypod bowl, amphora.
43	Vessel, amphora.

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the first two.

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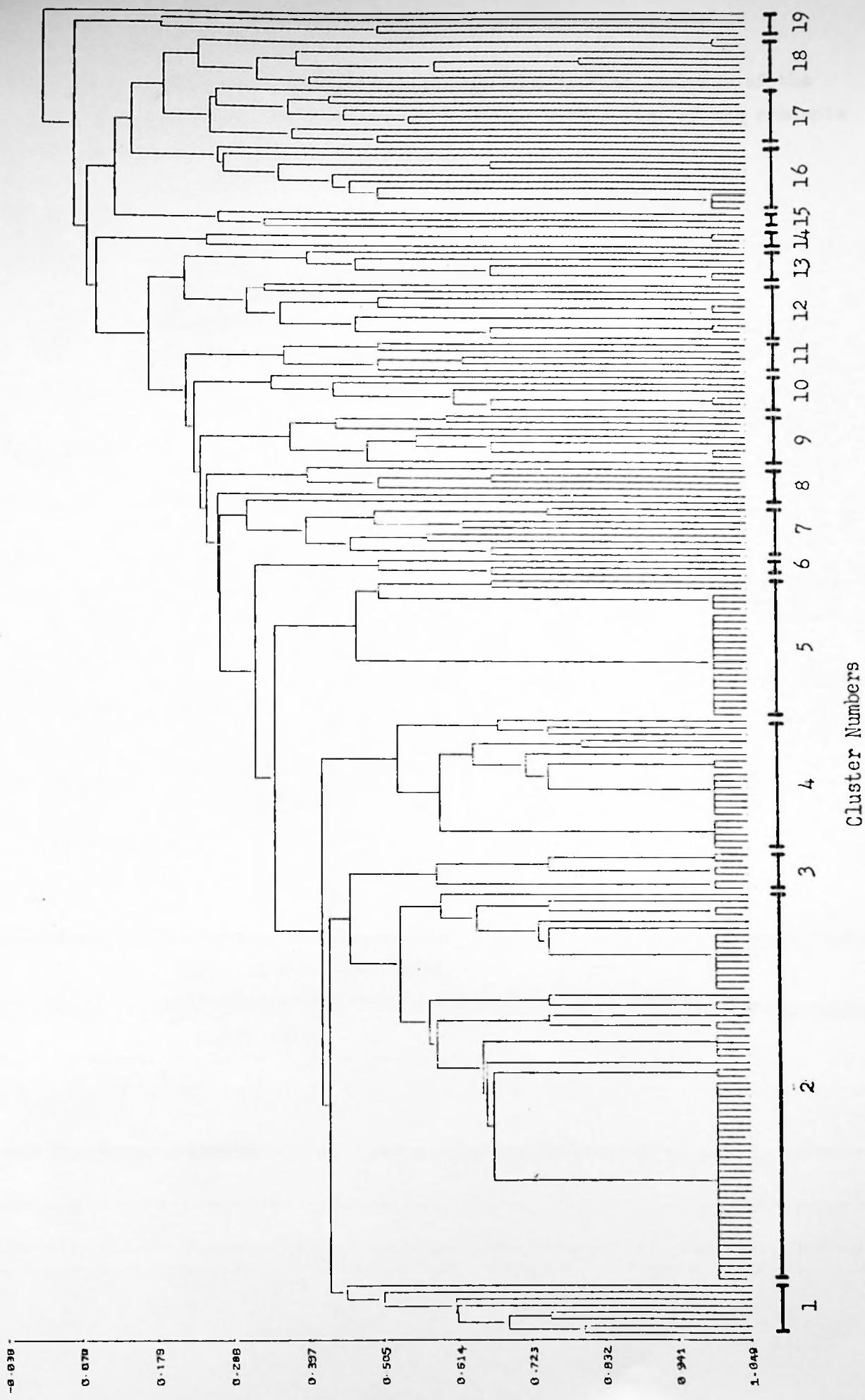




Figure 5.6 Dendrogram produced by average-link cluster analysis of the relations between Bell Beaker graves, together with a list of the contents of the graves in the clusters. Bohemia.

Cluster 1

<u>Grave No.</u>	<u>Contents</u>
1	Bowl, arrowhead.
107	Arrowhead.
105	Arrowhead, amphora.
192	Handled Topf, arrowhead, scraper.

Cluster 2

<u>Grave No.</u>	<u>Contents</u>
2	Jug, sherds.
119	" "
94	Sherds.

Cluster 3

<u>Grave No.</u>	<u>Contents</u>
3	Jug, decorated jug.
131	Jug, decorated jug, polypod bowl.
8	Jug, polypod bowl.
49	" " "
162	" " "
163	" " "
194	" " "
159	Jug, polypod bowl, Topf.
164	Decorated Bell Beaker, undecorated Bell Beaker, jug, polypod bowl.

Cluster 4

<u>Grave No.</u>	<u>Contents</u>
27	Jug.
41	"
52	"
121	"
129	"
111	"

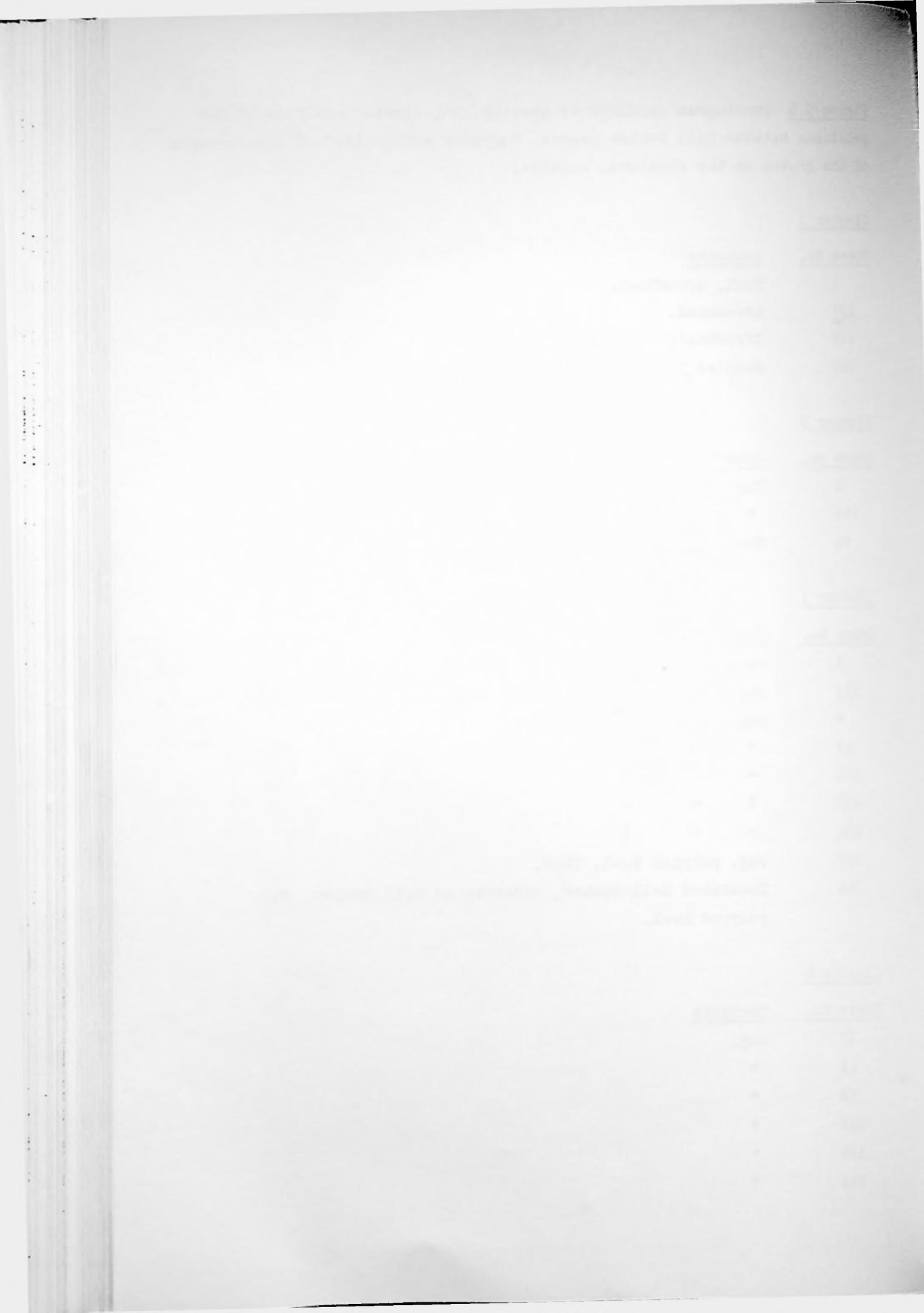


Fig. 5.6 (continued)

Cluster 4 (continued)

<u>Grave No.</u>	<u>Contents</u>
112	Jugs.
113	"
115	"
117	"
120	"
54	"
62	"
63	"
64	"
76	"
81	"
88	"
90	"
96	"

Cluster 5

<u>Grave No.</u>	<u>Contents</u>
5	Undecorated handled Bell Beaker, jug, bowl, stone axe,
67	Undecorated handled Bell Beaker, jug, bowl.
87	" " " " "
66	Undecorated handled Bell Beaker, jug.
69	" " " " "
155	" " " " "
6	Jug, bowl.
13	" "
14	" "
31	" "
34	" "
40	" "
45	" "
48	" "
50	" "
184	" "
181	" "
195	" "
51	" "
109	" "

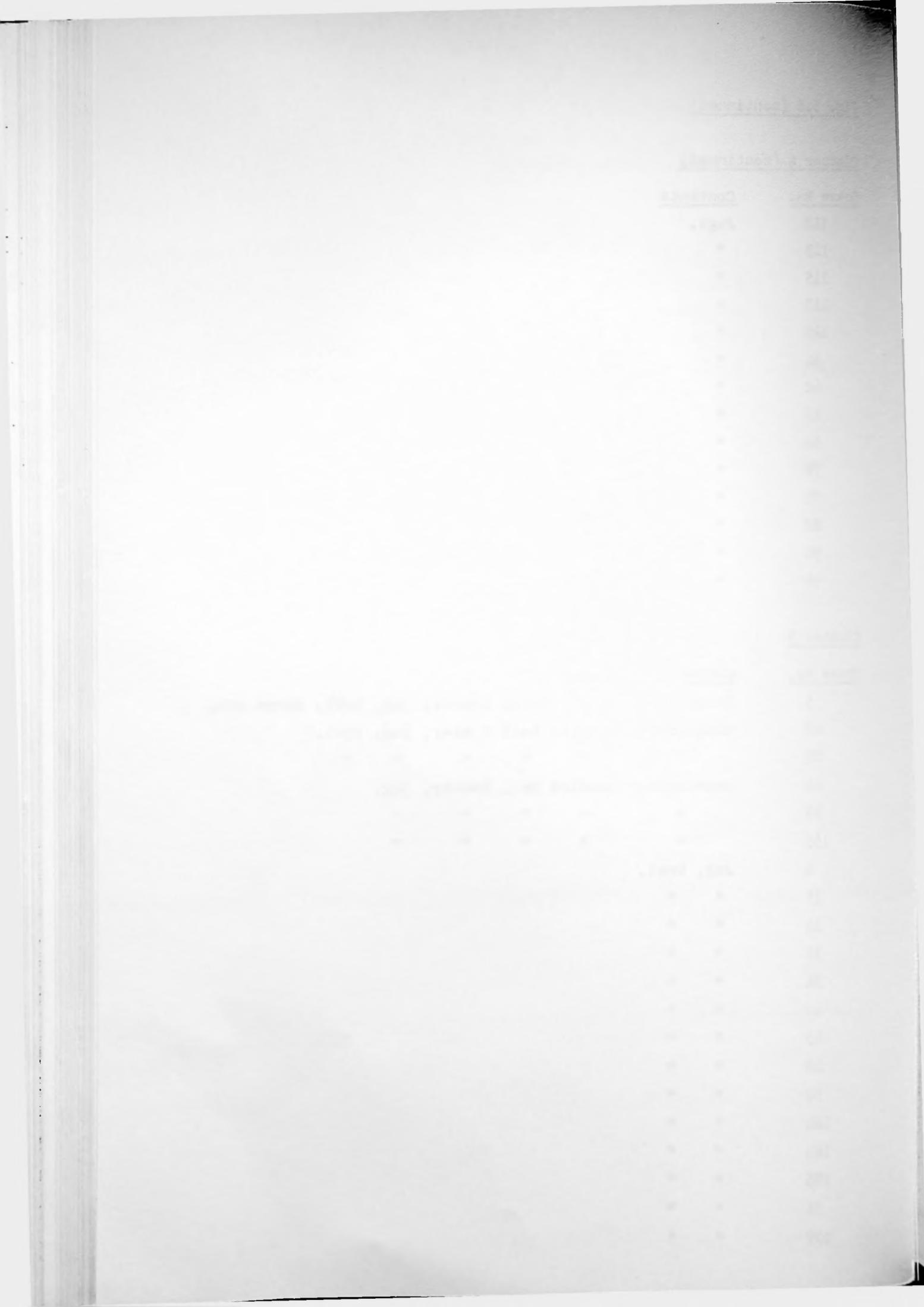


Fig. 5.6 (continued)

Cluster 5 (continued)

<u>Grave No.</u>	<u>Contents</u>
124	Jug, bowl.
127	" "
128	" "
136	" "
137	" "
138	" "
142	" "
168	" "
169	" "
170	" "
173	" "
174	" "
176	" "
177	" "
179	" "
180	" "
44	Jug, bowl, animal bones.
77	Jug, bowl, animal bones, blade.
7	Decorated Bell Beaker, jug, bowl.
24	" " " " "
104	Decorated Bell Beaker, jug, bowl, flake.
153	Decorated Bell Beaker, undecorated Bell Beaker, jug, bowl.
36	Undecorated handled Bell Beaker, jug, bowl, Topf.
68	" " " " " " "
185	Jug, bowl, Topf.
193	" " "
187	Jug, bowl, decorated bowl, Topf.
47	Jug, bowl, V-perforated button, copper sheet.

Cluster 6

<u>Grave No.</u>	<u>Contents</u>
30	Undecorated handled Bell Beaker, jug, bowl, arrowhead, blade.
154	Undecorated Bell Beaker, jug, bowl, scraper blade.
165	Jug, bowl, blade.

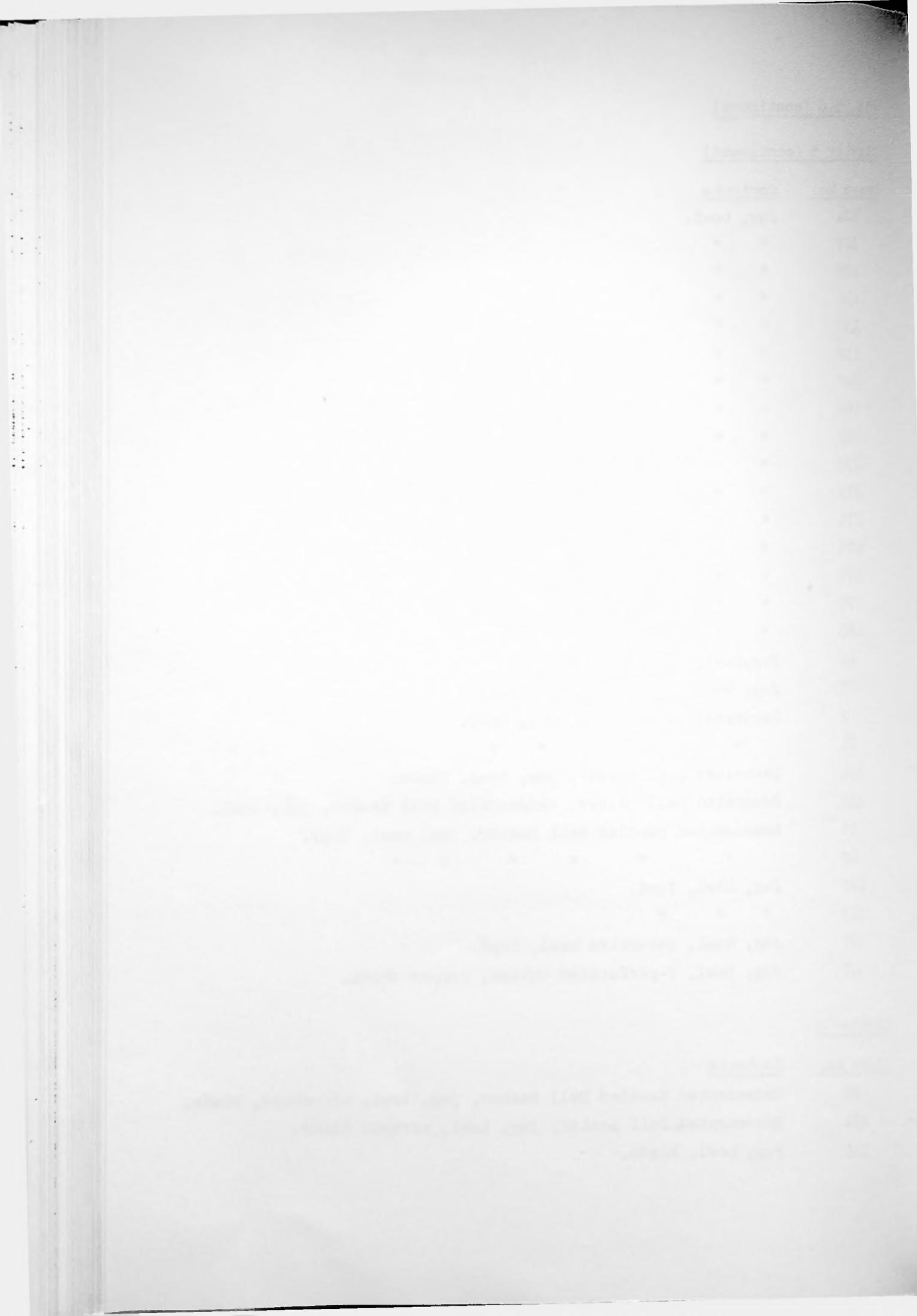


Fig. 5.6 (continued)

Cluster 6 (continued)

<u>Grave No.</u>	<u>Contents</u>
80	Jug, bowl, arrowhead, wrist-guard, blade.
196	Jug, bowl, handled Topf, pendant, wrist-guard, blade.

Cluster 7

<u>Grave No.</u>	<u>Contents</u>
72	Undecorated Bell Beakers, jug.
82	Undecorated Bell Beaker, undecorated handled Bell Beaker, jug, bowl.
123	Undecorated Bell Beaker, jug, bowl.
157	Undecorated Bell Beaker, undecorated handled Bell Beaker, jug, blade.

Cluster 8

<u>Grave No.</u>	<u>Contents</u>
18	Jug, vessel.
58	" "
110	Jug, bowl, vessel.
147	Jug, bowl, handled Topf, vessel, bone awl.

Cluster 9

<u>Grave No.</u>	<u>Contents</u>
38	Jug, bowl, wrist-guard.
197	Jug, bowl, wrist-guard, copper sheet.
145	Bowl, wrist-guard.
150	Jug, bowl, flake, wrist-guard, boar's tusk.
39	Jug, wrist-guard.
182	Jug, polypod bowl, wrist-guard.
61	Decorated Bell Beaker, bowl, stone axe, wrist-guard.
198	Decorated Bell Beaker, decorated handled Bell Beaker, jug, bowl, wrist-guard.
101	Decorated Bell Beaker, jug, bowl, arrowhead, copper dagger, wrist-guard, scraper.

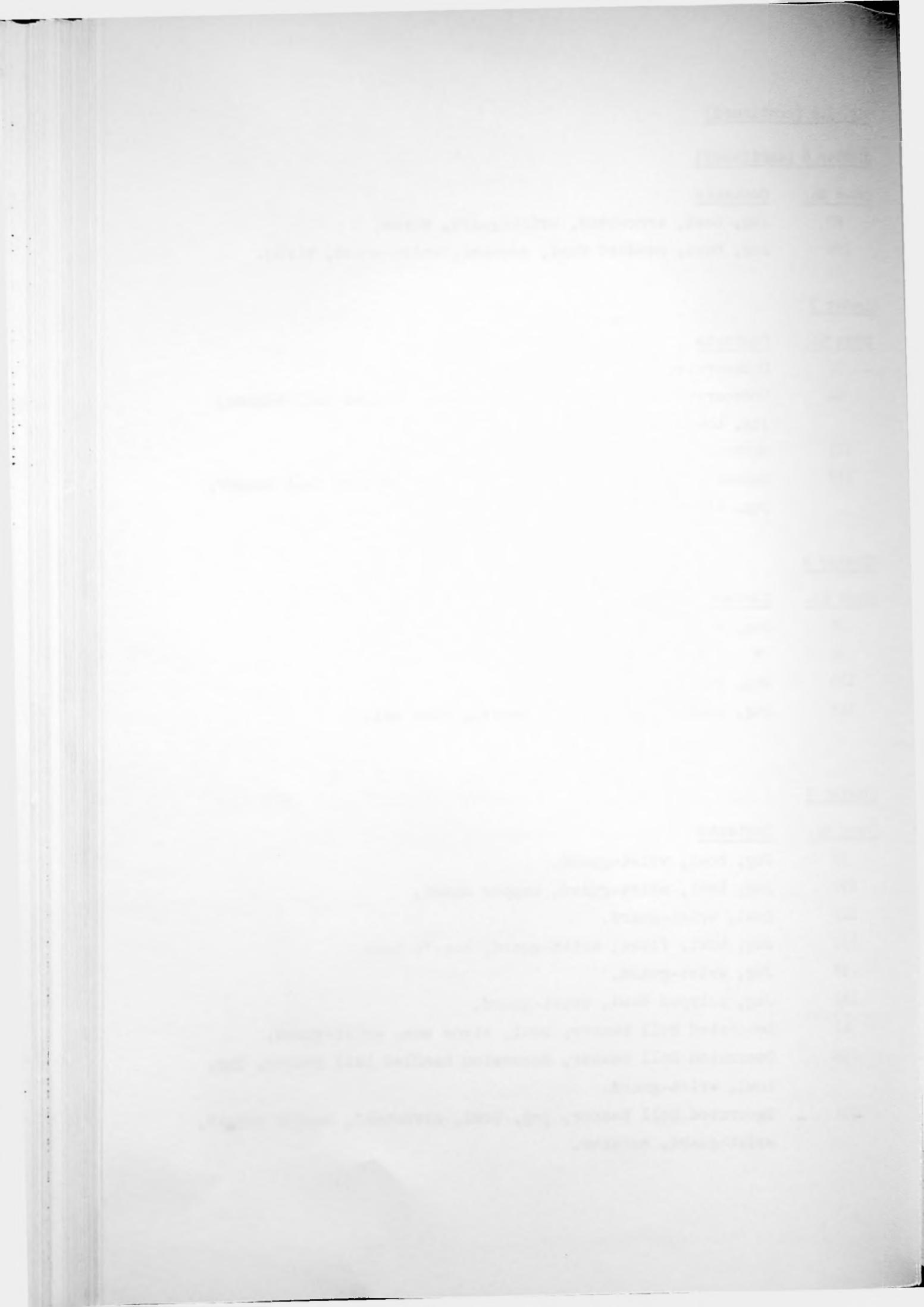


Fig. 5.6 (continued)

Cluster 10

<u>Grave No.</u>	<u>Contents</u>
17	Jug, bowl, arrowhead, flake, copper dagger.
79	Jug, bowl, arrowhead, flake, bone pendant, blade.

Cluster 11

<u>Grave No.</u>	<u>Contents</u>
55	Undecorated handled Bell Beaker, handled Topf.
83	Undecorated Bell Beaker, undecorated handled Bell Beaker, bowl, handled Topf.
60	Bowl, handled Topf.
122	" " "
141	Jug, bowl, handled Topf.
116	Handled Topf.
190	Jug, handled Topf.
191	" " "

Cluster 12

<u>Grave No.</u>	<u>Contents</u>
10	Undecorated handled Bell Beaker, jug, Topf, copper awl, copper dagger, animal bones, blade.
19	Jug, copper dagger, blade.
49	Undecorated handled Bell Beaker, jug, bone pendant, copper dagger, wrist-guard, blade.
20	Decorated Bell Beaker, jug, vessel, arrowhead, wrist-guard, blade.
108	Decorated Bell Beaker, jug, wrist-guard, blade.
126	Decorated Bell Beaker, undecorated Bell Beaker, jug, arrowhead, stone axe, blade, whetstone.
156	Undecorated Bell Beaker, jug, arrowhead, wrist-guard, amphora.

Cluster 13

<u>Grave No.</u>	<u>Contents</u>
4	Decorated Bell Beaker, undecorated handled Bell Beaker, bowl.
146	Decorated Bell Beaker, bowl.
158	Undecorated handled Bell Beaker, bowl, amphora.

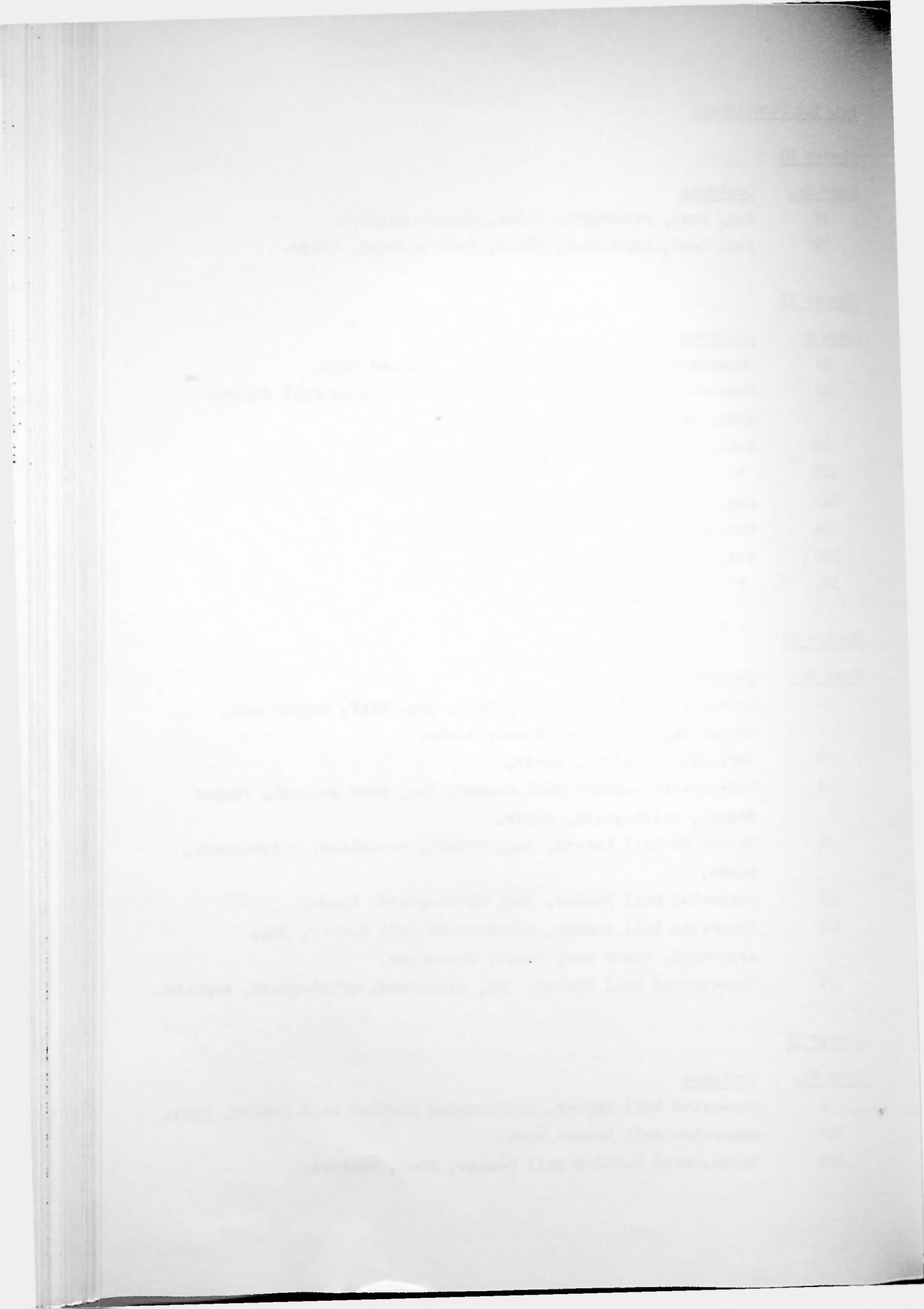


Fig. 5.6 (continued)

Cluster 13 (continued)

<u>Grave No.</u>	<u>Contents</u>
189	Undecorated handled Bell Beaker, bowl.
16	Bowl.
42	"
70	"
75	"
132	"
183	"
186	Bowl, blade.
12	Bowl, bone pendant.
140	Bowl, bone pendant, wrist-guard,
33	Decorated handled Bell Beaker, bowl, amphora.
144	Bowl, Topf, vessel.
178	Bowl, Topf.
37	Topf.

Cluster 14

<u>Grave No.</u>	<u>Contents</u>
9	Undecorated Bell Beaker, bowl, animal bones.
133	Bowl, animal bones.
167	Undecorated Bell Beaker, undecorated handled Bell Beaker, bowl, animal bones, amphora.
130	Bowl, handled Topf, copper awl, animal bones, copper sheet.
134	Bowl, animal bones, copper sheet.
43	Animal bones sherds, sherds.
166	Animal bones.

Cluster 15

<u>Grave No.</u>	<u>Contents</u>
21	Undecorated Bell Beaker, bowl, vessel.
22	Undecorated Bell Beaker, bowl, vessel, blade.
26	Decorated Bell Beaker, undecorated Bell Beaker.
71	Undecorated Bell Beaker.
106	Decorated Bell Beaker, undecorated Bell Beaker, flake, amphora.
118	Decorated Bell Beaker, undecorated Bell Beaker, bowl, amphora.

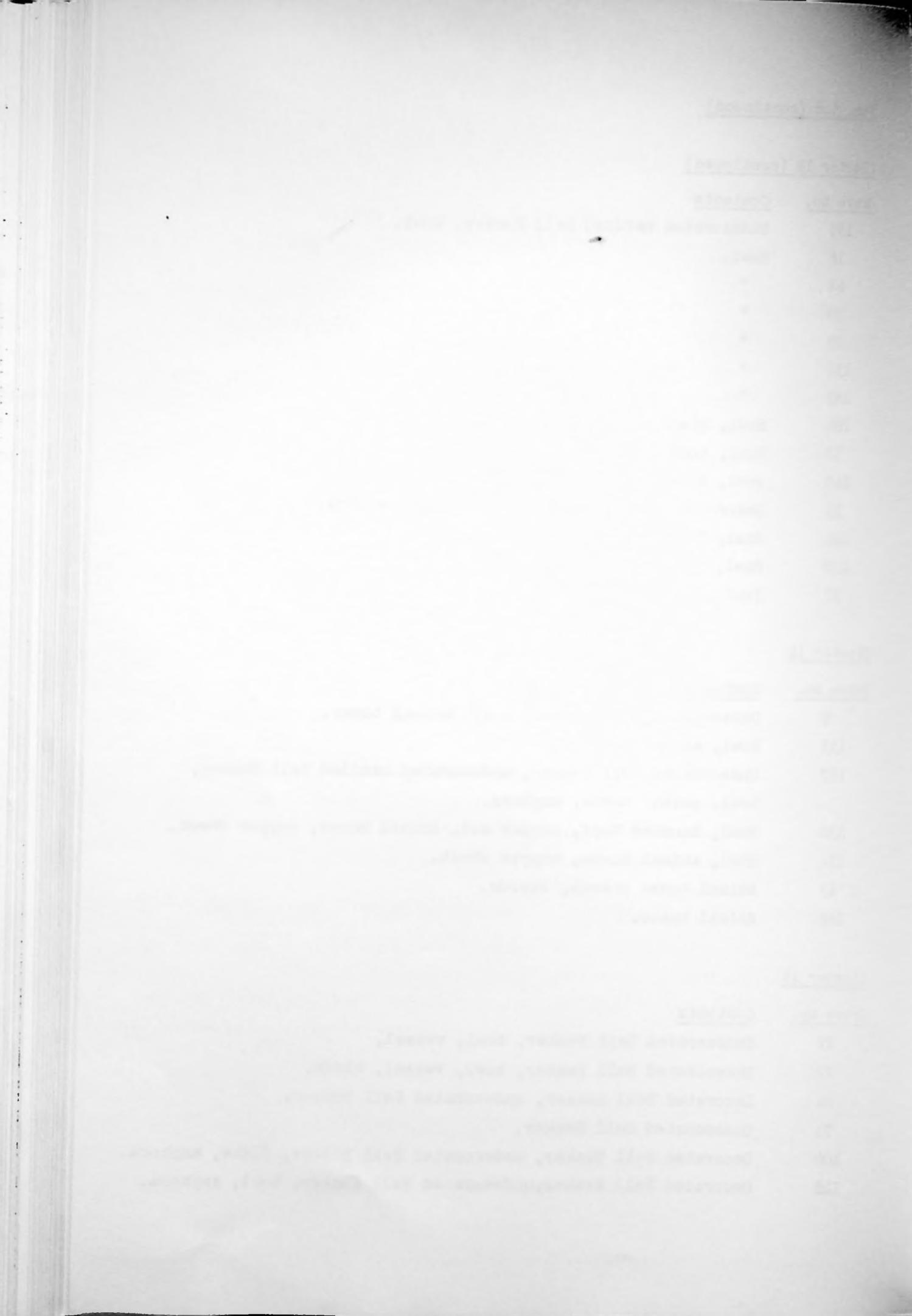


Fig.5.6 (continued)

Cluster 16

<u>Grave No.</u>	<u>Contents</u>
23	Decorated Bell Beaker, jug.
56	" " " "
65	" " " "
59	Decorated Bell Beaker, jug, stone axe.
151	Decorated Bell Beaker, jug, decorated bowl, bone pendant.
25	Decorated Bell Beaker.
53	" " "
57	" " "
84	" " "
103	" " "
172	" " "
95	Decorated Bell Beaker, sherds.
78	Decorated Bell Beaker, ear-rings, blade.
92	Decorated Bell Beaker, jug, copper dagger, wrist-guard, ear-rings.
125	Decorated Bell Beaker, copper dagger, ear-rings.
29	Decorated Bell Beaker, vessel, flake.
32	Decorated Bell Beaker, vessel, copper awl, ear-rings, scraper.

Cluster 17

<u>Grave No.</u>	<u>Contents</u>
35	Copper dagger, wrist-guard.
91	Undecorated handled Bell Beaker, copper dagger, wrist-guard.
74	Wrist-guard.
139	" "
86	Decorated Bell Beaker, copper dagger, amber buttons.
161	Decorated Bell Beaker, decorated handled Bell Beaker, decorated jug, arrowhead, flake, wrist-guard, amber buttons.

Cluster 18

<u>Grave No.</u>	<u>Contents</u>
89	Undecorated handled Bell Beaker.
100	" " " "
48	" " " "

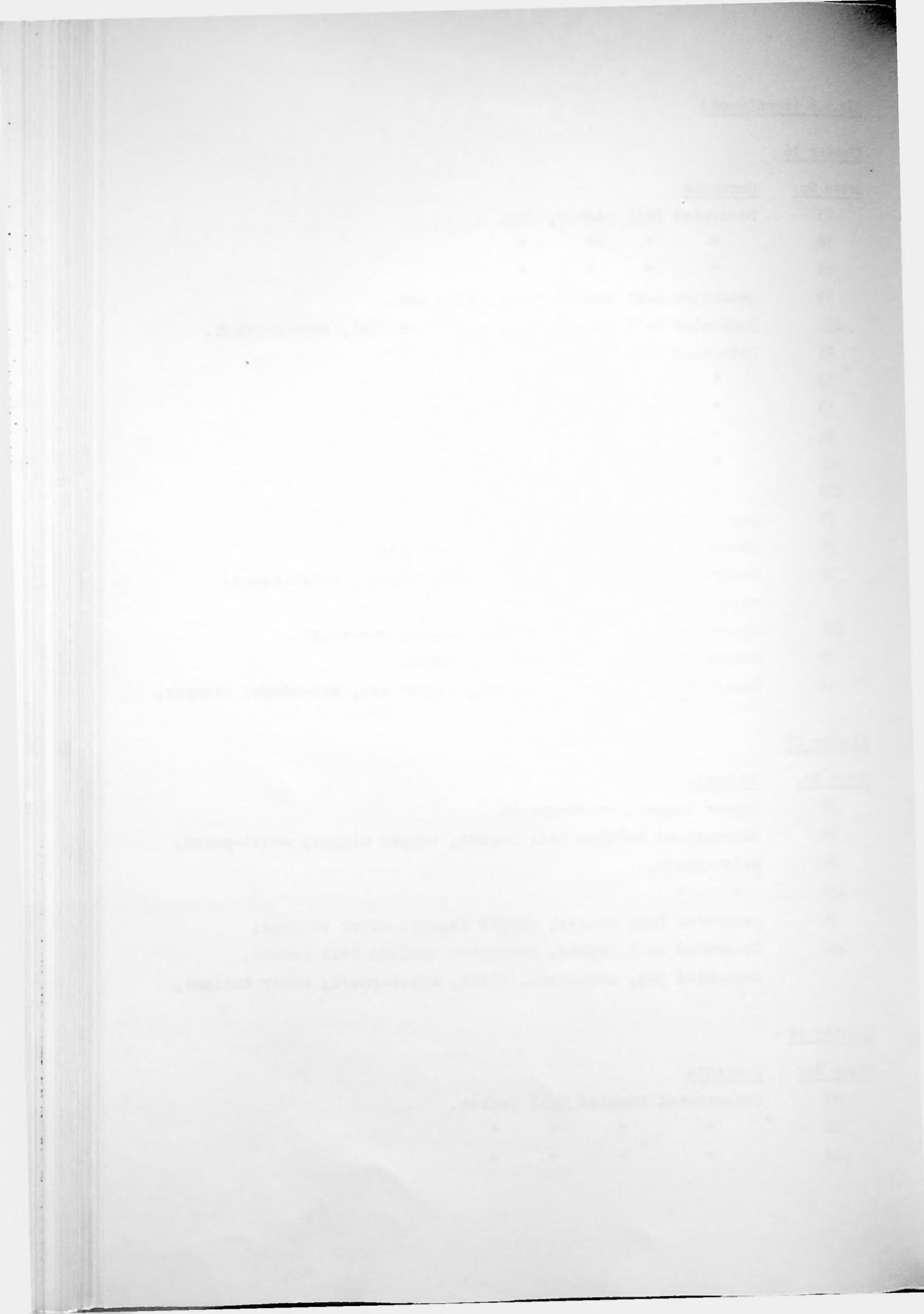


Fig. 5.6 (continued)

Cluster 18 (continued)

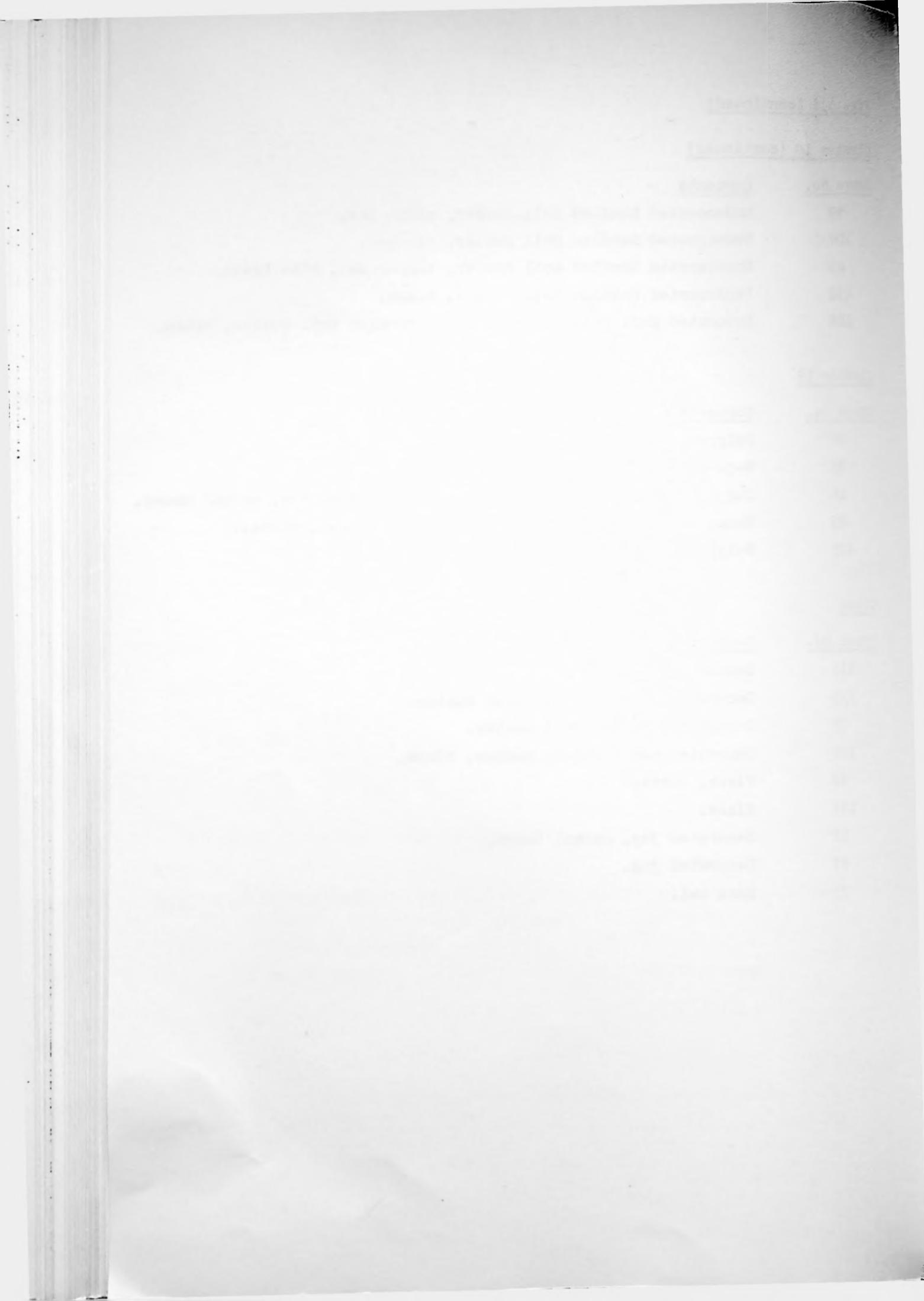
<u>Grave No.</u>	<u>Contents</u>
99	Undecorated handled Bell Beaker, stone axe.
102	Undecorated handled Bell Beaker, scraper.
43	Undecorated handled Bell Beaker, copper awl, bone beads.
152	Undecorated handled Bell Beaker, blade.
188	Decorated Bell Beaker, undecorated handled Bell Beaker, blade.

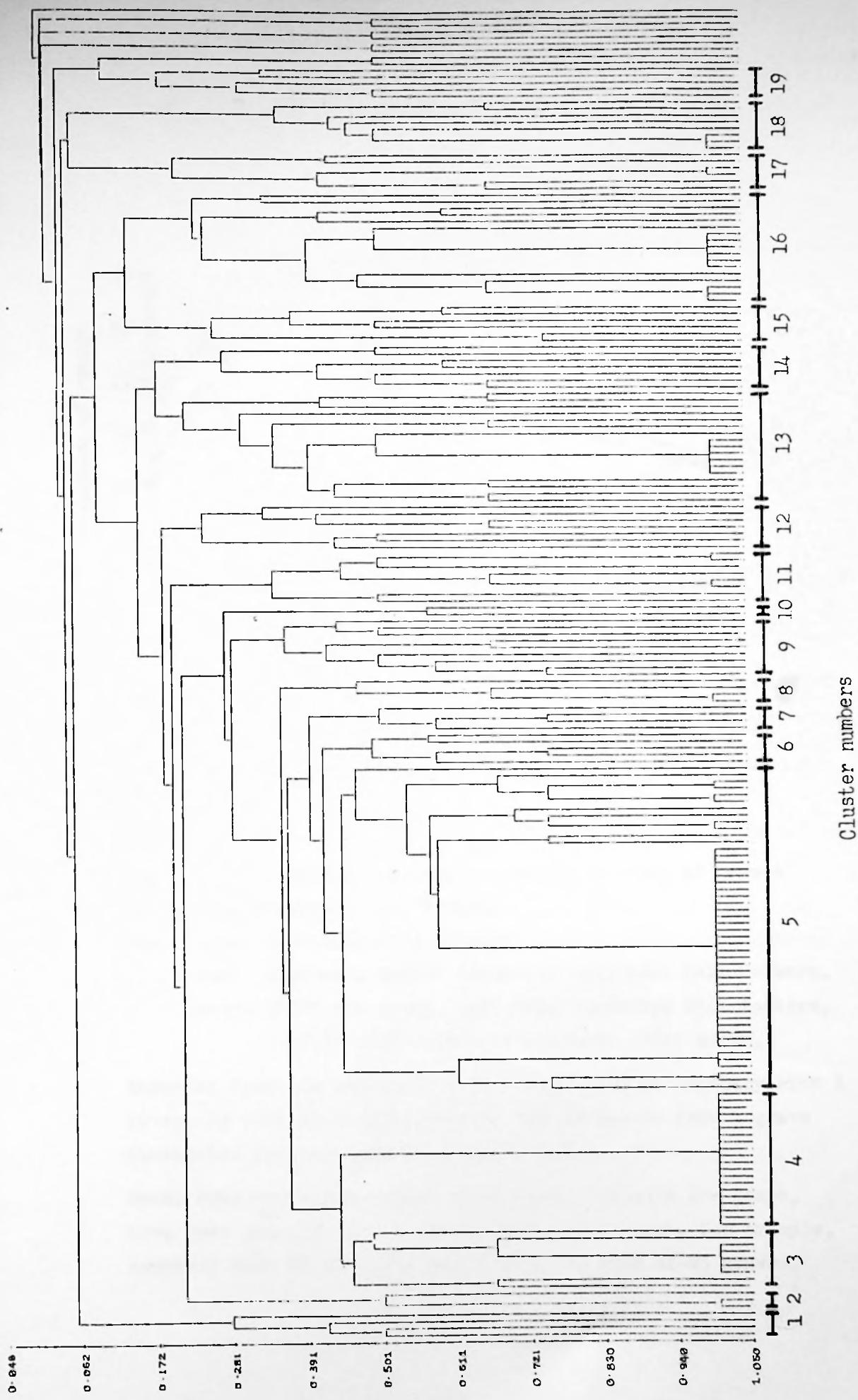
Cluster 19

<u>Grave No.</u>	<u>Contents</u>
28	Polypod bowl, V-perforated button.
93	V-perforated button.
46	Jug, polypod bowl, arrowhead, V-perforated button, animal bones.
85	Undecorated handled Bell Beaker, polypod bowl, vessel.
175	Polypod bowl.

Other

<u>Grave No.</u>	<u>Contents</u>
114	Decorated bowl.
135	Decorated bowl, V-perforated button.
15	Decorated handled Bell Beaker.
160	Decorated handled Bell Beaker, blade.
98	Flake, sherds.
171	Flake.
11	Decorated jug, animal bones.
97	Decorated jug.
73	Bone awl.





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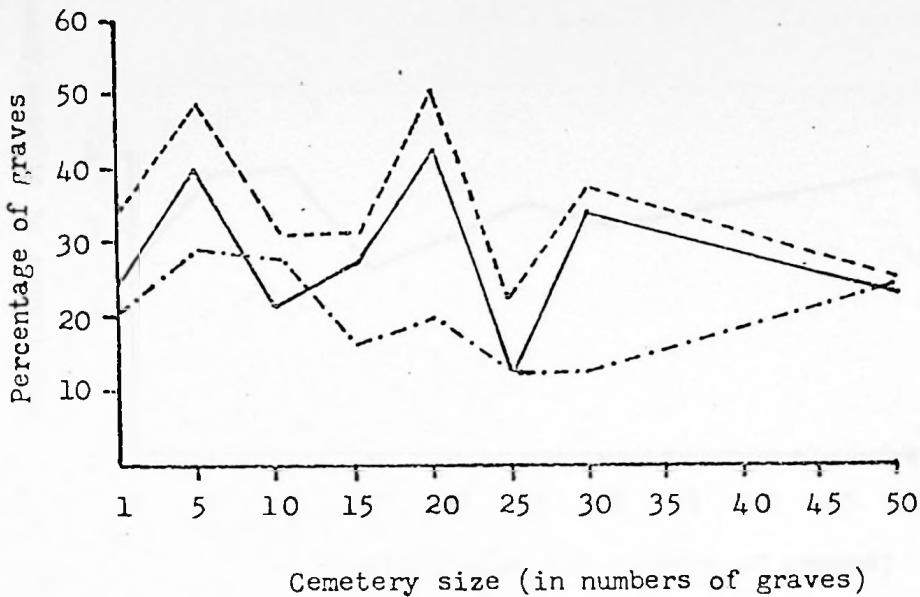


Figure 5.7 Cemetery size against the percentage of graves containing certain items. Moravia.

Key: —— Decorated Bell Beakers.

--- Cluster 1 goods, including decorated Bell Beakers.

----- Cluster 1 goods, excluding decorated Bell Beakers, together with other non-ceramic grave goods.

Example: from the position of the solid line at cemetery size 1 it can be seen that approximately 25% of graves from 1 grave cemeteries contain decorated Bell Beakers.

Note: cemetery sizes, apart from those with only one grave, have been grouped into 5 grave intervals so that, for example, cemetery size 25 includes all cemeteries with 21-25 graves.

and the same will develop in the same way. In
the first place, the new species will be more
adapted to its environment than the old one,
and it will therefore increase in numbers at the
expense of the old one. This is called natural
selection, and it is the chief cause of evolution.
In the second place, the new species will be
more numerous than the old one, and it will
therefore have more opportunities for developing
new characteristics. This is called environmental
selection, and it is also a cause of evolution.

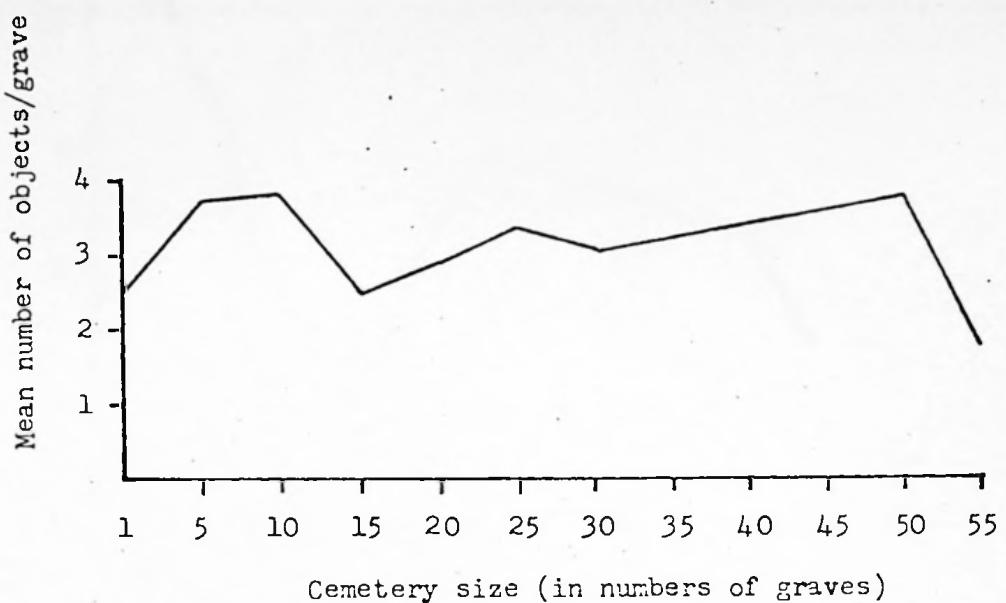


Figure 5.8 Cemetery size against mean number of objects/grave.
Moravia.

Example: from the position of the line at cemetery size 1 it can be seen that the mean number of objects/grave in 1 grave cemeteries is approximately 2.5.

Note: cemetery sizes, apart from those with only one grave, have been grouped into 5 grave intervals so that, for example, cemetery size 25 includes all cemeteries with 21-25 graves.

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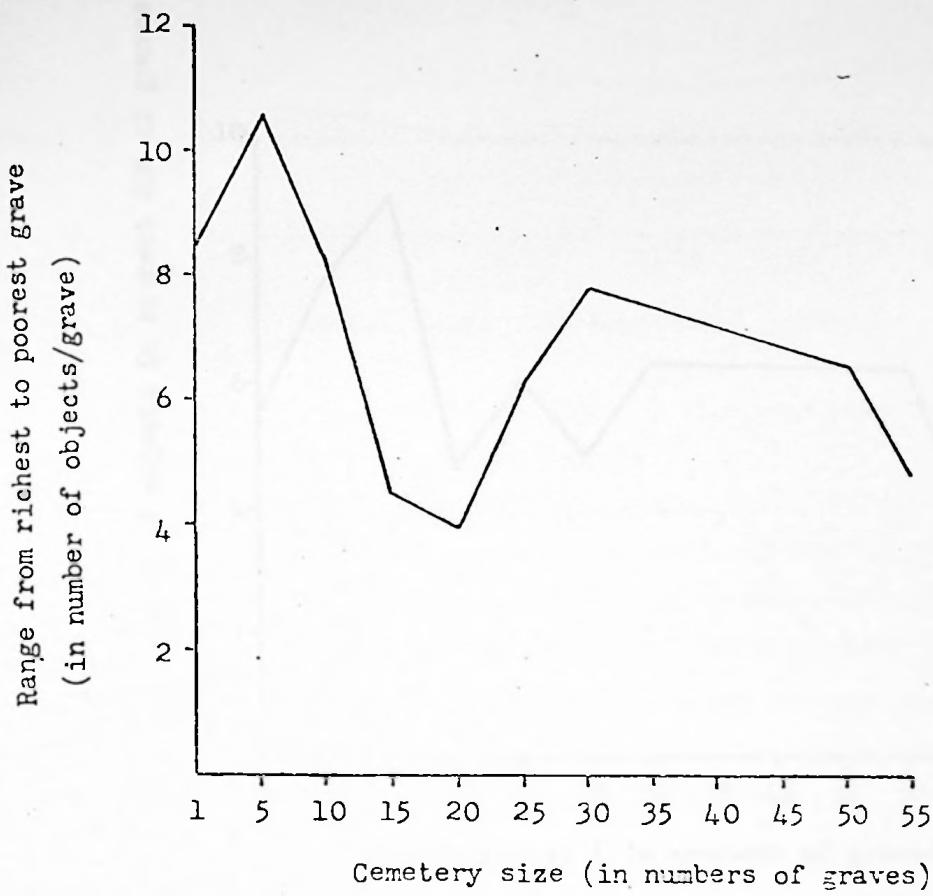


Figure 5.9 Cemetery size against the range from richest to poorest grave measured in terms of number of objects/grave. Moravia. The range was obtained by taking the mean of the three maximum differences in number of objects/grave for each size category.

Example: from the position of the line at cemetery size 1 it can be seen that the difference between the richest and poorest graves in all 1 grave cemeteries taken together is approximately 8.3 objects.

Note: as above, cemetery sizes have been grouped into 5 grave intervals so that, for example, cemetery size 25 includes all cemeteries with 21-25 graves.

Figure 6.2 shows that the average age at first marriage is 25.2 years. This figure is very similar to the average age at first marriage in 1990 (25.1 years). The average age at first marriage has increased by 1.1 years over the last two decades. The increase in the average age at first marriage is due to the fact that women are delaying their first marriage and having children later. The average age at first marriage has increased from 25.1 years in 1990 to 25.2 years in 2000. The average age at first marriage has increased from 25.1 years in 1990 to 25.2 years in 2000. The average age at first marriage has increased from 25.1 years in 1990 to 25.2 years in 2000.

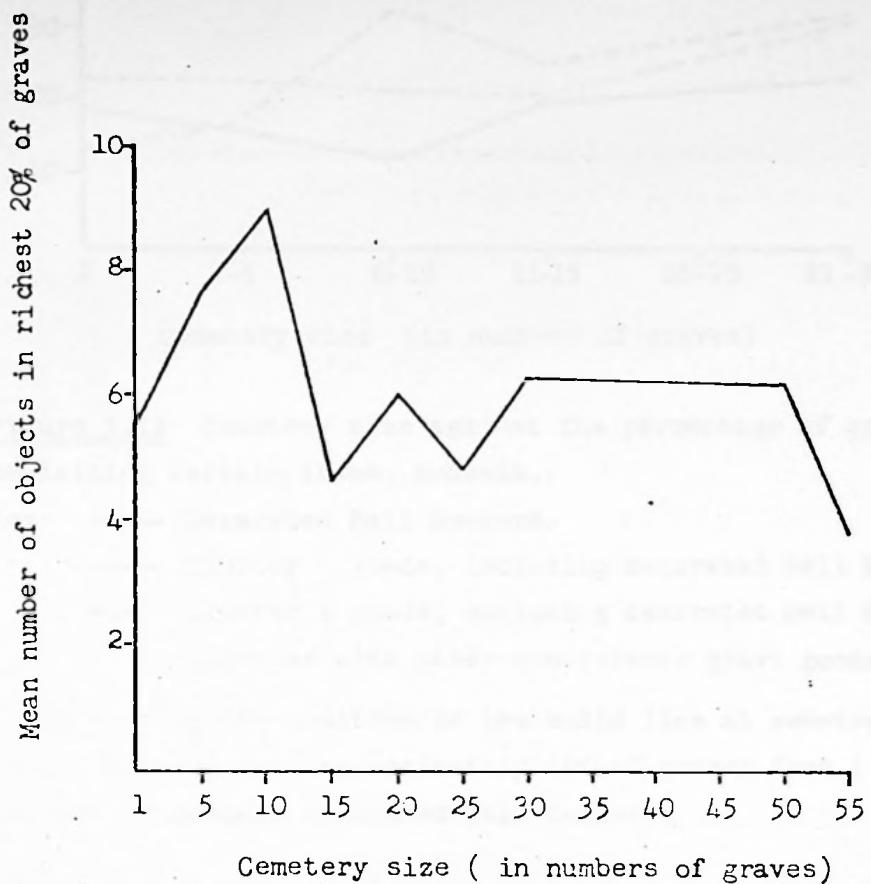


Figure 5.10 Cemetery size against the mean number of objects in the richest 20% of graves. Moravia.

Example: from the position of the line at cemetery size 1 it can be seen that the mean number of objects in the richest 20% of graves from 1 grave cemeteries is 5.5.

Note: as above, cemetery sizes have been grouped into 5 grave intervals so that, for example, cemetery size 25 includes all cemeteries with 21-25 graves.

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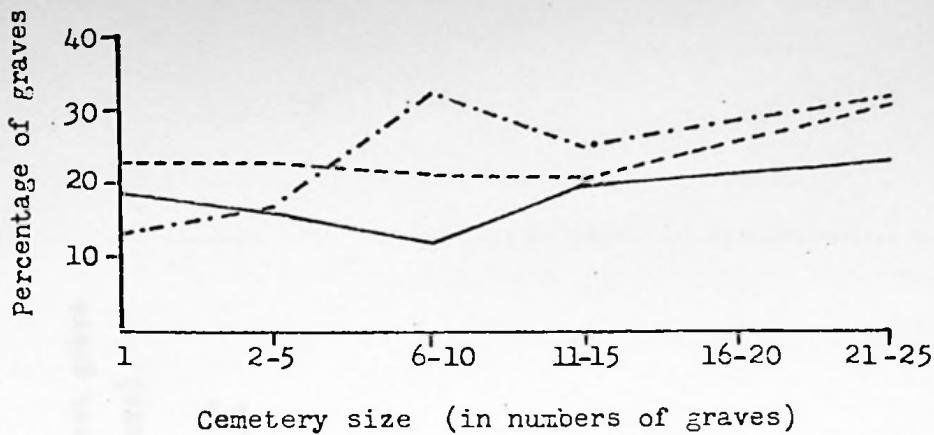


Figure 5.11 Cemetery size against the percentage of graves containing certain items. Bohemia.

Key:

- Decorated Bell Beakers.
- - Cluster 1 goods, including decorated Bell Beakers.
- · Cluster 1 goods, excluding decorated Bell Beakers, together with other non-ceramic grave goods.

Example: from the position of the solid line at cemetery size 1 it can be seen that approximately 18% of graves from 1 grave cemeteries contain decorated Bell Beakers.

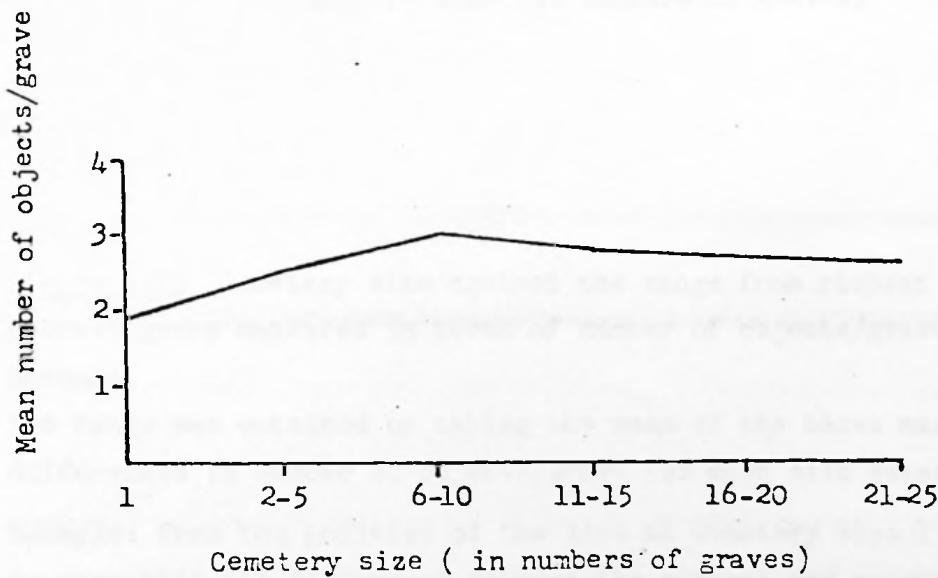


Figure 5.12 Cemetery size against mean number of objects/grave. Bohemia.

Example: from the position of the line at cemetery size 1 it can be seen that the mean number of objects/grave in 1 grave cemeteries is approximately 1.9.



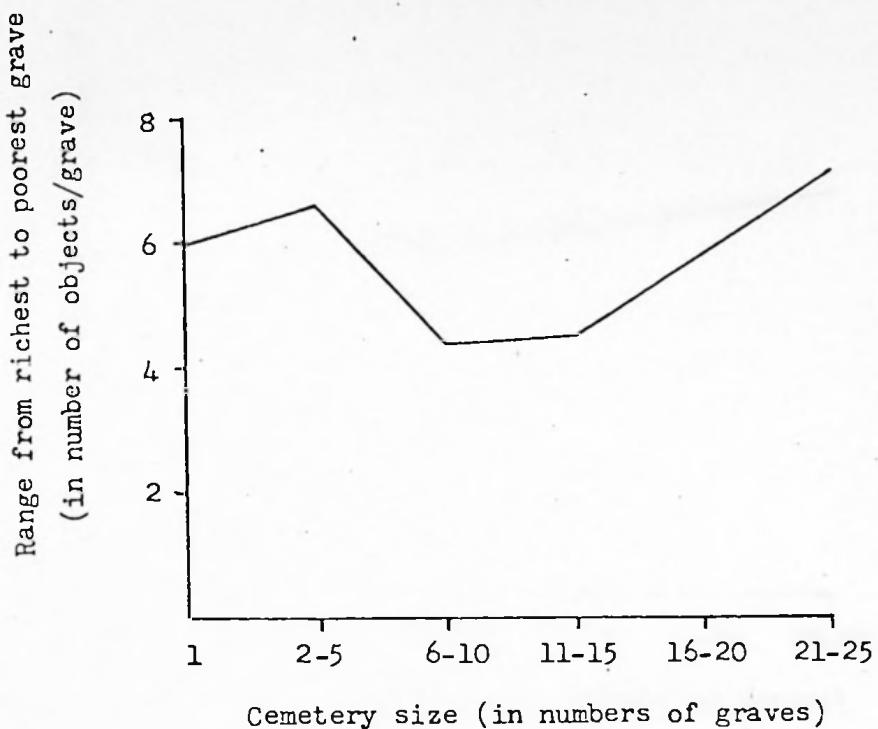


Figure 5.13 Cemetery size against the range from richest to poorest grave measured in terms of number of objects/grave.
Bohemia.

The range was obtained by taking the mean of the three maximum differences in number of objects/grave for each size category.

Example: from the position of the line at cemetery size 1 it can be seen that the difference between the richest and poorest graves in all 1 grave cemeteries taken together is 6 objects.

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1990.06.14. (Tues.)

2000

1990.06.14. (Tues.)

1990.06.14. (Tues.)

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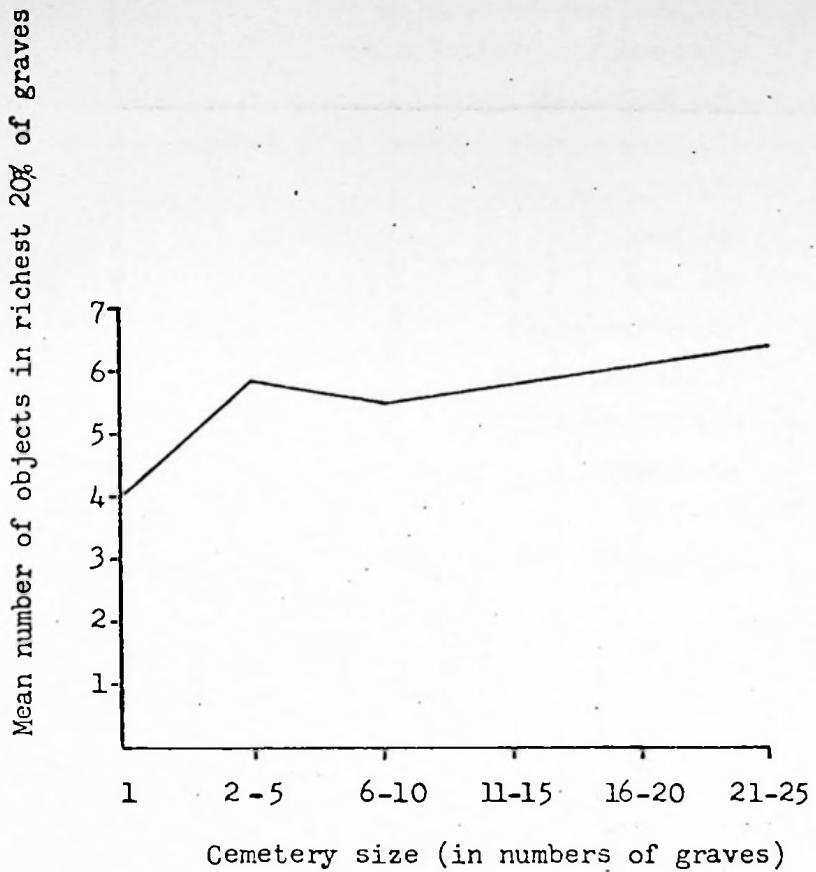
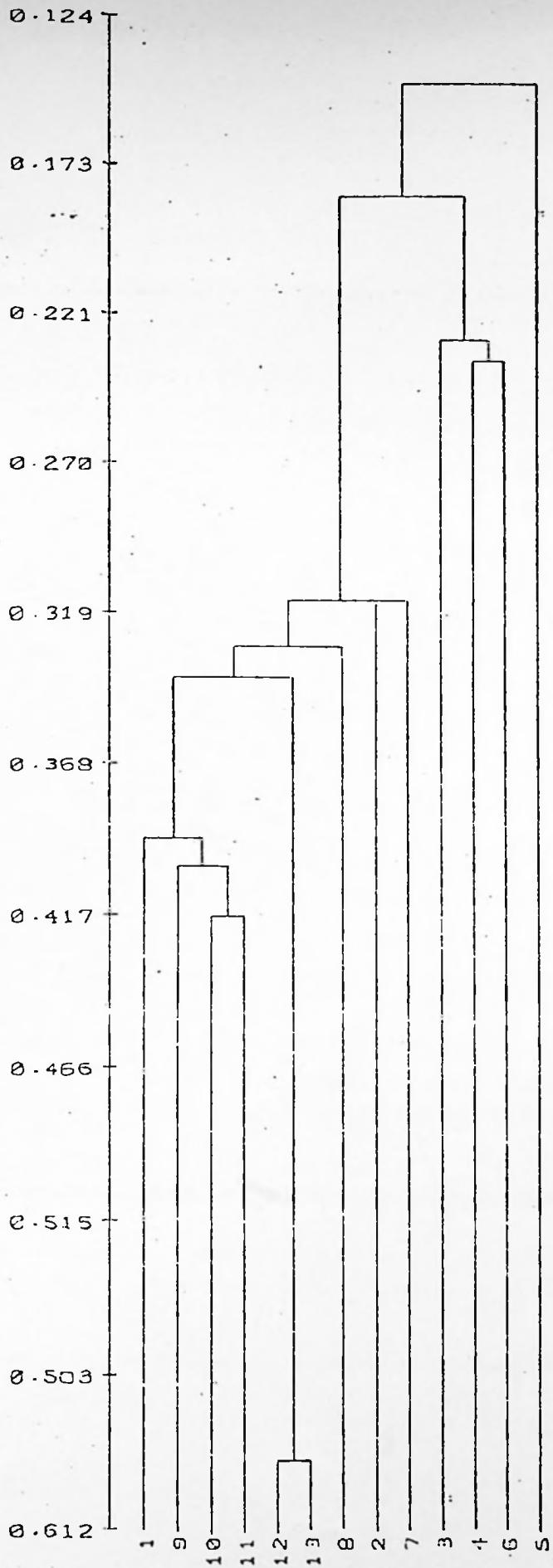


Figure 5.14 Cemetery size against the mean number of objects in the richest 20% of graves. Bohemia.

Example: from the position of the line at cemetery size 1 it can be seen that the mean number of objects in the richest 20% of graves from 1 grave cemeteries is 4.0.

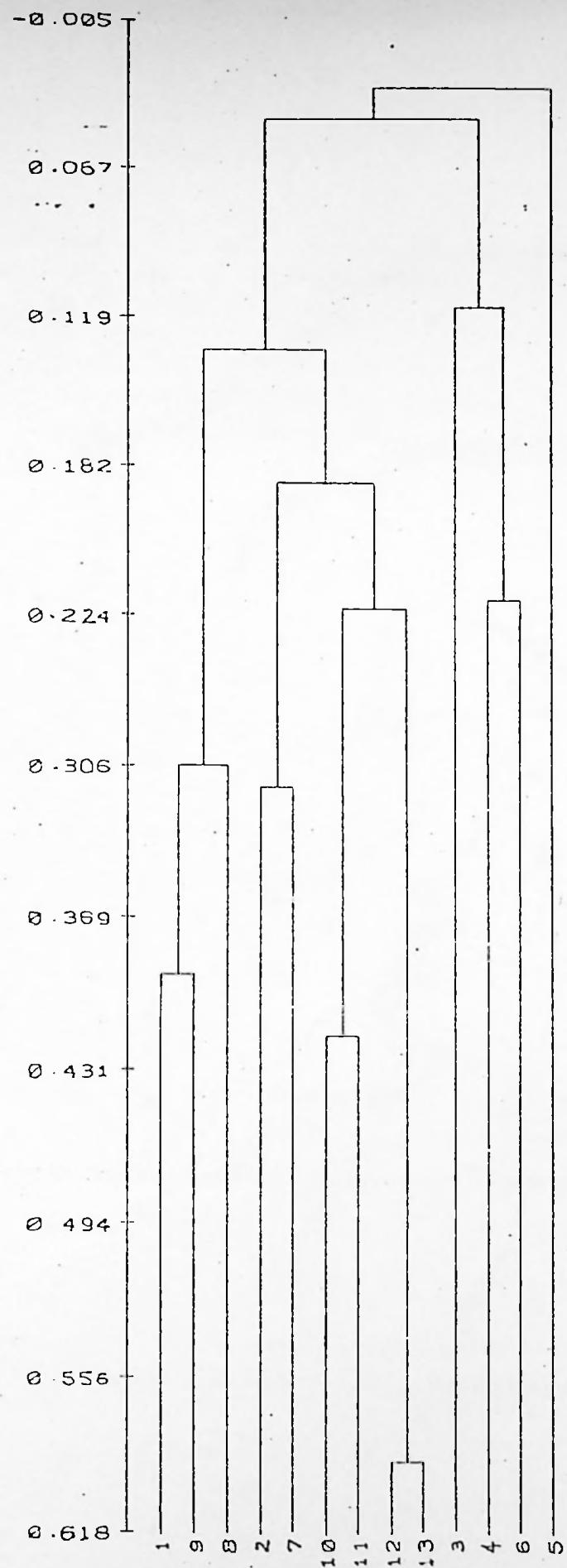
<u>Type</u>	<u>Number of occurrences</u>
1. Undecorated Bell Beaker	48
2. Decorated Bell Beaker	31
3. Vessel	3
4. Undecorated handled Bell Beaker	8
5. Polypod bowl	6
6. Bowl	9
7. Jug	8
8. Wrist-guard	9
9. Animal bones	13
10. Arrowhead	12
11. Blade	8
12. Flake	7
13. Sherds	4

Figure 6.1 Single-link dendrogram of the relationships between objects from Central German Bell Beaker graves. Inter-object associations calculated by means of the Kulczynski coefficient (see p. 35).



<u>Type</u>	<u>Number of occurrences</u>
1. Undecorated Bell Beaker	48
2. Decorated Bell Beaker	31
3. Vessel	3
4. Undecorated handled Bell Beaker	8
5. Polypod bowl	6
6. Bowl	9
7. Jug	8
8. Wrist-guard	9
9. Animal bones	13
10. Arrowhead	12
11. Blade	8
12. Flake	7
13. Sherdas	4

Figure 6.2 Average-link dendrogram of the relationships between objects from Central German Bell Beaker graves. Inter-object associations calculated by means of the Kulczynski coefficient (see p. 35).





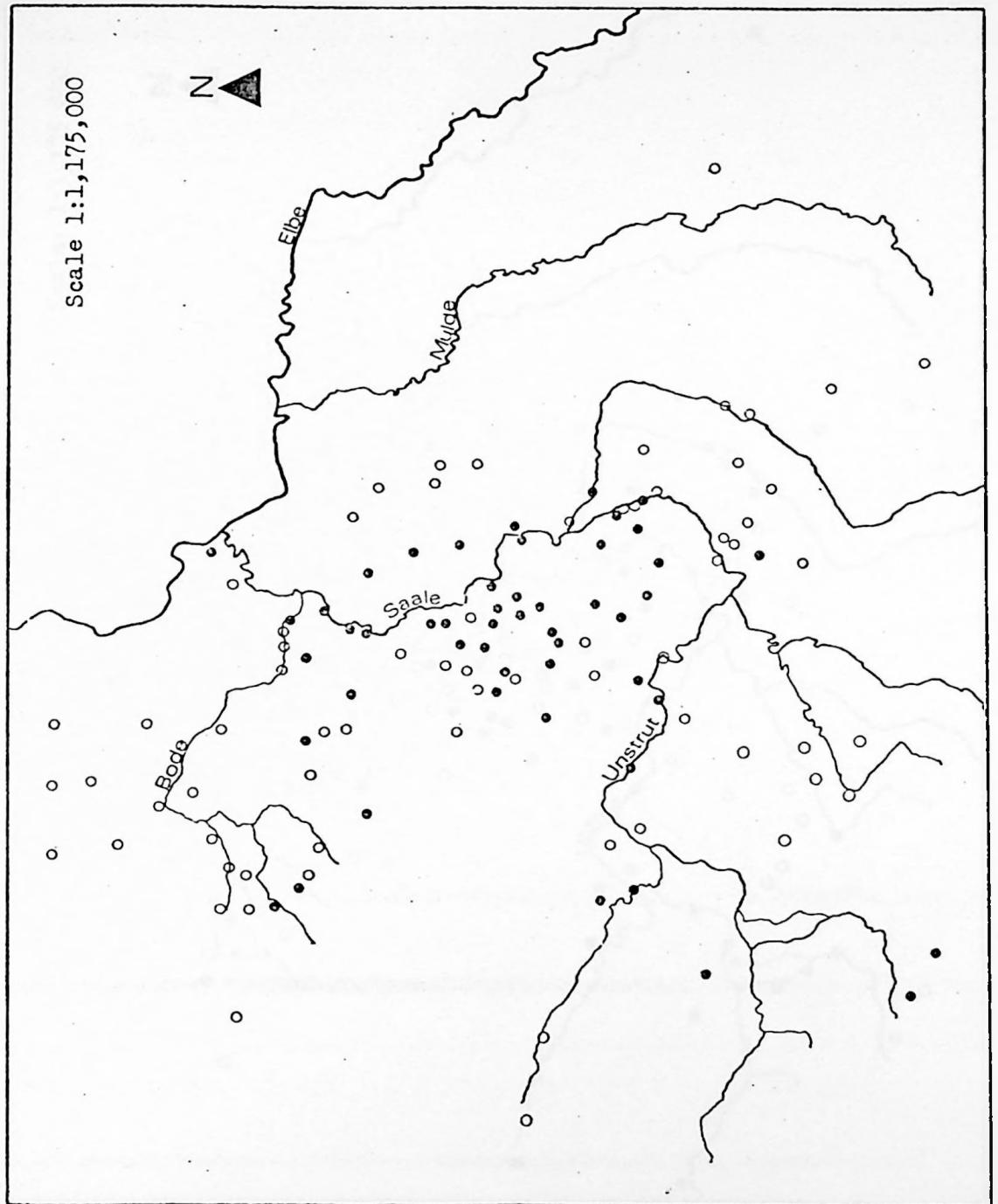


Figure 6.2 Distribution of sites with stone cist graves against grave sites without stone cists.
Central Germany.

Key:

- Sites with stone cist graves.
- Sites without stone cist graves.



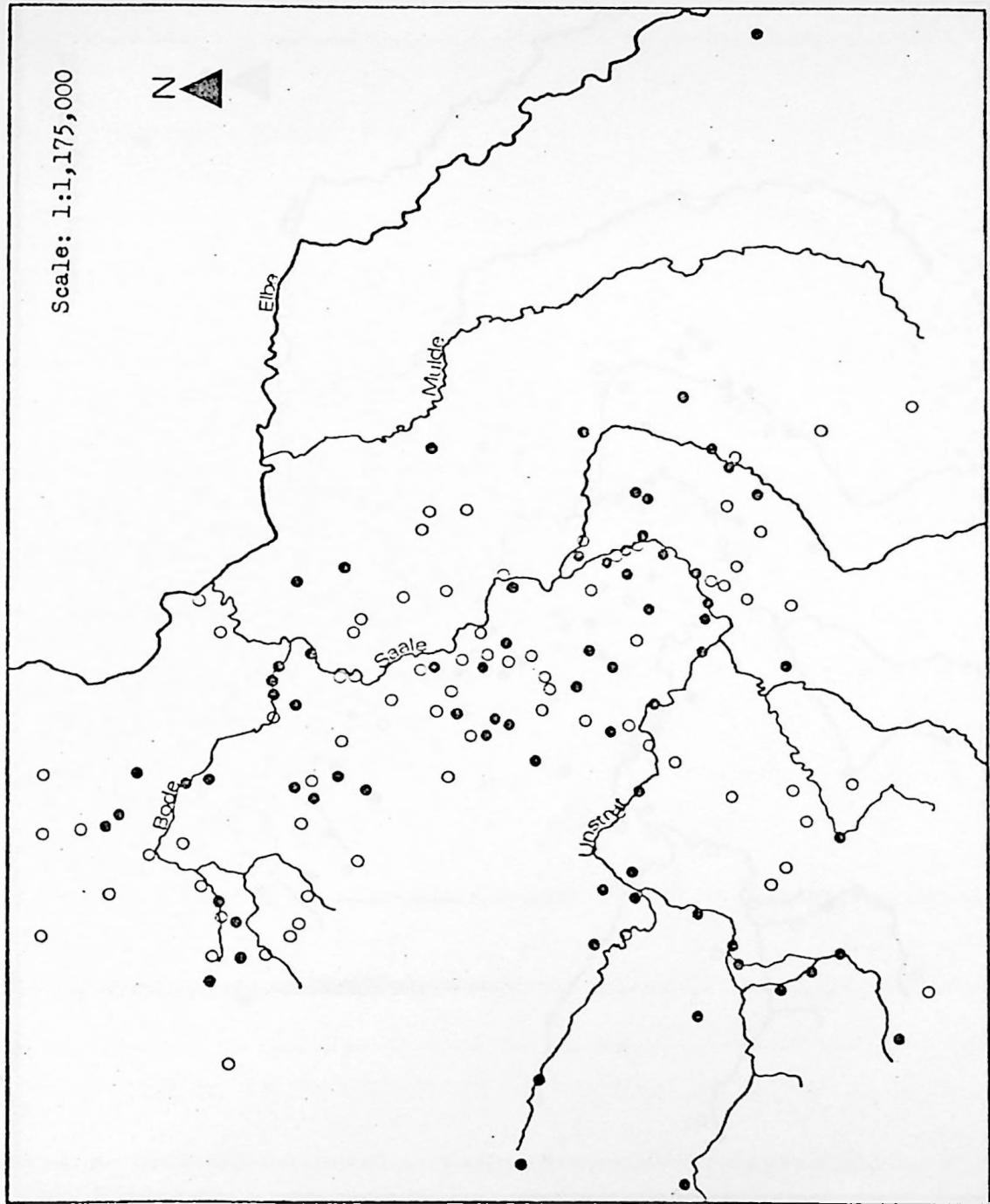


Figure 6.4 Distribution of grave sites with decorated Bell Beakers against those without decorated Bell Beakers.
Central Germany.

Figure 6.4 Distribution of grave sites with decorated Bell Beakers. Key: ● Sites with decorated Bell Beakers. ○ Sites without decorated Bell Beakers.



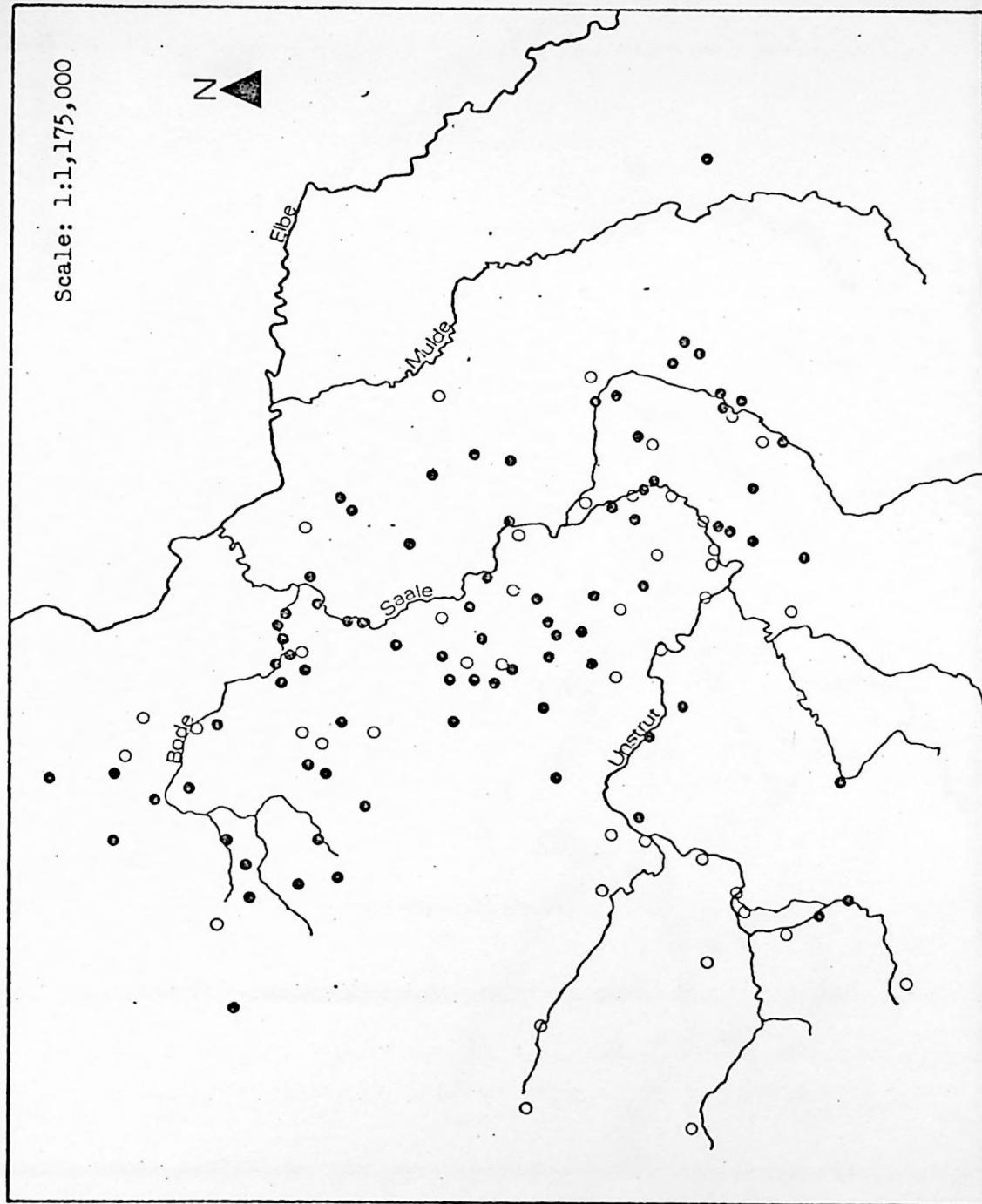


Figure 6.5 Distribution of sites with undecorated Bell Beakers against sites without undecorated Bell Beakers but with decorated Bell Beakers. Central Germany.



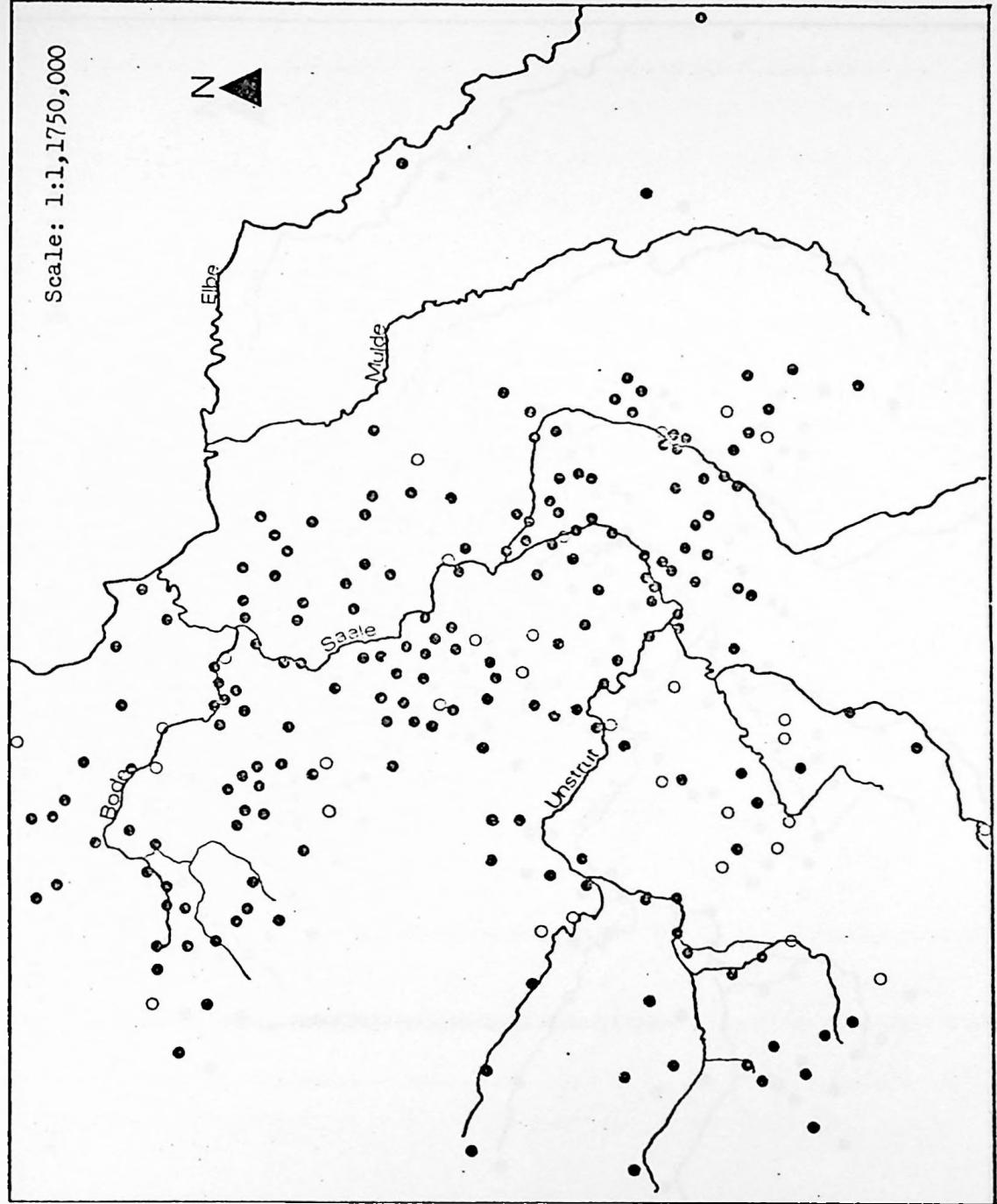


Figure 6.6 Distribution of sites with wrist-guards against all other Bell Beaker sites in Central Germany.

- Sites without wrist-guards.
- Sites with wrist-guards.



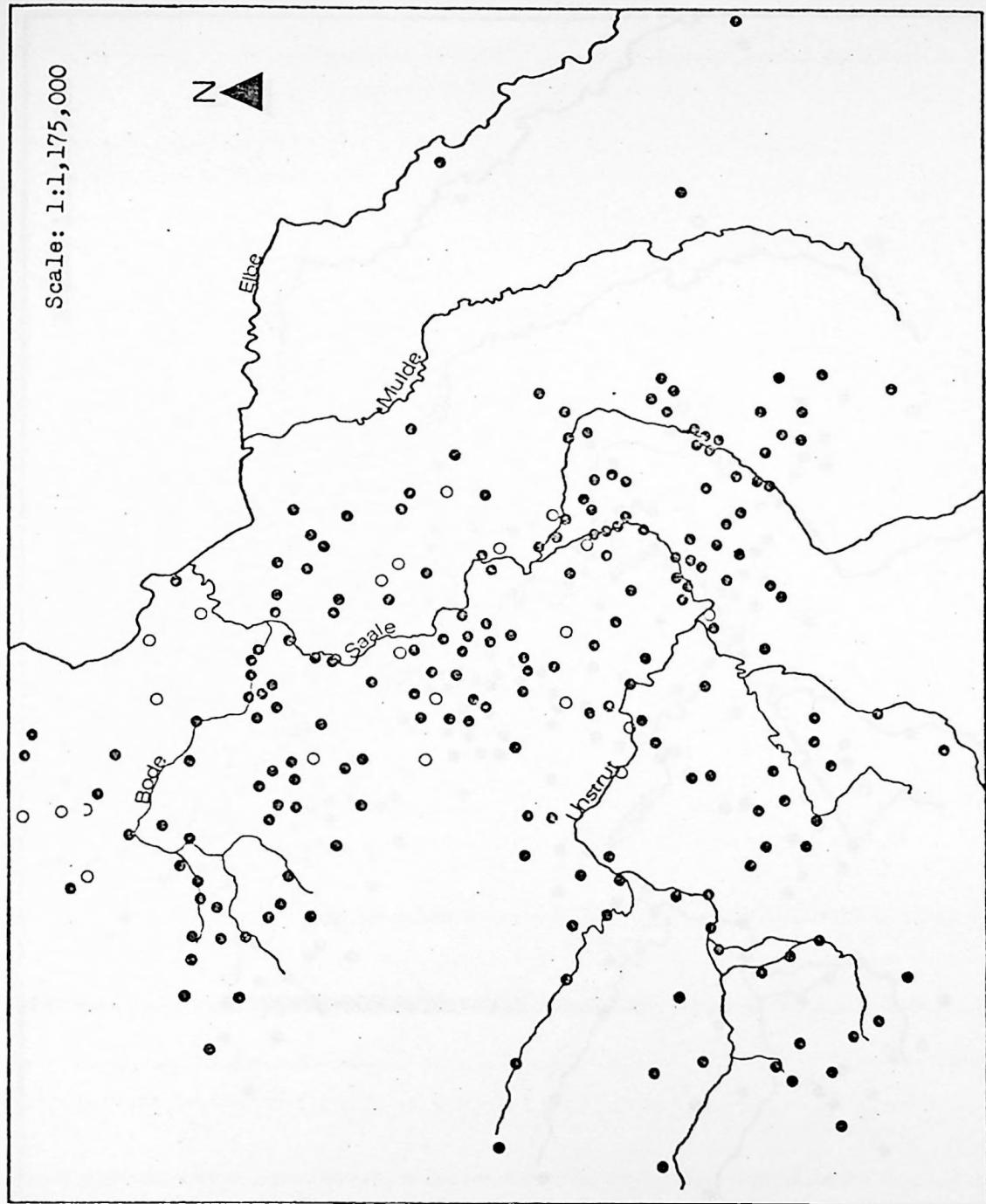


Figure 6.7 Distribution of sites with ordinary bowls against all other Bell Beaker sites in Central Germany.

Key: ○ Sites with bowls. ● Sites without bowls.



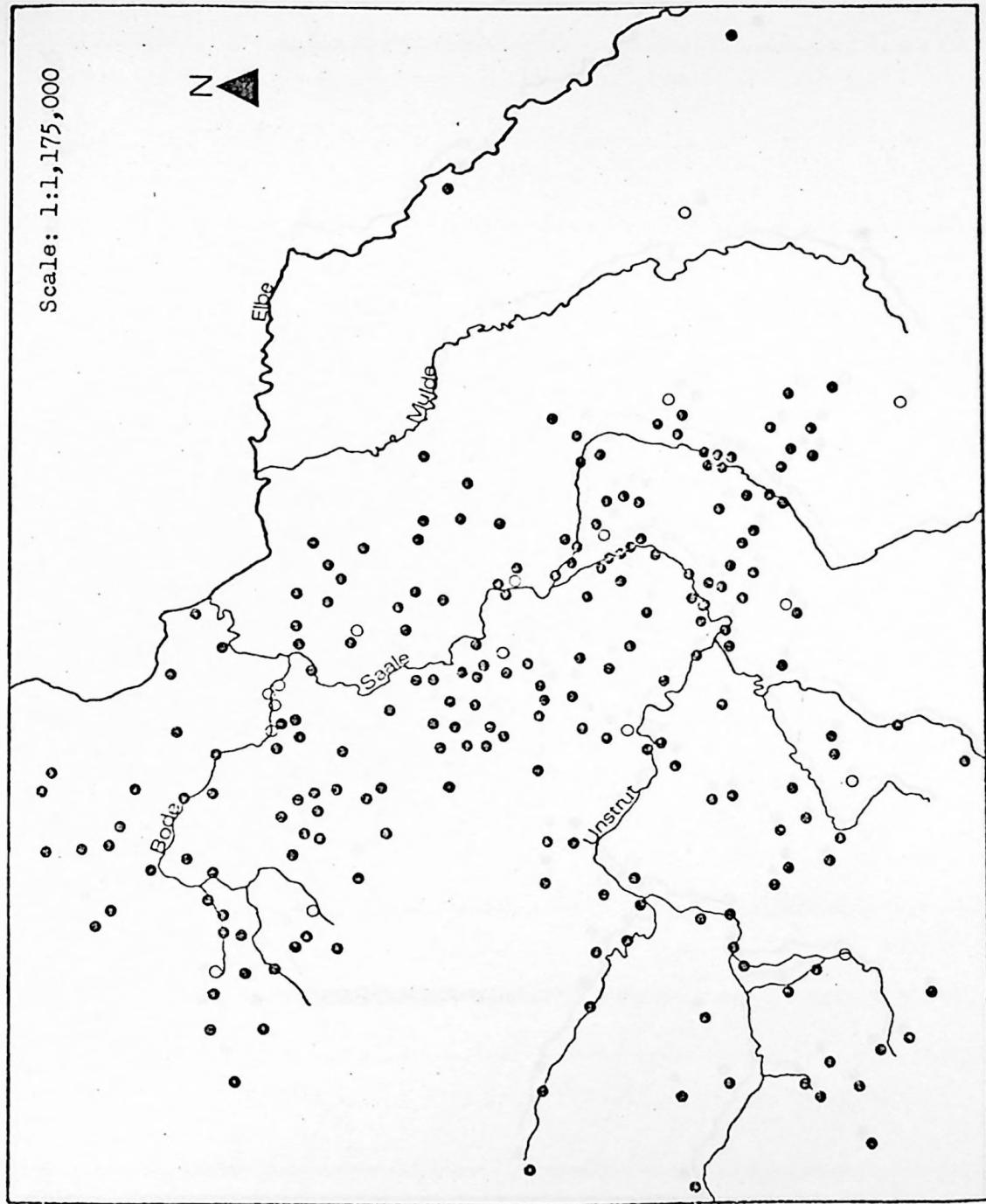


Figure 6.8 Distribution of sites with polypod bowls against all other Bell Beaker sites in Central Germany.

Key:

- Sites with polypod bowls.
- Sites without polypod bowls.



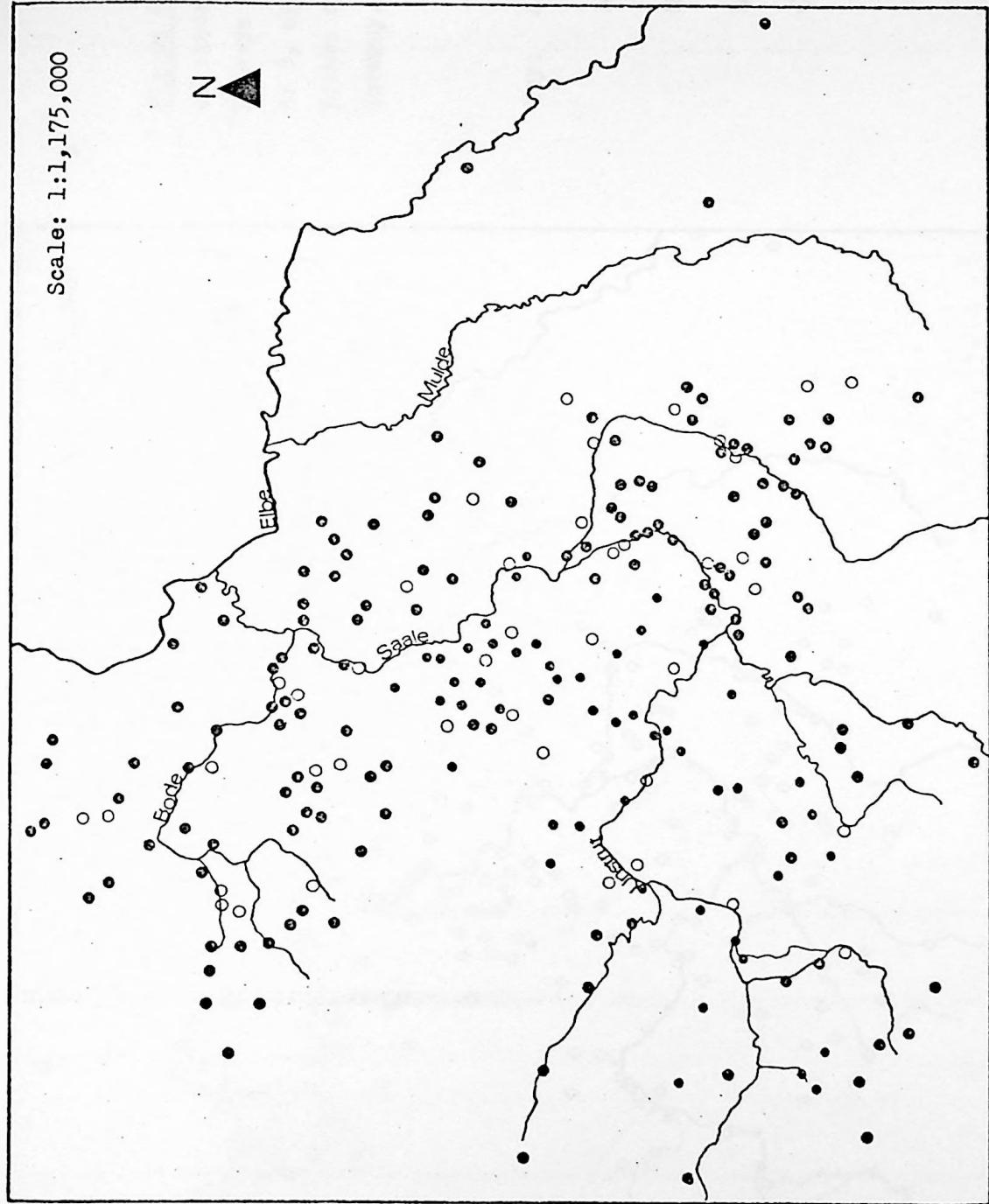
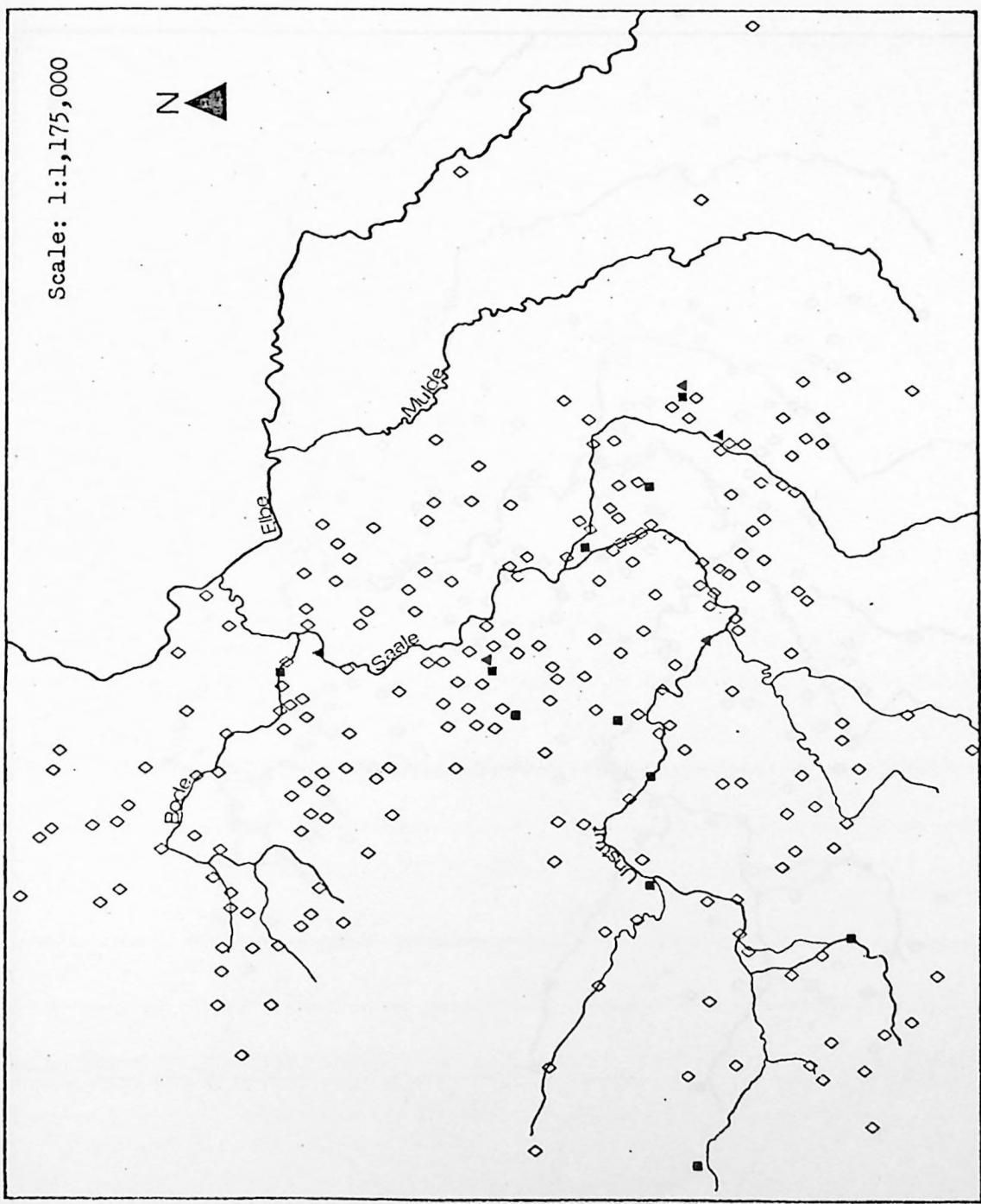


Figure 6.9 Distribution of sites with handled vessels against all other Bell Beaker sites in Central Germany.

Key: O Sites with handled vessels
● Sites without handled vessels



Figure 6.10 Distribution map
of sites with decorated Bell
Beakers having motifs 1, 3, 4
or 5, against all other Bell
Beaker sites in Central
Germany.



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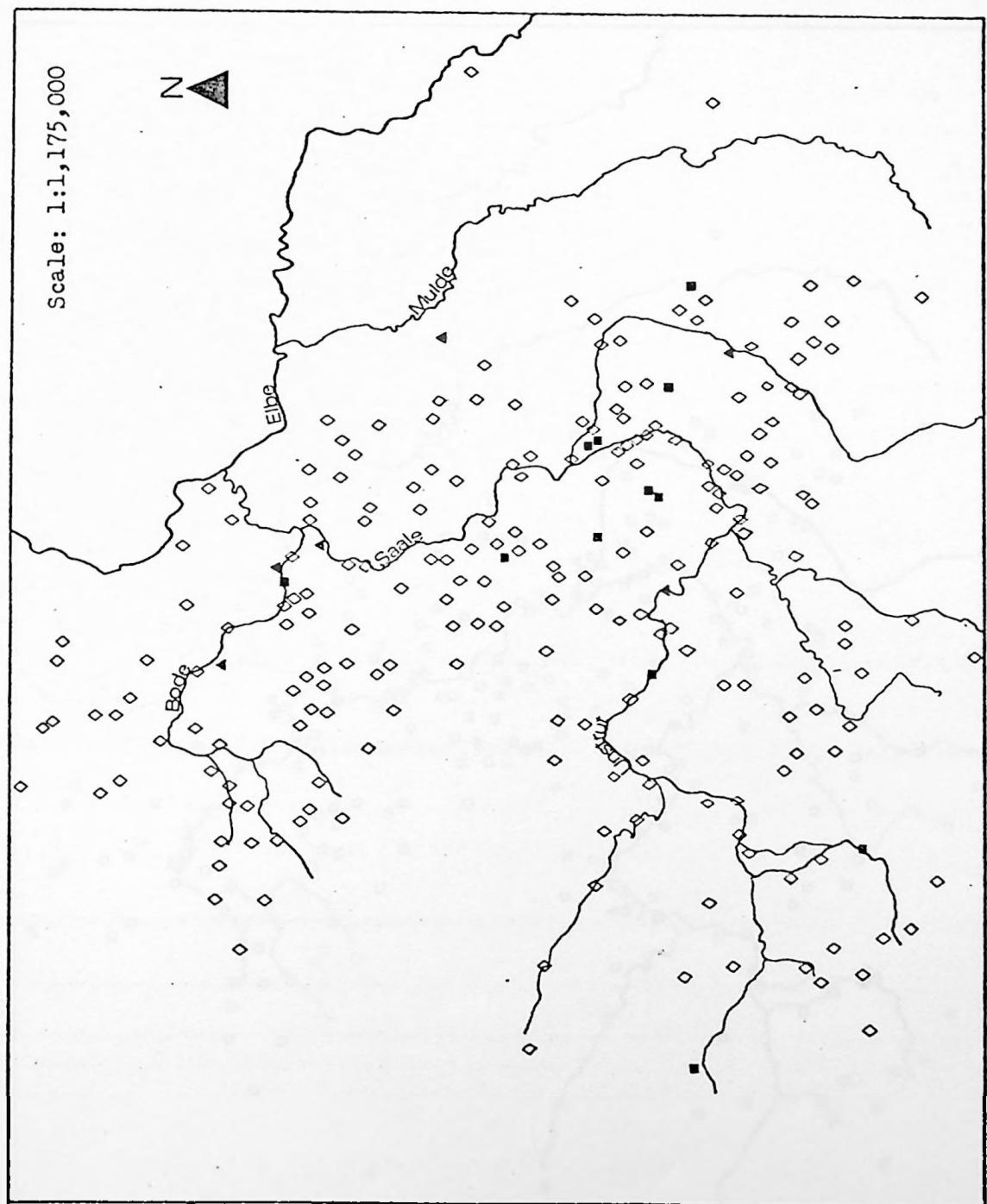
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Figure 6.11 Distribution map
of sites with decorated Bell
Beakers having motifs 6, 12,
18 or 20, against all other
Bell Beaker sites in Central
Germany.





Scale: 1:1,175,000

Figure 6.12 Distribution map
of sites with decorated Bell
Beakers having motifs 21, 29,
31 or 41, against all other
Bell Beaker sites in Central
Germany.

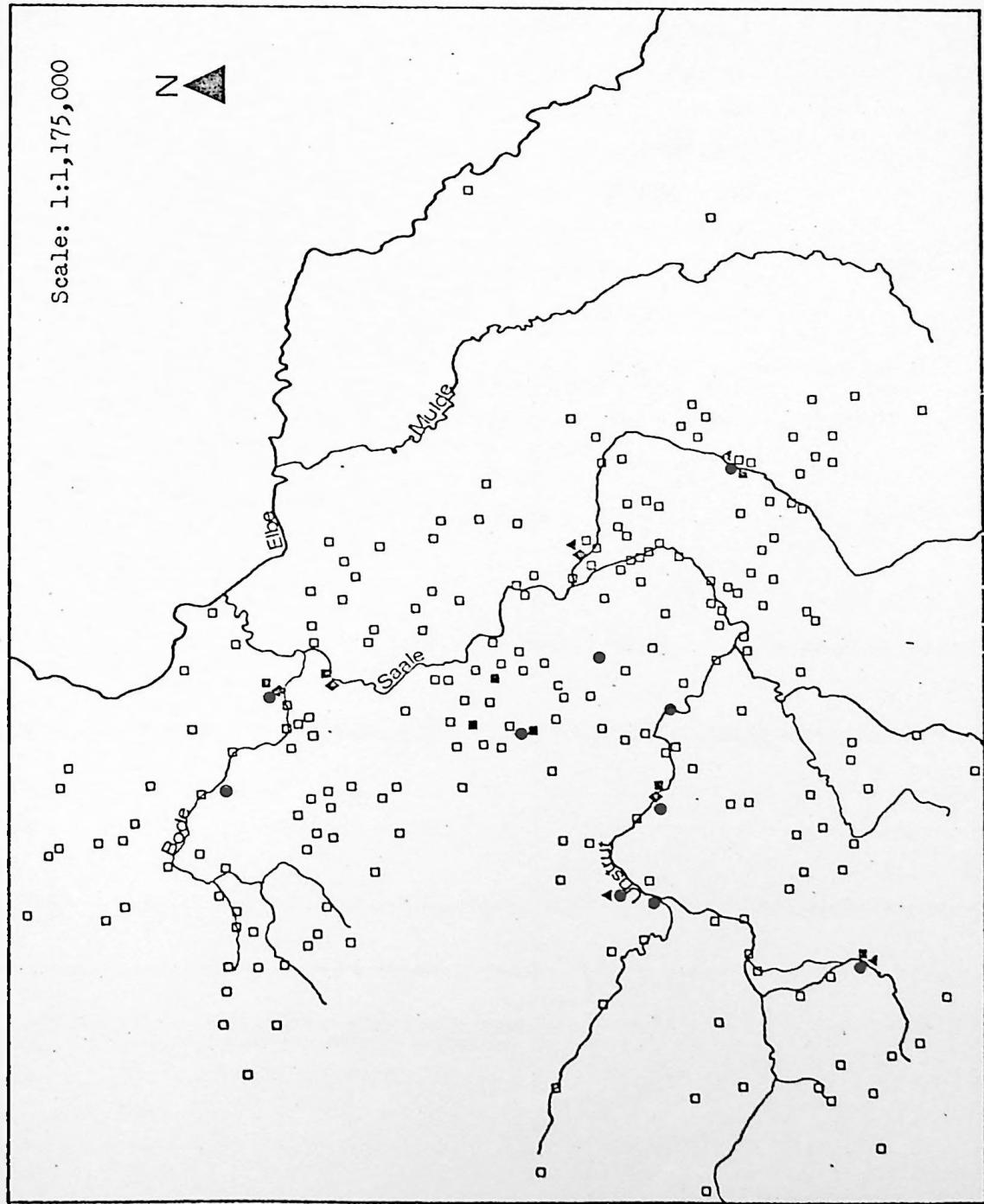


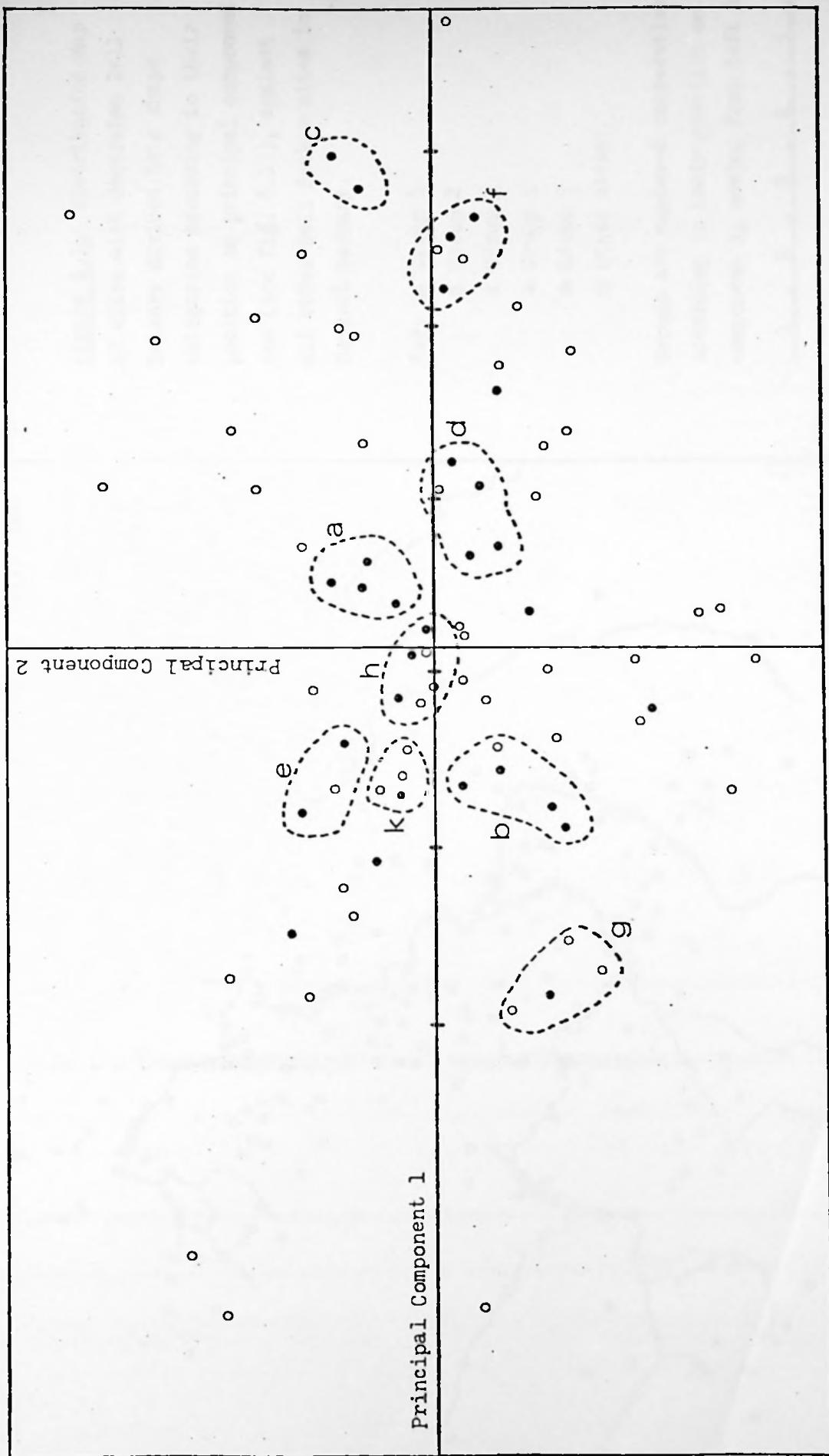
Figure 6.13 Decorated and undecorated Bell Beakers from Central Germany plotted on a scattergram produced from a principal components analysis carried out on measurements of their shape.

Key: ● Decorated Bell Beaker

○ Undecorated Bell Beaker

In order to find out if component 1 represented a spatial trend it was divided into intervals (see this figure) and those decorated Beakers in a given interval were marked by the same symbol on a map (fig. 6.14).

Secondly, groups detectable by visual examination of the scattergram were also plotted on a map to see if they had any spatial significance (see fig. 6.15). The groups plotted are marked by dashed lines in the scattergram.



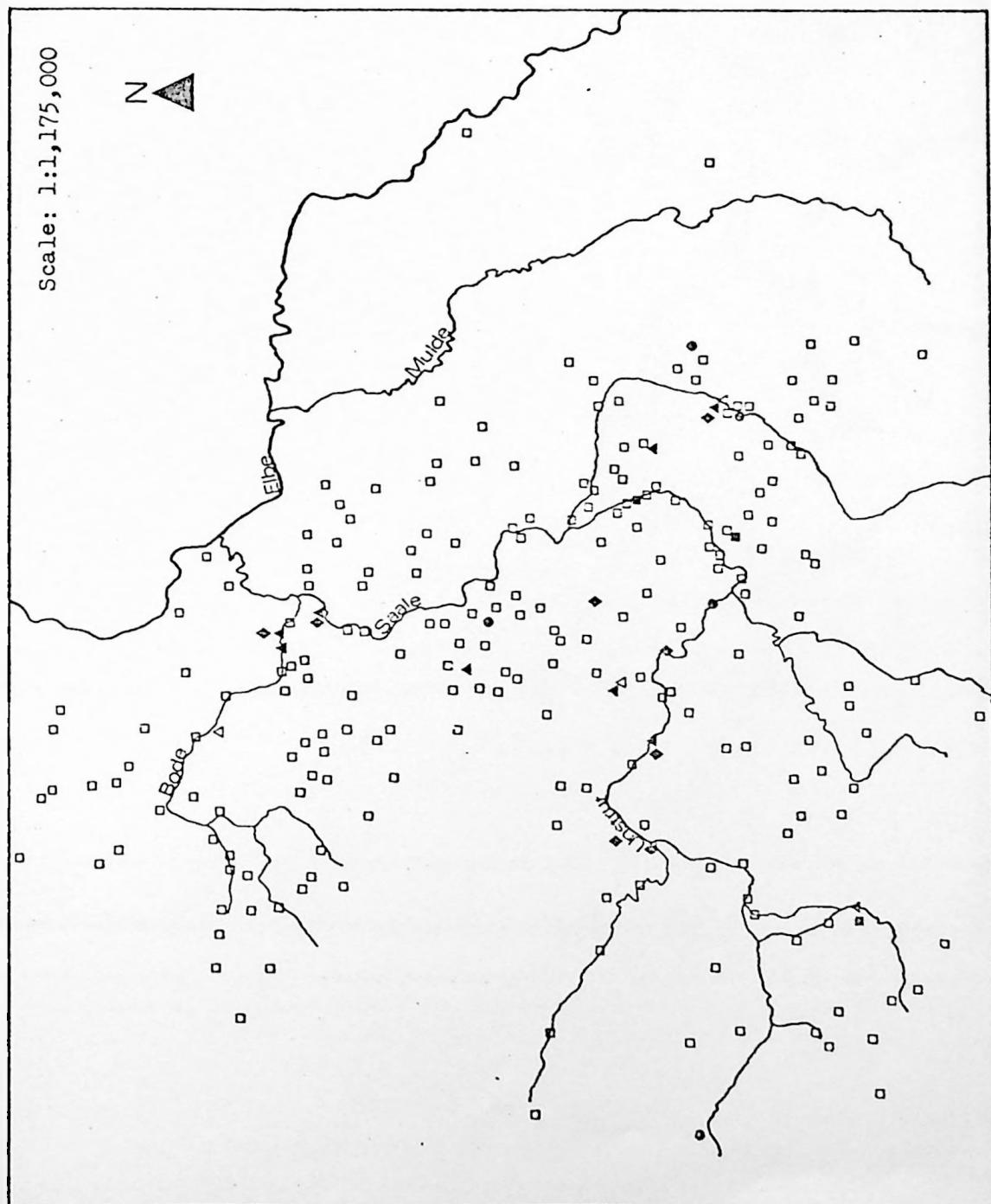


Scale: 1:1,175,000

Figure 6.14 Distribution map
of sites with decorated Bell
Beakers divided into shape
categories according to their
position on principal component
one (see fig. 6.13), against
all other Bell Beaker sites in
Central Germany.

Key: ■ Group 1
◆ Group 2
▲ Group 3
△ Group 4
● Group 5
□ Other sites

Groups are numbered consecutively
according to their position on
component 1, moving from left to right
1 . 2 . 3 . 4 . 5 .



and standardised
U.S.A. laboratory. This
single buck breeding
stock at National Animal
Breeding Station, India.



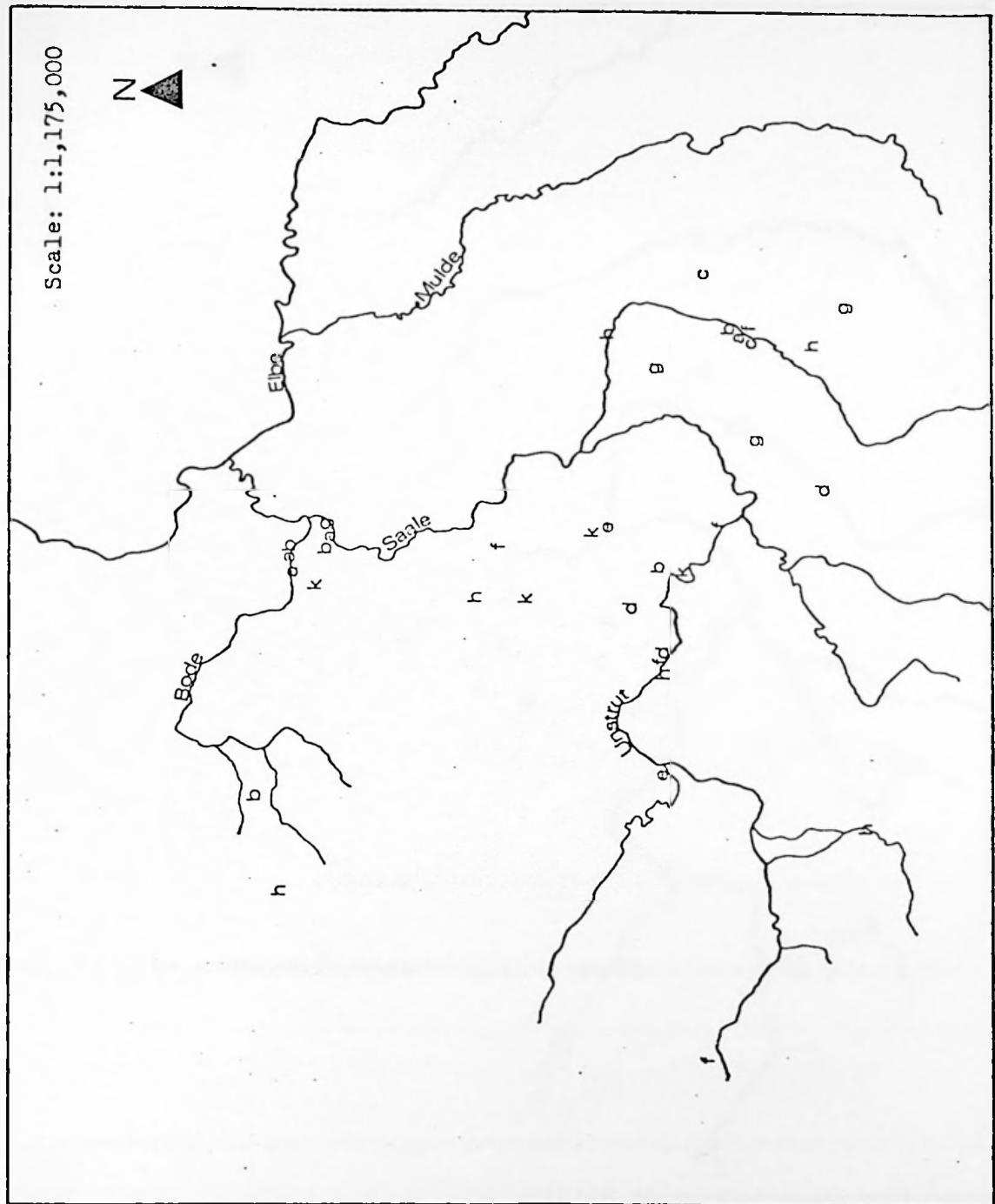


Figure 6.15 Distribution map of Bell Beakers divided into shape categories on the basis of groups visible in the principal components scattergram fig. 6.13. Letters correspond to those which designate the groups in the scattergram.



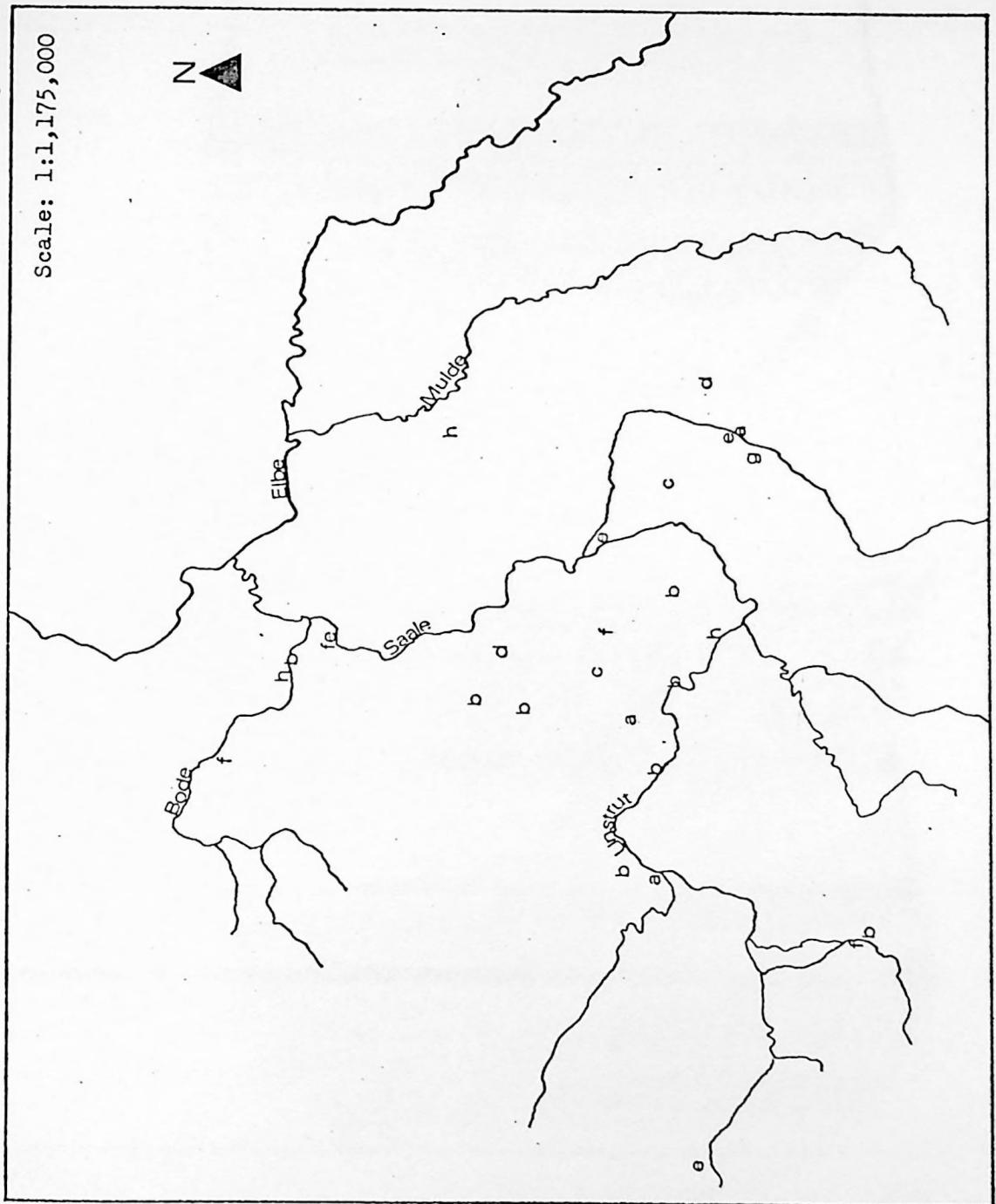
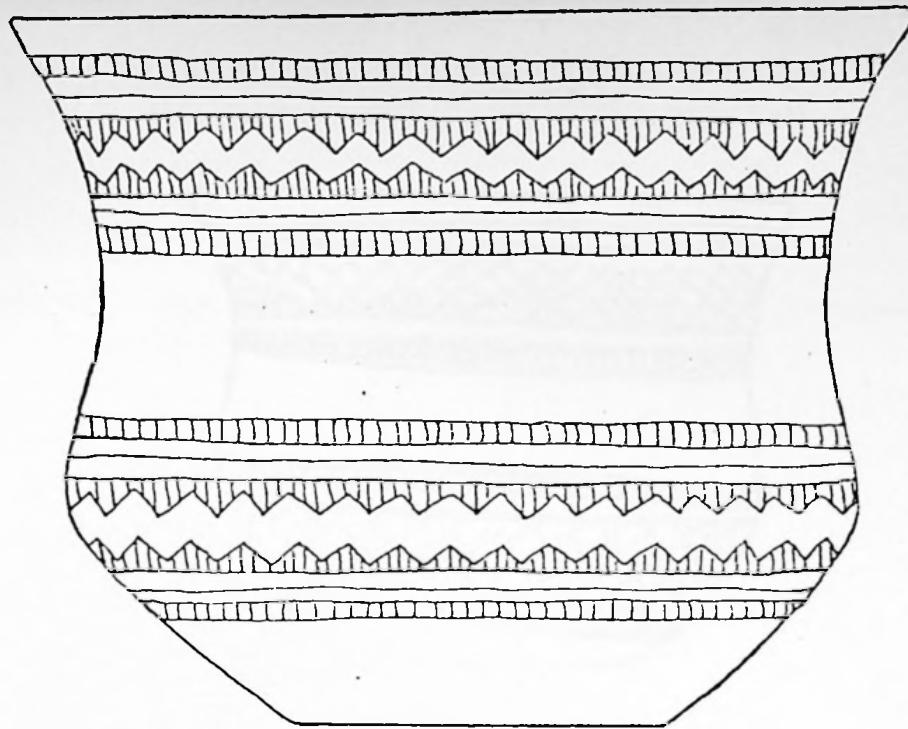
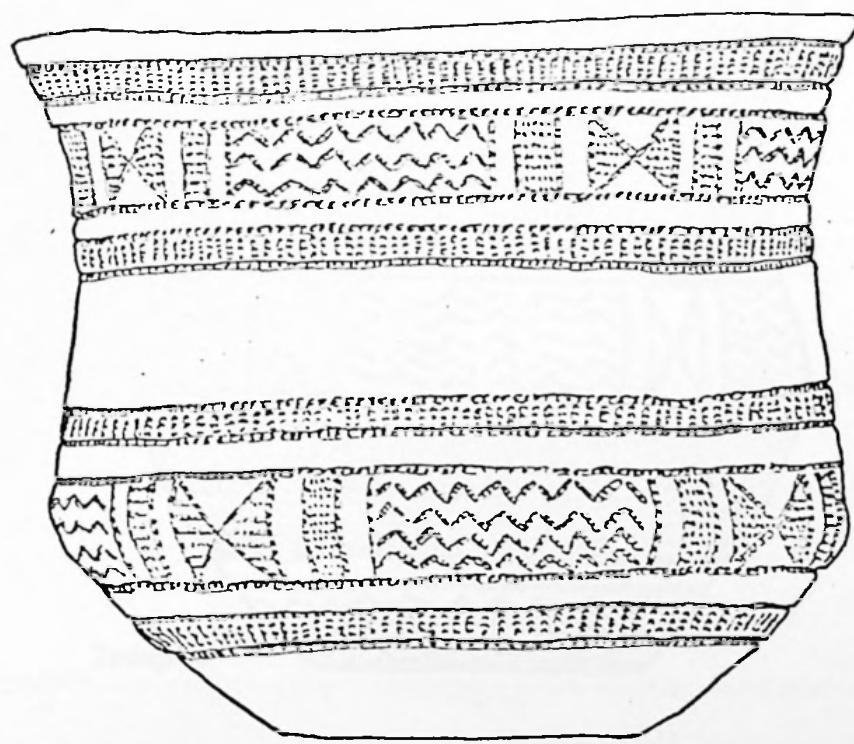


Figure 6.16 Distribution map of decorated Bell Beakers divided into groups on the basis of visual inspection. Examples of the groups are shown in fig. 6.17, where the letters designating the groups correspond to those on the map.





Group a



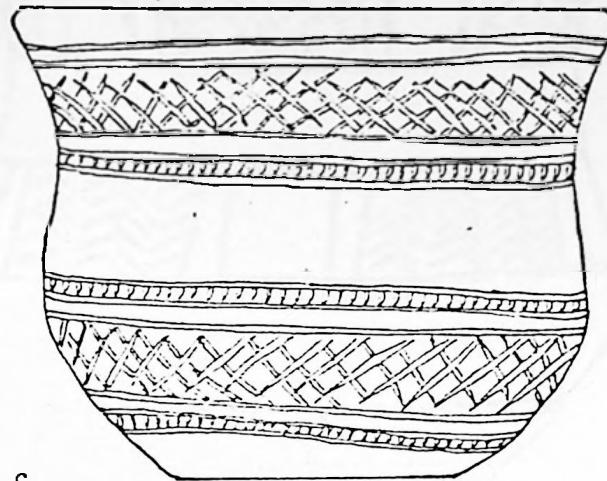
Group b

Figure 6.17 Examples of decorated Bell Beakers belonging to groups defined by visual inspection.

Group a: Niederschmon Scale: 3:4

Group b: Neehausen Scale: 3:4

of which I have had pleasure to witness. This morning
we were all up at 4 o'clock, having
got up by degrees, so gradually as to avoid
disturbing the others.



Group c



Group d

Fig. 6.17 (continued) Group c: Grosslehna Scale: 3:4
 Group d: Neehausen Scale: 3:4



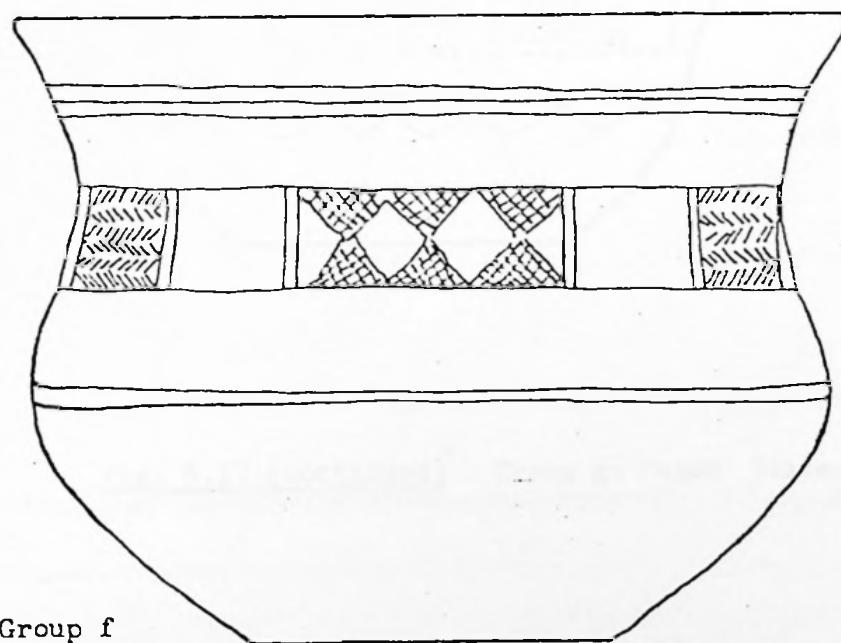
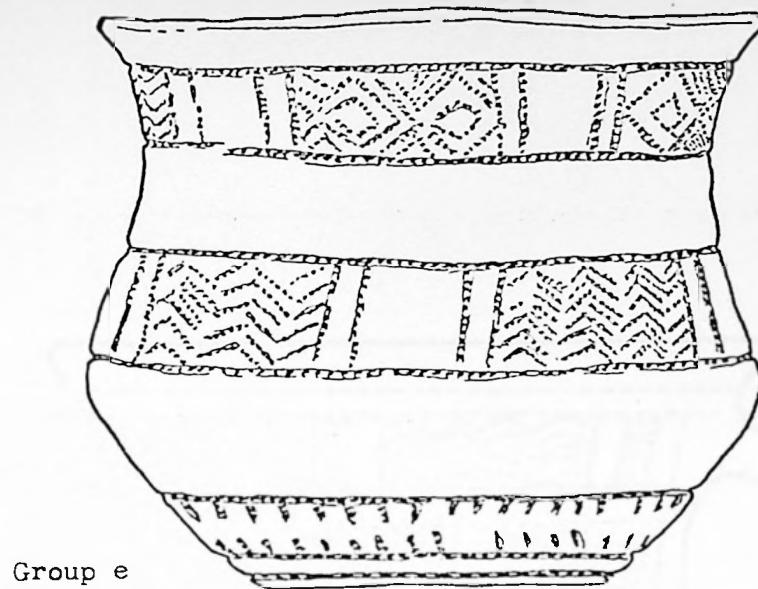


Fig. 6.17 (continued) Group e: Bernburg Scale: 3:4
 Group f: Bernburg Scale: 3:4



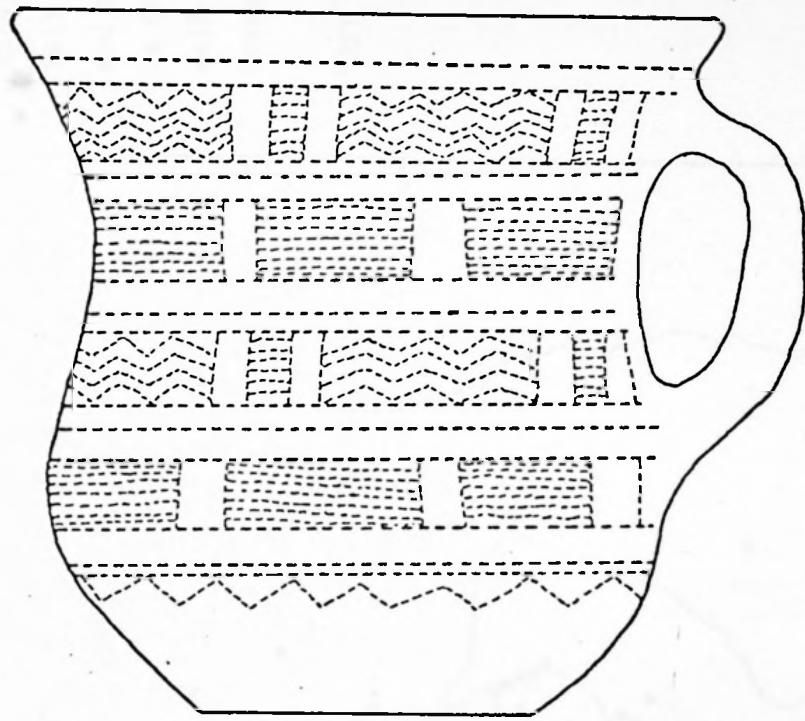
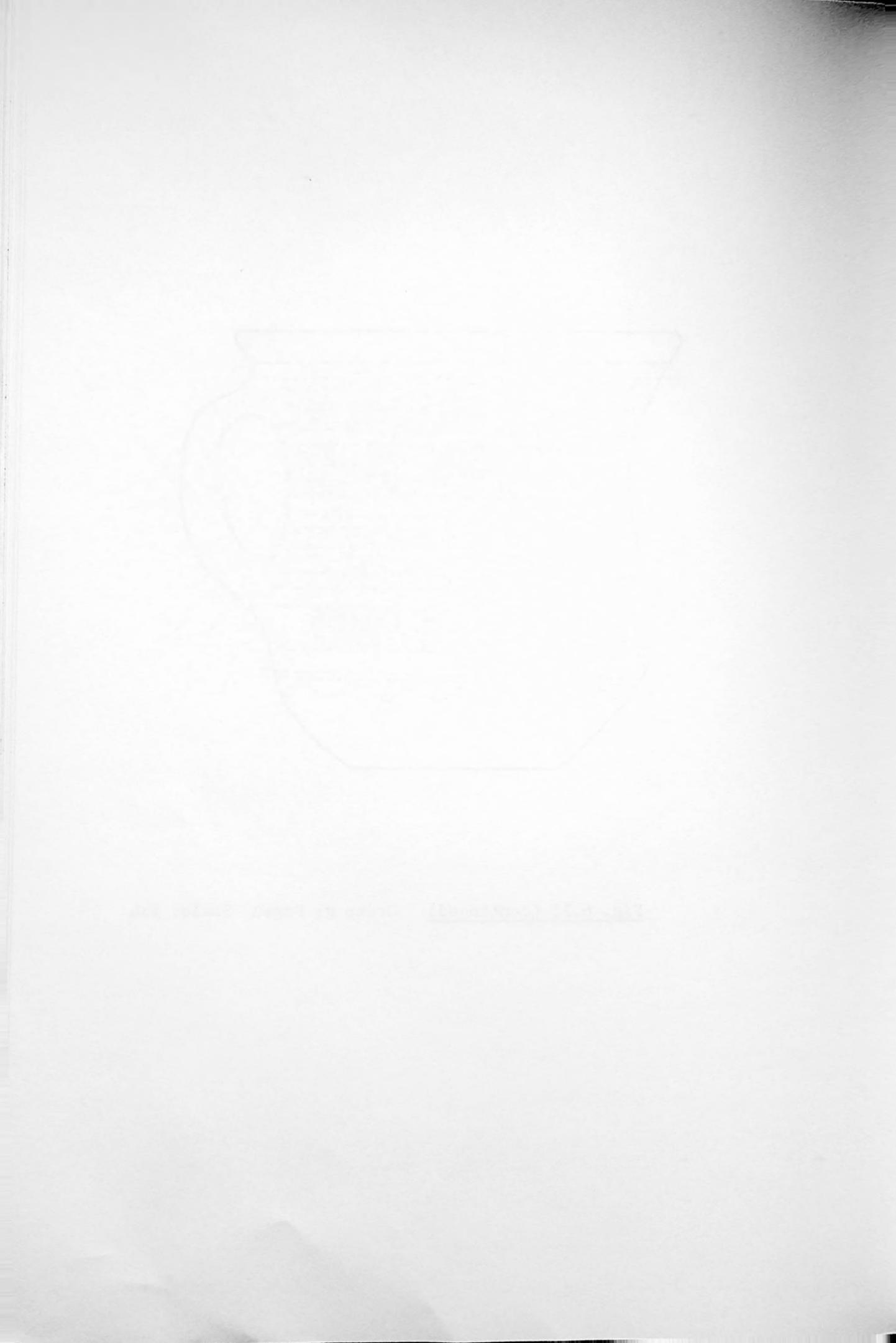


Fig. 6.17 (continued) Group g: Pegau Scale: 3:4

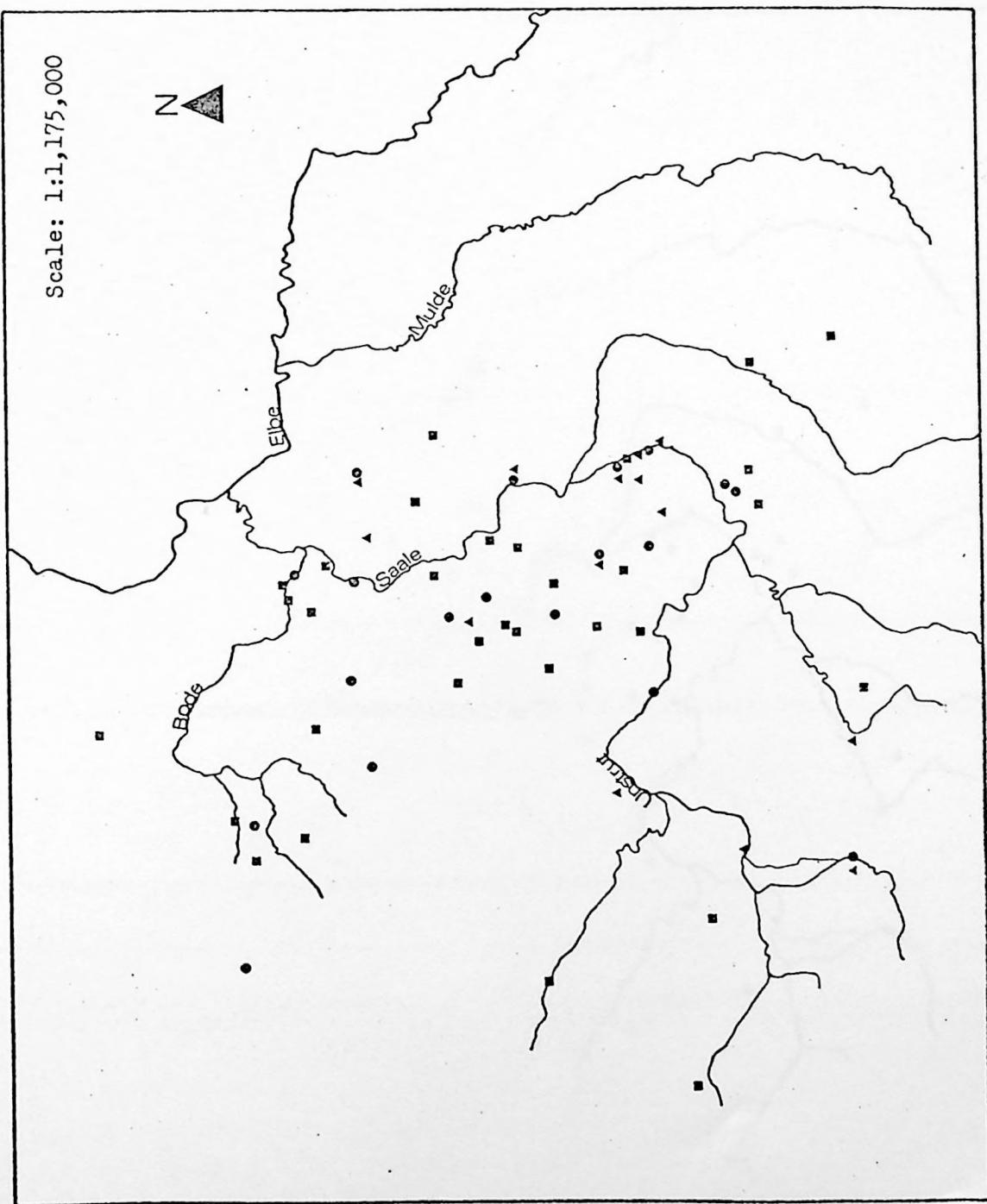


Scale: 1:1,175,000

Figure 6.18 Distribution map showing those graves with undecorated Bell Beakers as the sole grave good, and those with decorated Bell Beakers as the sole grave good, against all well-documented graves in Central Germany.

Key:

- Undecorated Bell Beaker alone in grave.
- ▲ Decorated Bell Beaker alone in grave.
- Other well-documented graves.





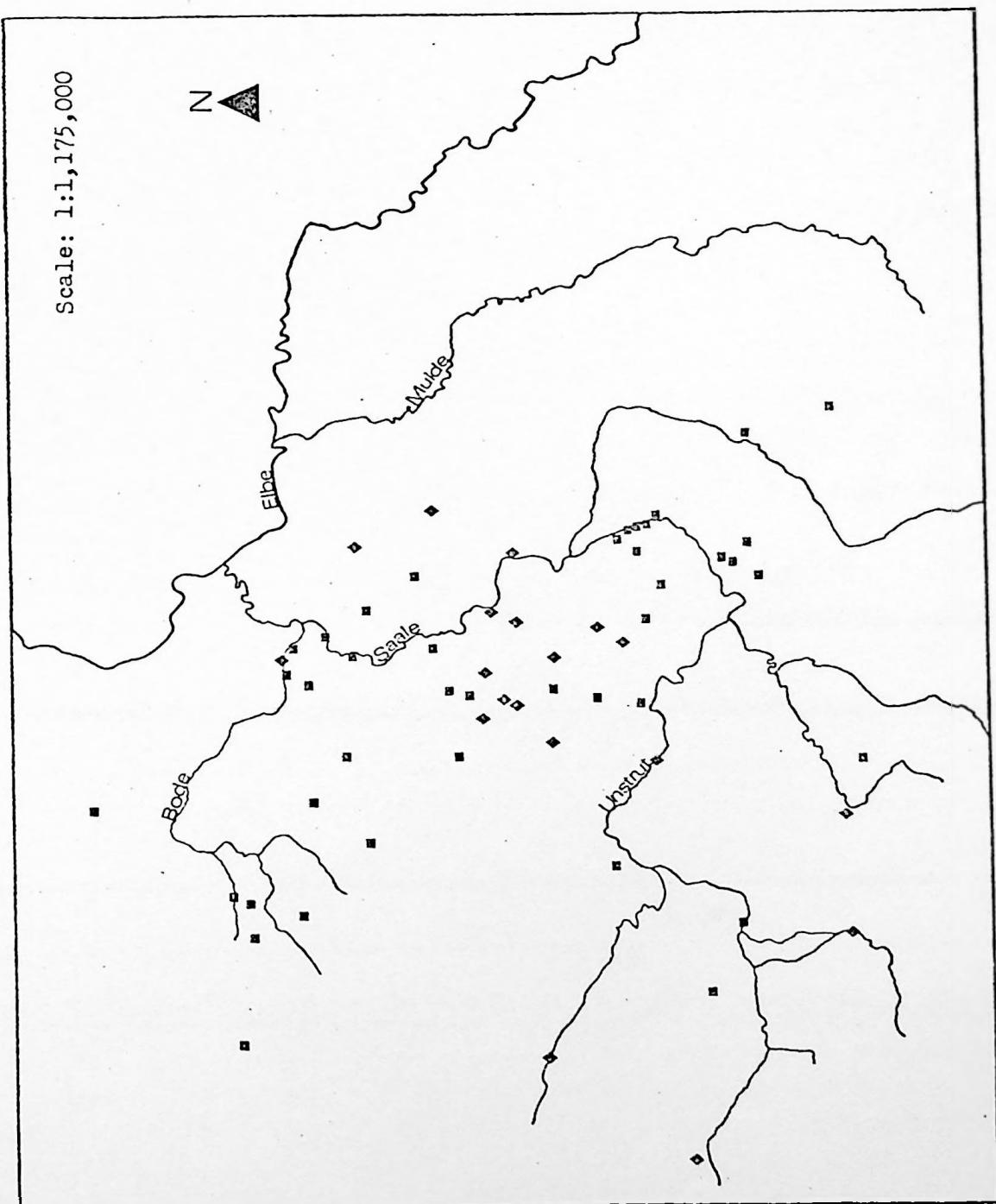


Figure 6.19 Distribution map
of sites containing graves with
goods scoring 20 or more points,
against all well-documented
graves in Central Germany.

Key: ♦ Graves with 20 or more
points.
■ Other well-documented
graves.



Figure 6.20 Dendrogram produced by average-link cluster analysis of the relations between Bell Beaker graves, together with a list of the contents of the graves. Central Germany.

Undecorated Bell Beaker group

<u>Grave No.</u>	<u>Contents</u>			
1	Undecorated Bell Beaker			
2	"	"	"	
3	"	"	"	
99	"	"	"	
100	"	"	"	
76	"	"	"	
89	"	"	"	
95	"	"	"	
4	"	"	"	
13	"	"	"	
21	"	"	"	
23	"	"	"	
24	"	"	"	
26	"	"	"	
30	"	"	"	
32	"	"	"	
37	"	"	"	
38	"	"	"	
40	"	"	"	
43	"	"	"	
47	"	"	"	
49	"	"	"	
57	"	"	"	
58	"	"	"	
62	"	"	"	
65	"	"	"	
20	Undecorated Bell Beaker, sherds.			
61	Undecorated Bell Beaker, coarse jar.			
87	Undecorated Bell Beaker, jug.			
105	"	"	"	"

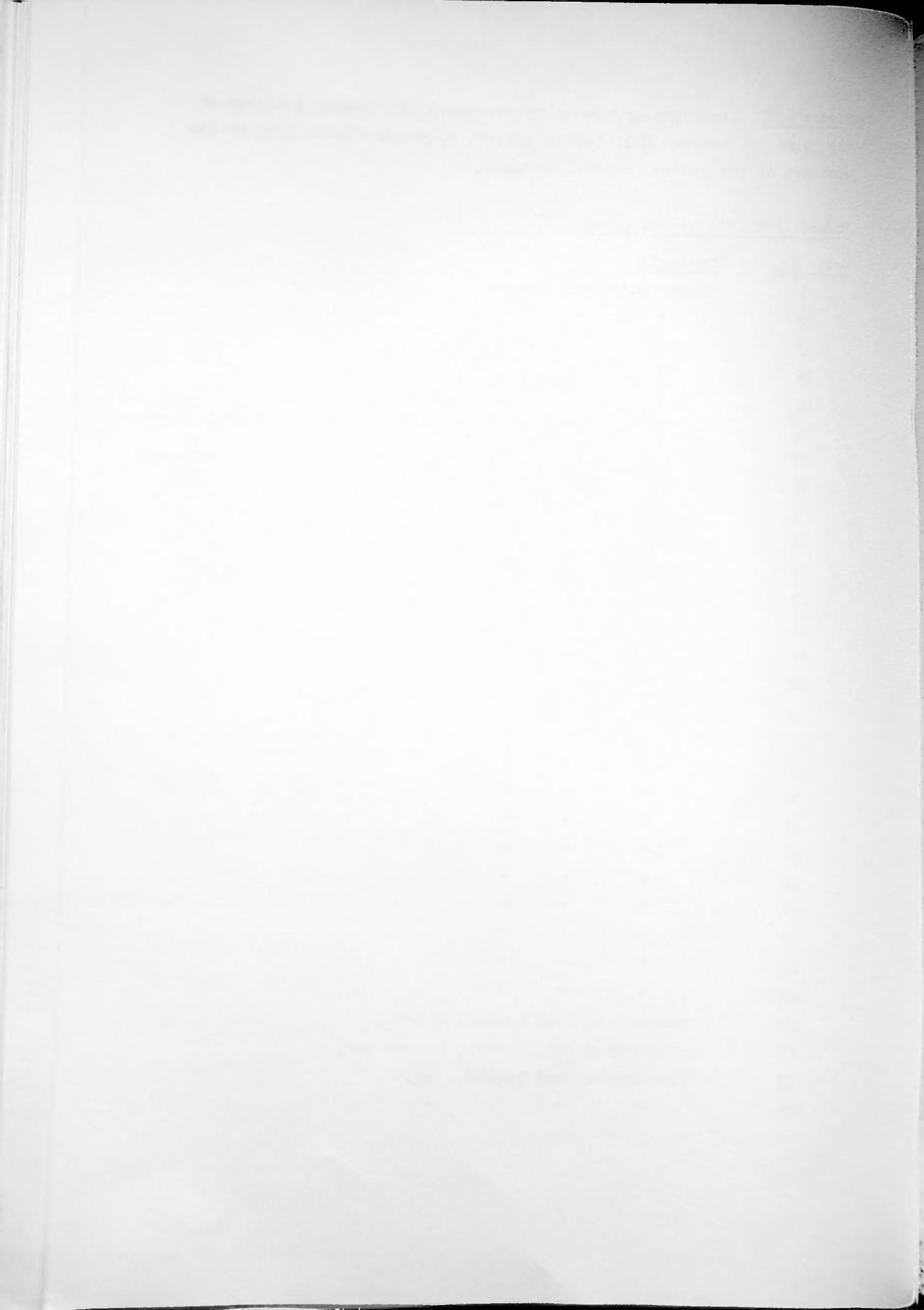


Fig. 6.20 (continued)

Undecorated Bell Beaker group (continued)

<u>Grave No.</u>	<u>Contents</u>
88	Undecorated Bell Beaker, bone pin.
10	Undecorated Bell Beaker, wrist-guard, animal bones.
25	" " " "
85	" " " "
53	Undecorated Bell Beaker, wrist-guard.
63	" " " "
41	Undecorated Bell Beaker, animal bones, flake.
74	Undecorated Bell Beaker, animal bones.
90	" " " "
82	Undecorated Bell Beaker, animal bones, arrowhead.
5	Undecorated Bell Beaker, vessel.
86	Vessel
69	Undecorated Bell Beaker, flake, copper awl, sherds, bone point, shell.
11	Undecorated handled Bell Beaker.
19	" " " "
67	" " " "
27	Undecorated Bell Beaker, undecorated handled Bell Beaker.
56	" " " " "
79	Decorated Bell Beaker, vessel, undecorated handled Bell Beaker, amber bead, amber button.
7	Undecorated Bell Beaker, bowl, handled Topf.
54	Undecorated Bell Beaker, bowl.
66	Bowl.
68	"
72	"
77	"
94	"
36	Undecorated handled Bell Beaker, bowl, blade.
104	Undecorated handled Bell Beaker, bowl.
75	Wrist-guard, coarse jar.



Fig. 6.20 (continued)

Decorated Bell Beaker group

<u>Grave No.</u>	<u>Contents</u>
6	Decorated Bell Beaker.
8	" " "
9	" " "
106	" " "
107	" " "
71	" " "
81	" " "
102	" " "
14	" " "
16	" " "
17	" " "
18	" " "
28	" " "
42	" " "
44	" " "
55	" " "
70	" " "
46	Decorated Bell Beaker, burnt clay.
98	Decorated Bell Beaker, wrist-guard.
103	Decorated Bell Beaker, wrist-guard, pendant.
22	Decorated Bell Beaker, jug, animal bones.
33	Decorated Bell Beaker, jug.
73	" " " "
84	Jug, animal bones.
29	Decorated Bell Beaker, arrowhead, blade, scraper, amber bead.
64	Decorated Bell Beaker, blade, stone chisel, stone axe.
39	Decorated Bell Beaker, animal bones, arrowhead, colouring matter.
48	Decorated Bell Beaker, animal bones, arrowhead, blade.
92	Animal bones, arrowhead, blade, flake.
101	Undecorated Bell Beaker, arrowhead, blade.
31	Decorated Bell Beaker, jug, blade, flake, sherds.
50	Decorated Bell Beaker, arrowhead, flake, boar's tusk, sherds.
51	" " " " " " " "
59	Decorated Bell Beaker, wrist-guard, arrowhead, tanged copper dagger, amber bead.

1876

Wednesday January 1st - A very
cold day. Went to church in
the morning and then home. In
the afternoon I went to the
post office and then home. In
the evening I went to the
post office again and then home.
I also went to the post office
again at 10 o'clock at night.
I also went to the post office
again at 10 o'clock at night.

Figure 6.20 (continued)

Decorated Bell Beaker group (continued)

<u>Grave No.</u>	<u>Contents</u>
83	Polypod bowl, arrowhead.
91	Arrowhead.
97	Undecorated Bell Beaker, animal bones, arrowhead, boar's tusk, tanged copper dagger, polishing stone, antler object.
52	Arrowhead, flake, scraper.
93	Flake.

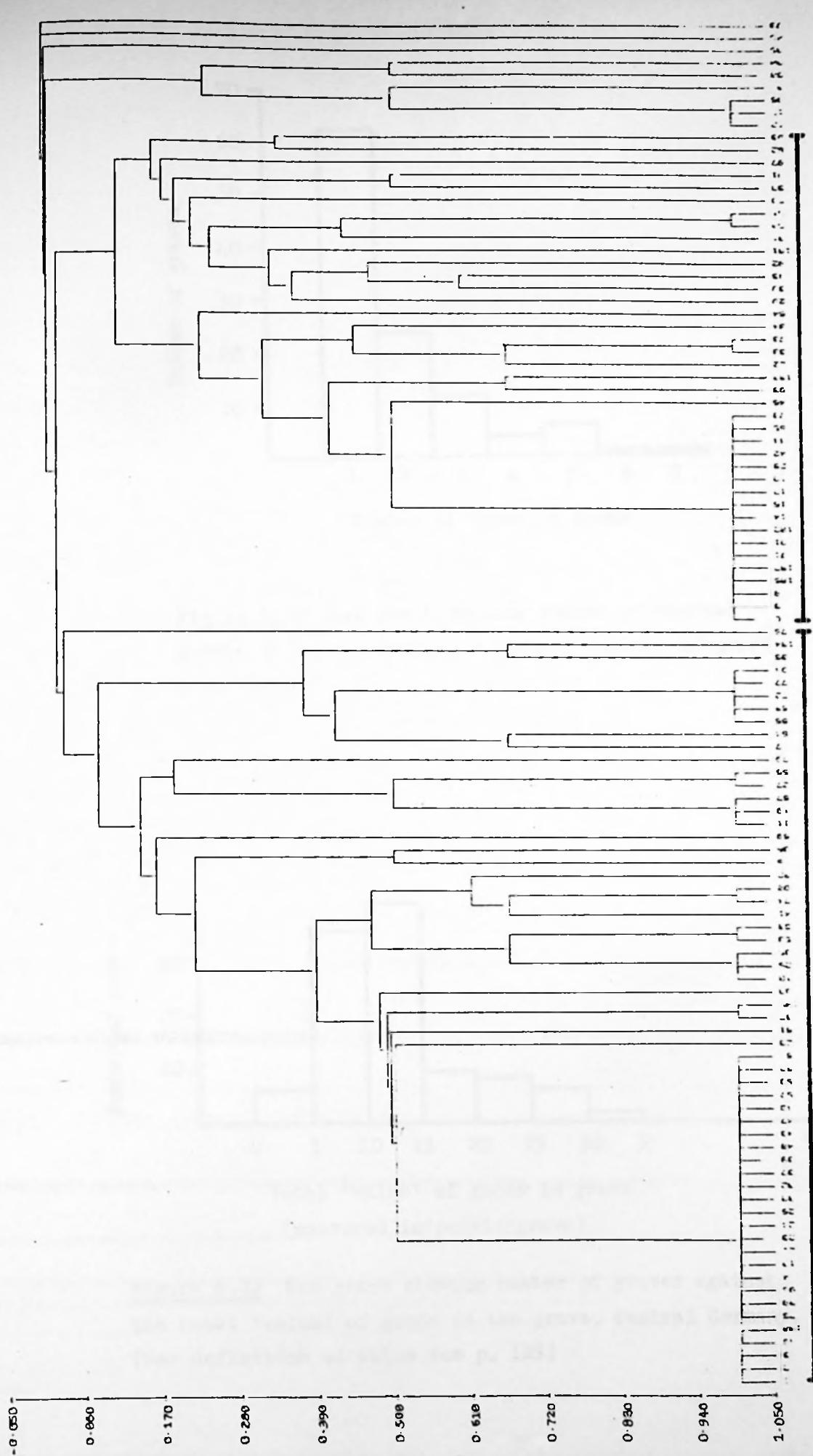
Others

<u>Grave No.</u>	<u>Contents</u>
12	Polypod bowl.
15	" "
96	" "
34	Polypod bowl, blade.
60	Polypod bowl, decorated handled Bell Beaker.
80	Decorated handled Bell Beaker.
35	Handled Topf.
45	Basin.
78	Wood.



Decorated Bell Beaker group

Undecorated Bell Beaker group



1990-1991
Yearbook
of the
University of
Tennessee

1990-1991
Yearbook
of the
University of
Tennessee

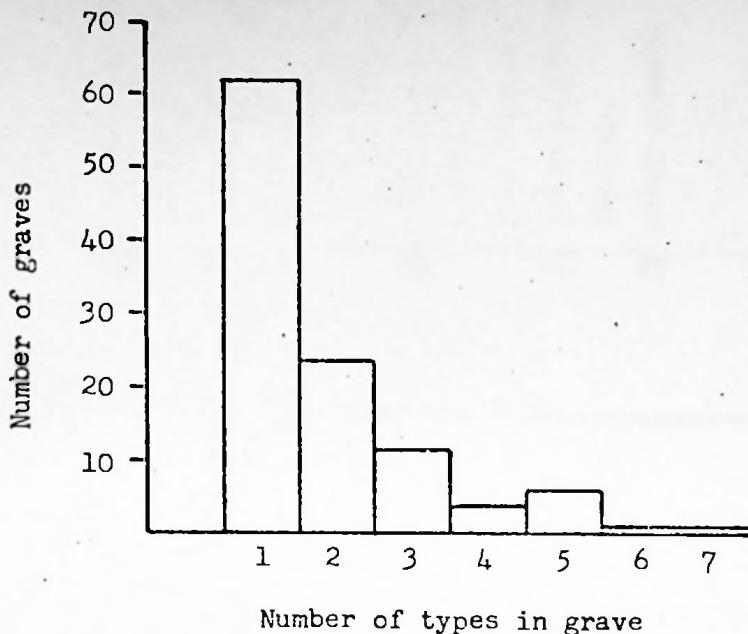


Figure 6.21 Bar graph showing number of Central German graves containing different numbers of grave good types.

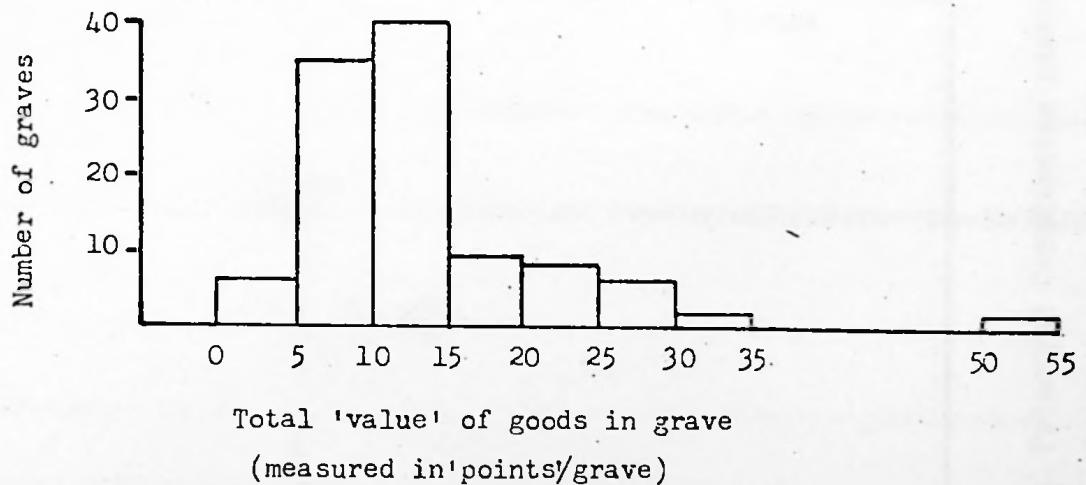


Figure 6.22 Bar graph showing number of graves against the total 'value' of goods in the grave. Central Germany.
(For definition of value see p. 125)



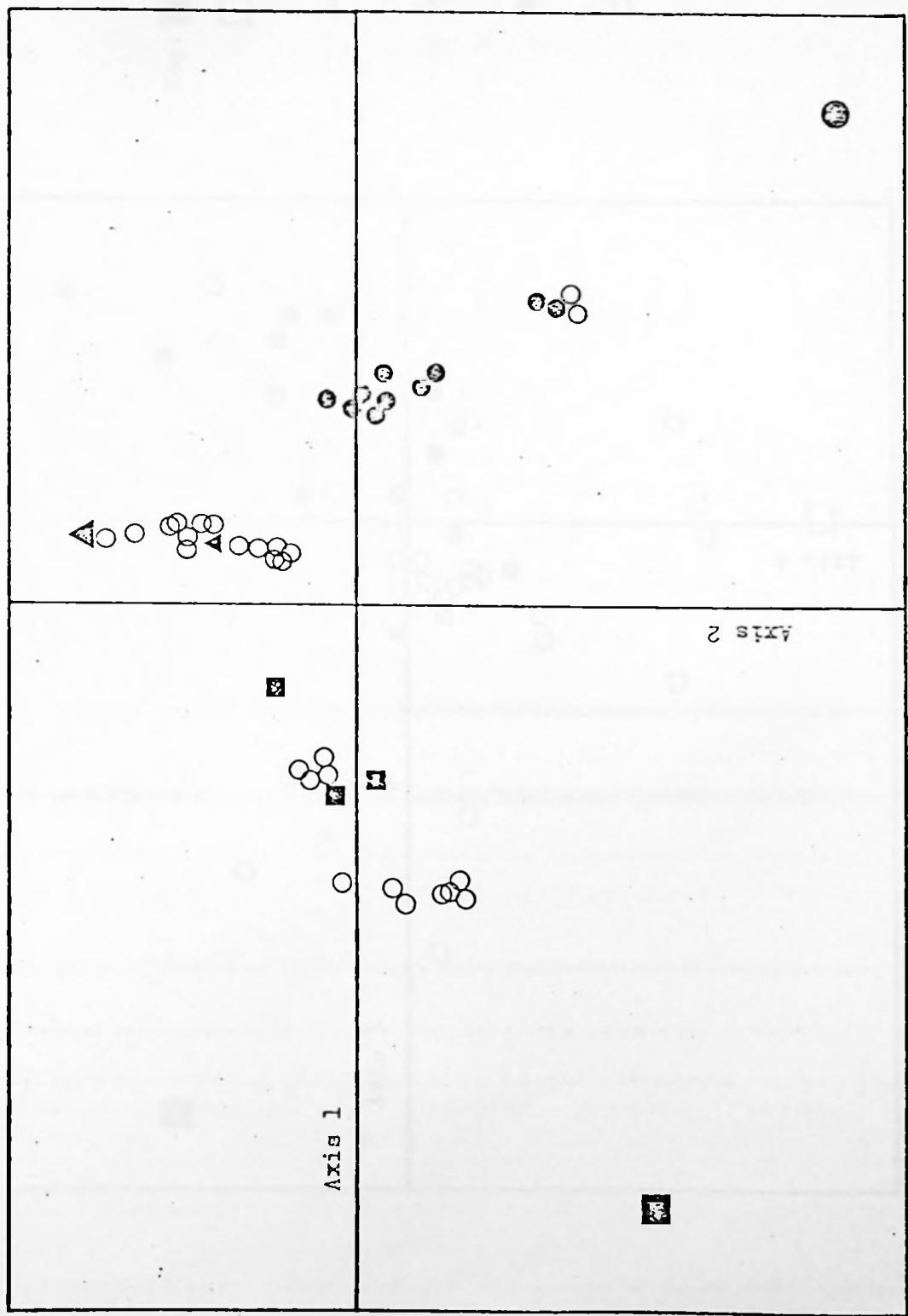


Figure 6.23 Principal Coordinates scattergram of Central German Bell Beaker graves. Axes 1 and 2.

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2099-20100

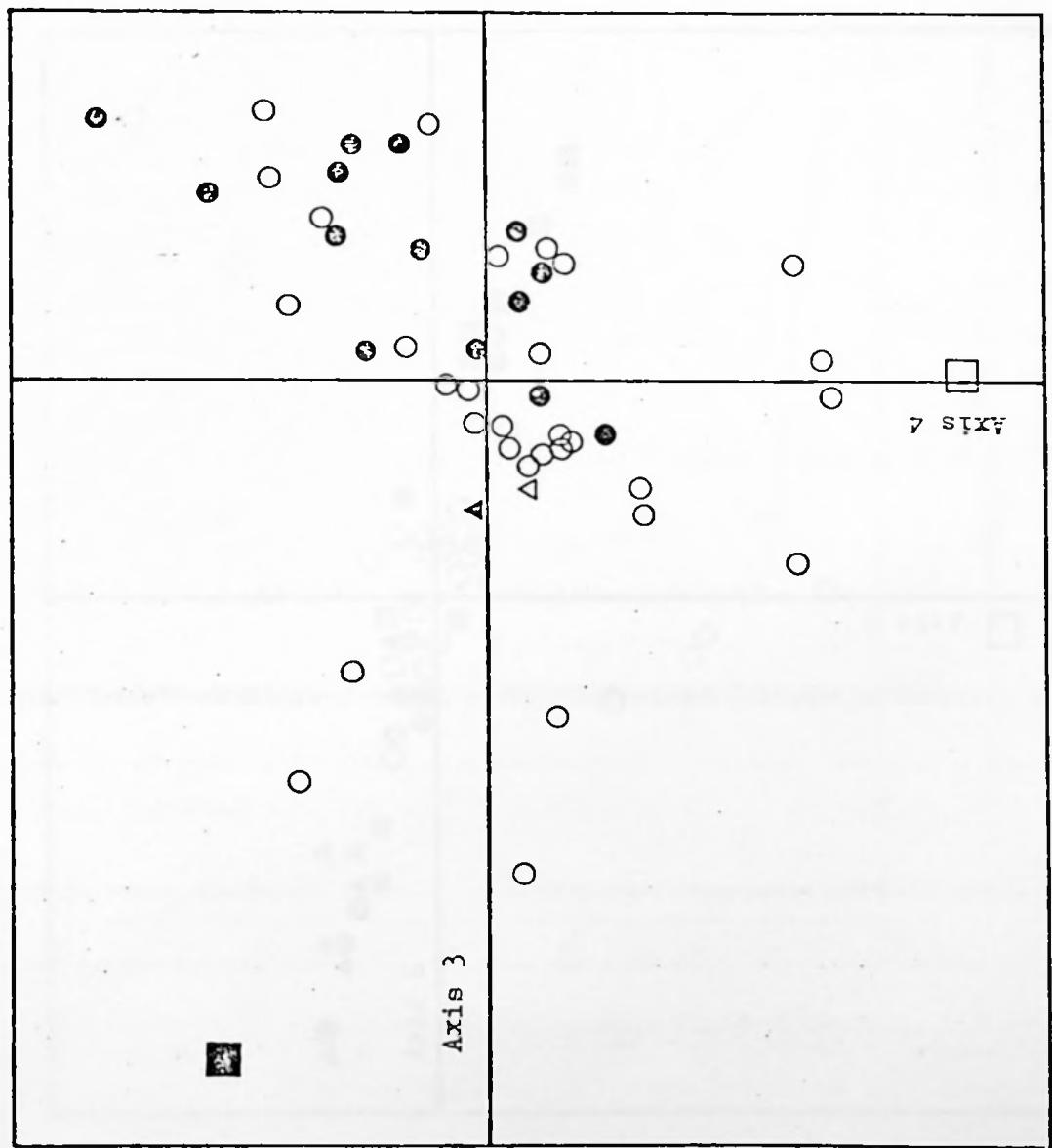


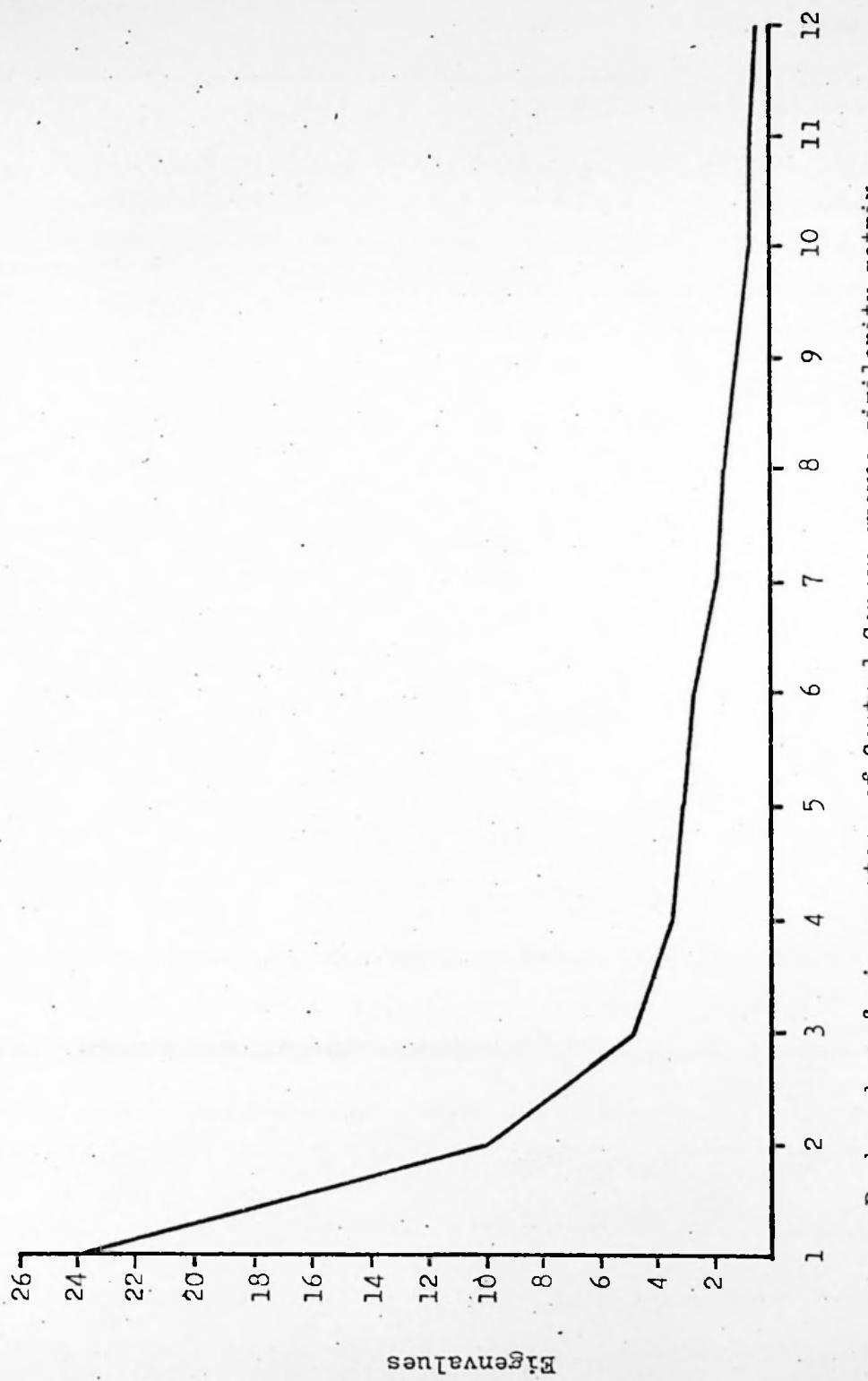
Figure 6.24 Principal Coordinates scattergram of Central German Bell Beaker graves. Axes 3 and 4.





Figure 6.25 Principal Coordinates scattergram of Central German Bell Beaker graves. Axes 5 and 6.





Rank order of eigenvectors of Central German Graves similarity matrix

Figure 6.26 Graph of eigenvectors against their corresponding eigenvalues

Figure 7.1 Relative frequency of deposition for the more common goods found in Bell Beaker graves in different regions of Central Europe.

Key: x-axis runs from south-east to north-west;
H=Hungary, M=Moravia, B=Bohemia, G= Central Germany.
The meaning of the y-axis depends on which line is being considered (see immediately below), but all the units are at the same scale.

Line number

- 3 Percentage of all graves in each area that are cremations.
- 4 Number of undecorated Bell Beakers/100 graves in each area.
- 5 Number of polypod bowls in each area as a percentage of the total number of bowls in that area.
- 6 Number of undecorated handled Bell Beakers in each area, as a percentage of the total number of undecorated handled Bell Beakers and jugs in that area.
- 7 The number of bowls/100 graves in each area.
- 8 The number of jugs/100 graves in each area.
- 9 The number of undecorated handled Bell Beakers/100 graves in each area.
- 10 The number of polypod bowls/100 graves in each area.
- 11 The number of decorated Bell Beakers/100 graves in each area.
- 12 The number of copper daggers/100 graves in each area.
- 13 The number of wrist-guards/100 graves in each area.

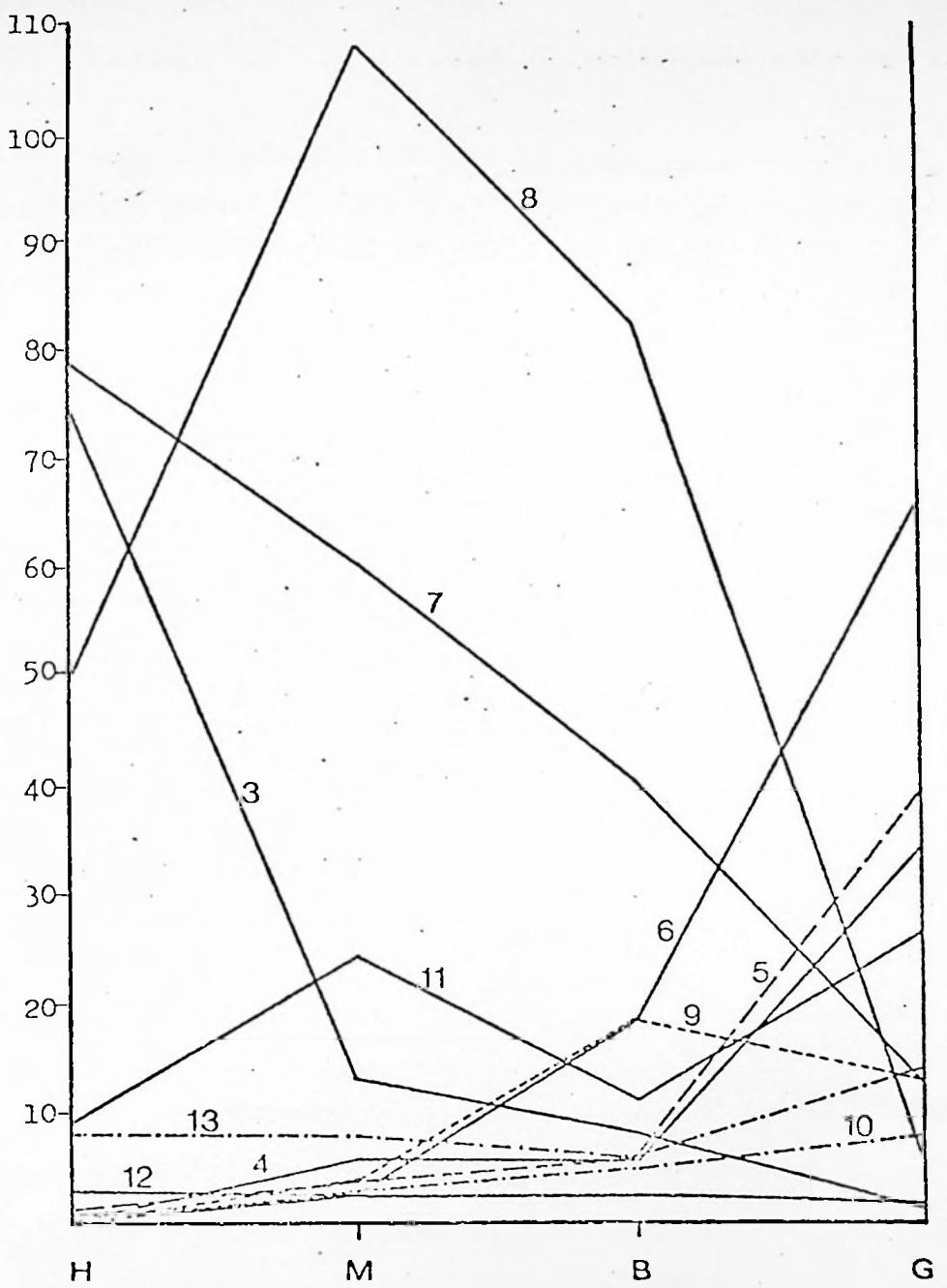


Figure 7.2 Multi-dimensional scalogram of Central European Bell Beaker shapes. The shapes of 100 randomly selected Central European Bell Beakers were described in terms of ratios and a number of groups was initially produced by average-link cluster analysis. Multi-dimensional scaling was carried out on the resulting groups (see text) and the result in two dimensions is shown in the figure.

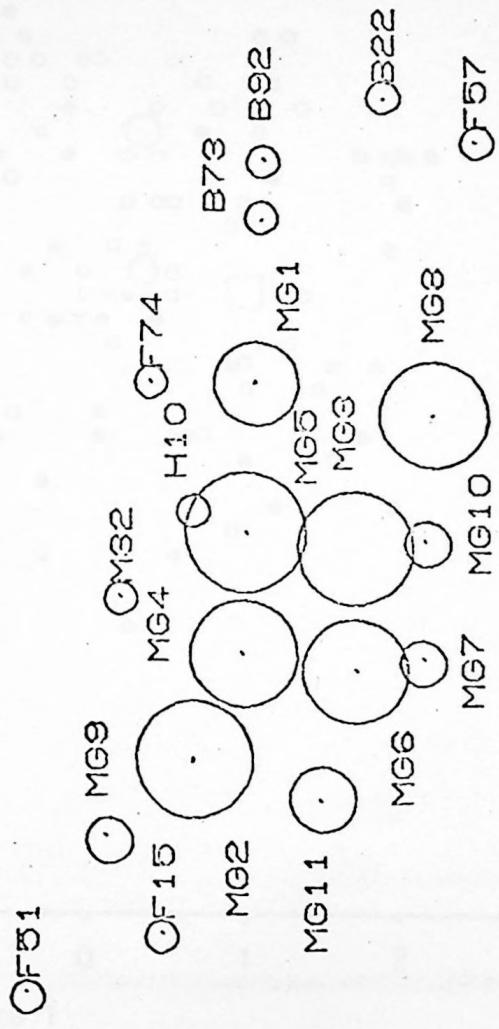
Key

Circles labelled MG are groups of more than 1 vessel produced by the cluster analysis; the area of the circle depends on the size of the group.

Other small circles represent individual vessels which did not fit into any of the clusters. The place of origin of these vessels is given by the alphabetic part of their identifier. B=Bohemia, F=Central Germany, H=Hungary, M=Moravia.

Stress of 2-dimensional solution is 0.070.

Simple Random Sample



Change & Plan

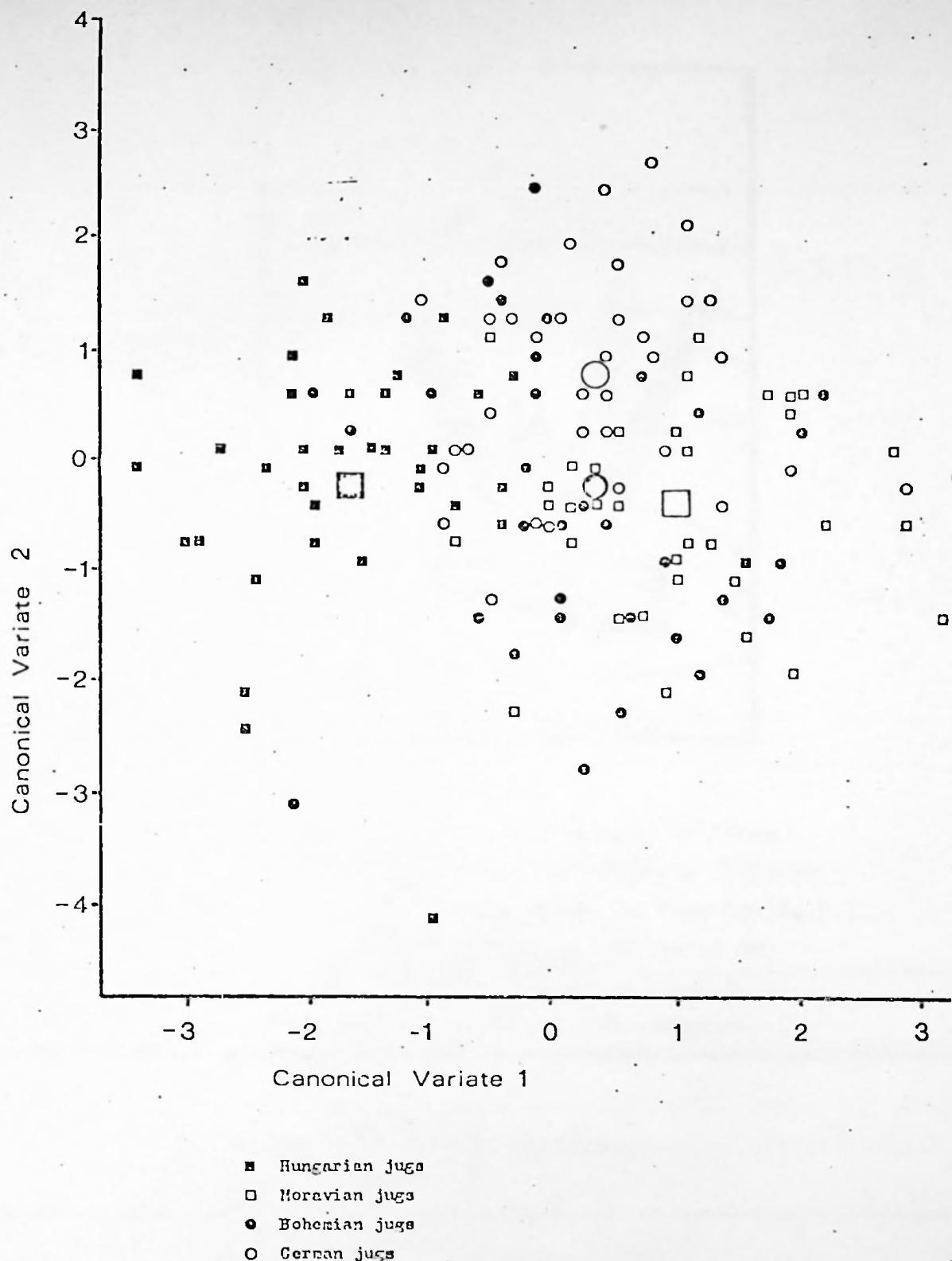
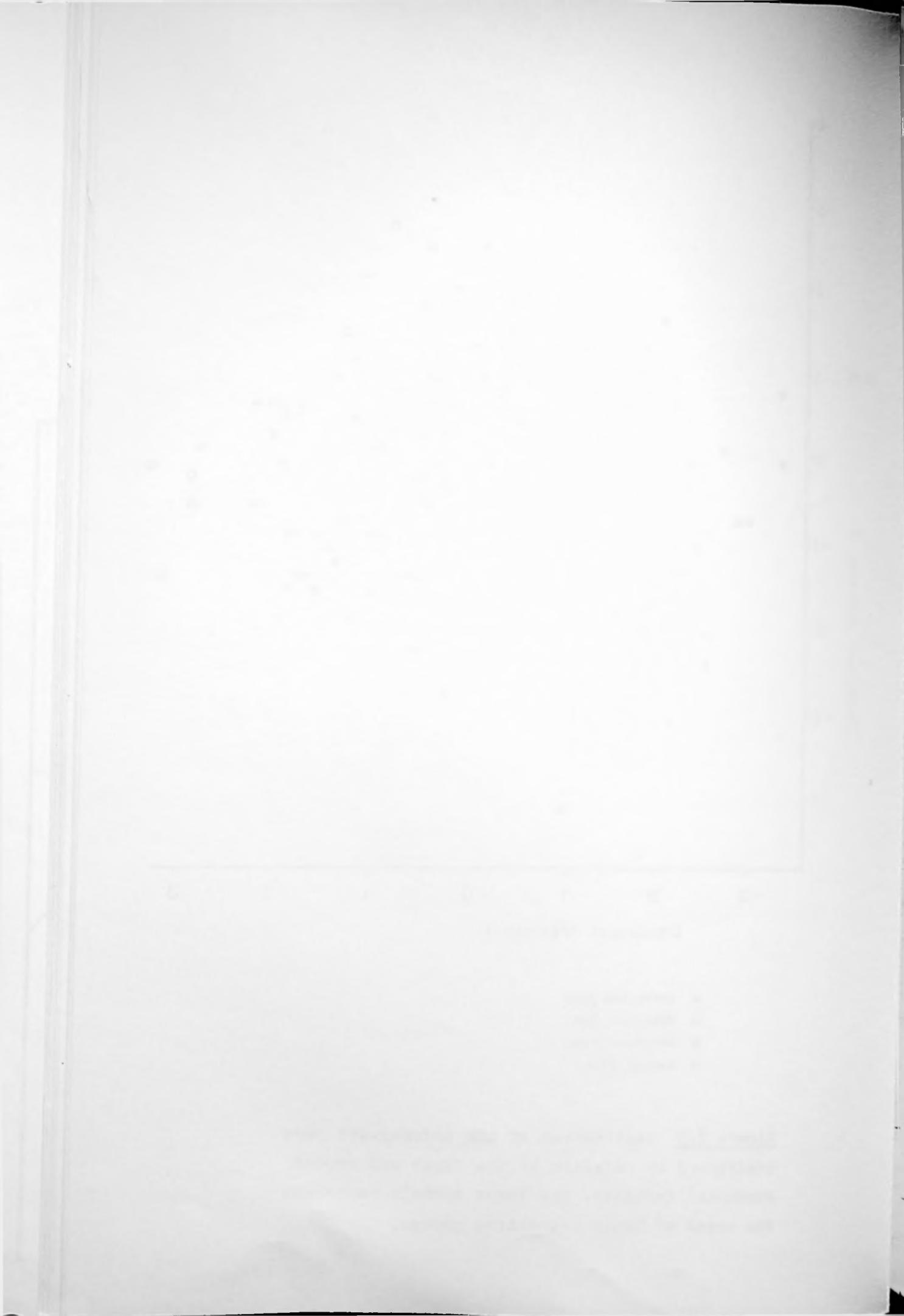


Figure 7.3 Scattergram of the undecorated jugs positioned in relation to the first and second canonical variates. The large symbols represent the means of their respective groups.



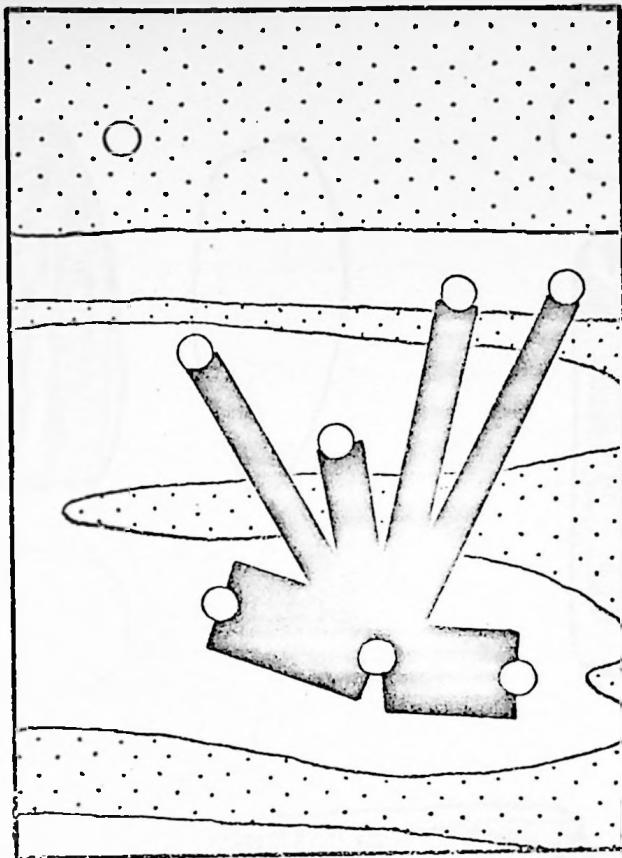
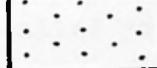
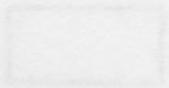
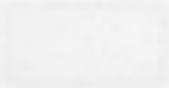


Figure 7.4 Effect of natural barriers on frequency of marriage between villages in the Appalachians (Fig. 22 from Gould, P., 1969. Spatial Diffusion Commission on College Geography, Resource Paper 4, Association of American Geographers. Washington DC).

Key:  Mountains

 Valleys

Width of bars relates to frequency of marriage.



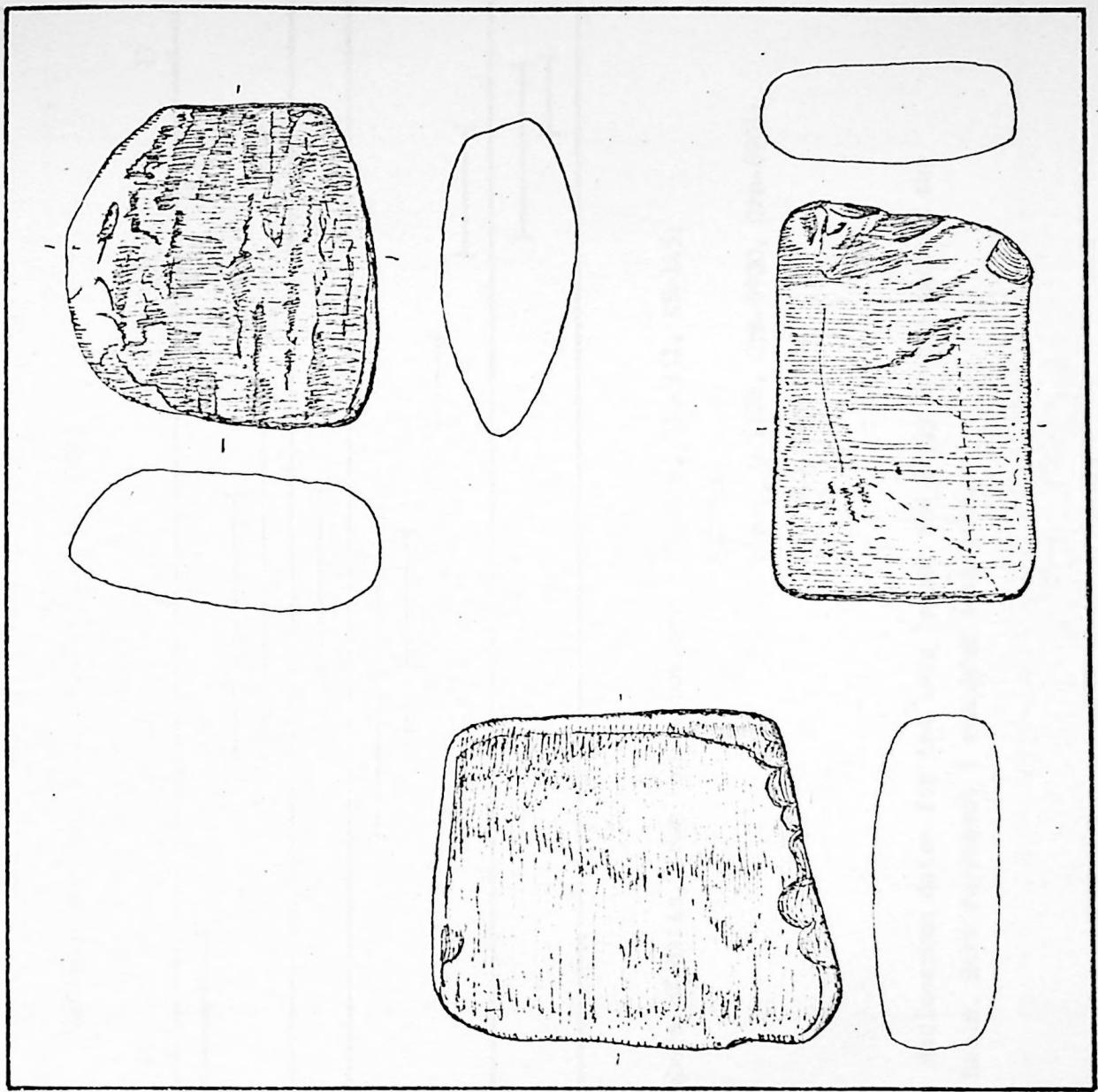
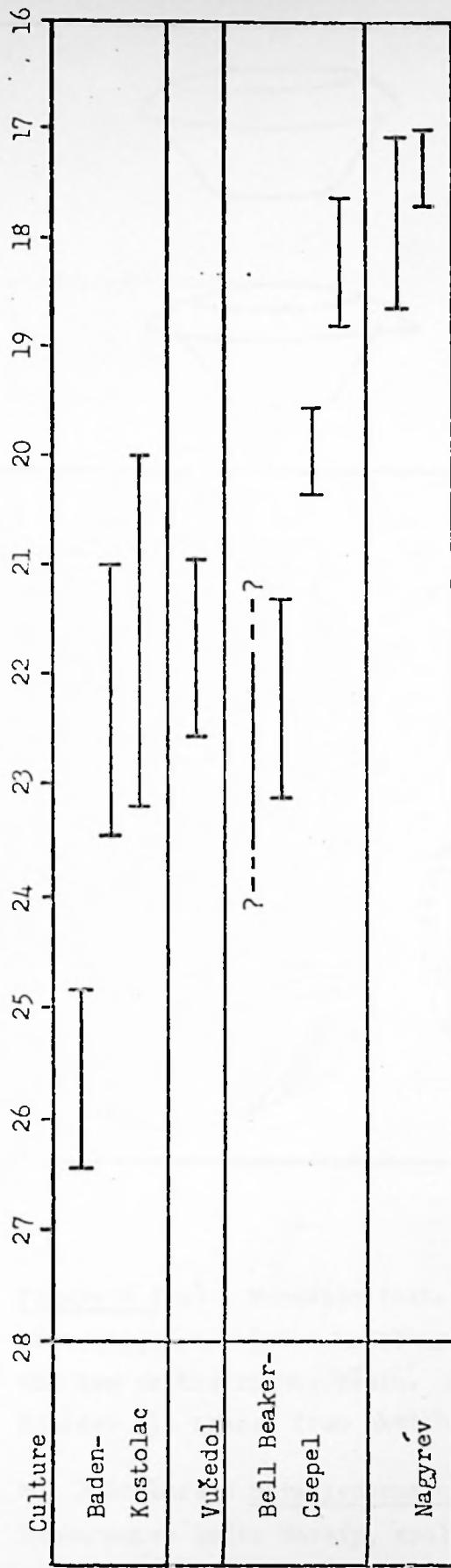


Figure 7.5 Three so-called 'cushion stones', probably connected with metal-working, from Grave X, Holešov, Moravia.
(Source: Ondráček, J., unpublished report.)



Radiocarbon Years b.c. (numbers are in 100s)



Reference numbers of dates, from top to bottom:
Bln-476, Bln-351, KN-145;
Bln-564;
Bln-?, Q-1122, Grn-6900, Grn-6901;
Bln-340, Grn-6653.

Figure 8.1 Radiocarbon dates for the Late Copper and Early Bronze Ages in the Carpathian Basin. Bars represent 1 standard deviation.



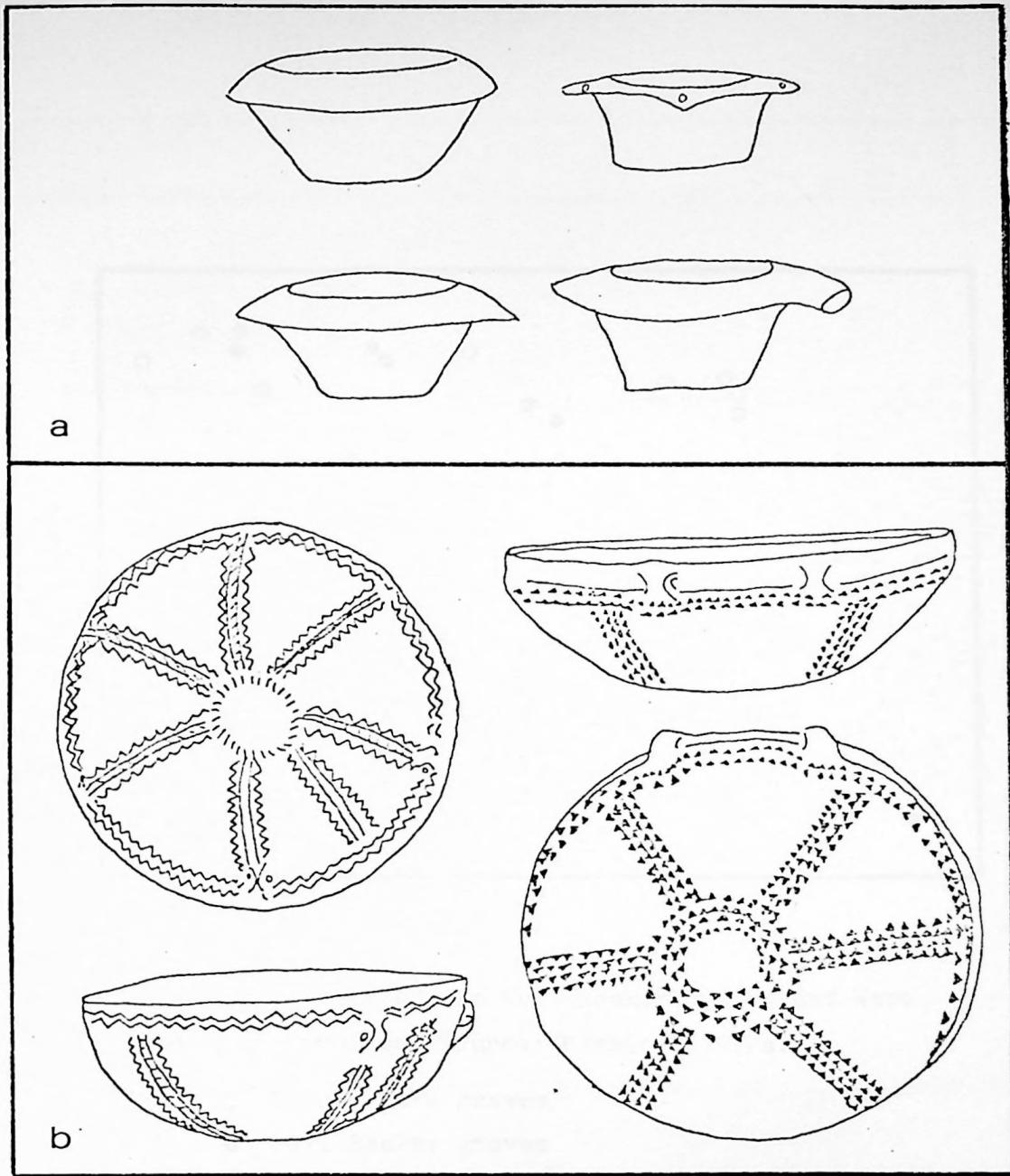


Figure 8.2 a) 4 Moravian 'hat-bowls'.

Provenance: top left: Opločany; bottom left: Němcice nad Hanou; the two on the right: Měřín. Scale: all 1:3.

Source: all traced from sketches in Červinka 1938b.

b) 2 Schönenfeld Strahlenschalen from Moravia.

Provenance: left: Marefy, scale 1:5; right: Smržice, scale 1:3.

Source: both traced from sketches in Červinka 1938b.



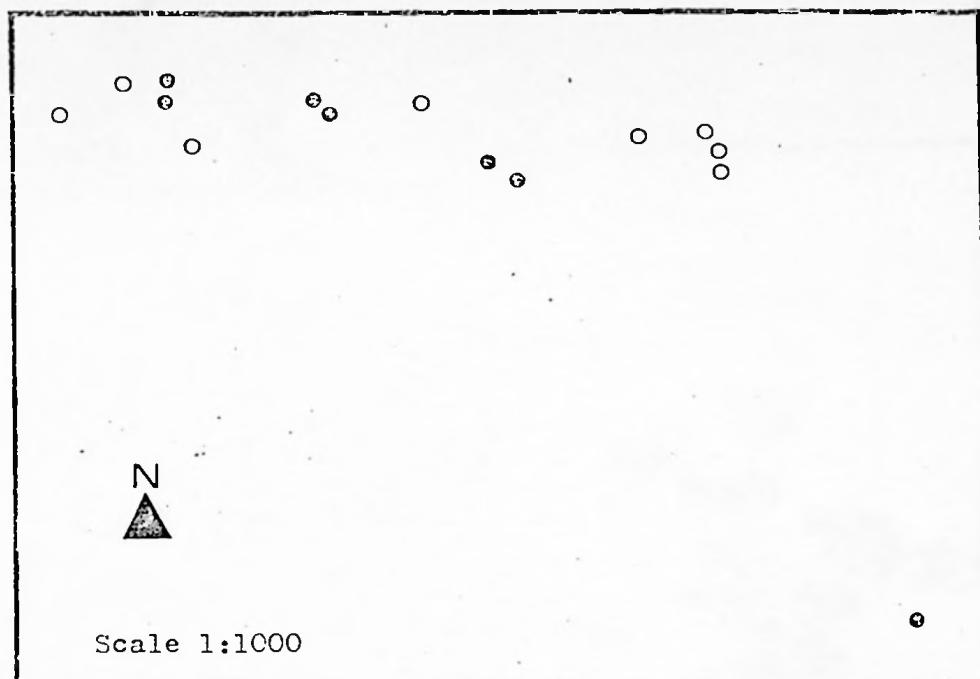


Figure 8.3 Plan of the Bell Beaker and Corded Ware graves at Lysolaje. Source: Pleslová 1972a.

Key: ○ Corded Ware graves
● Bell Beaker graves



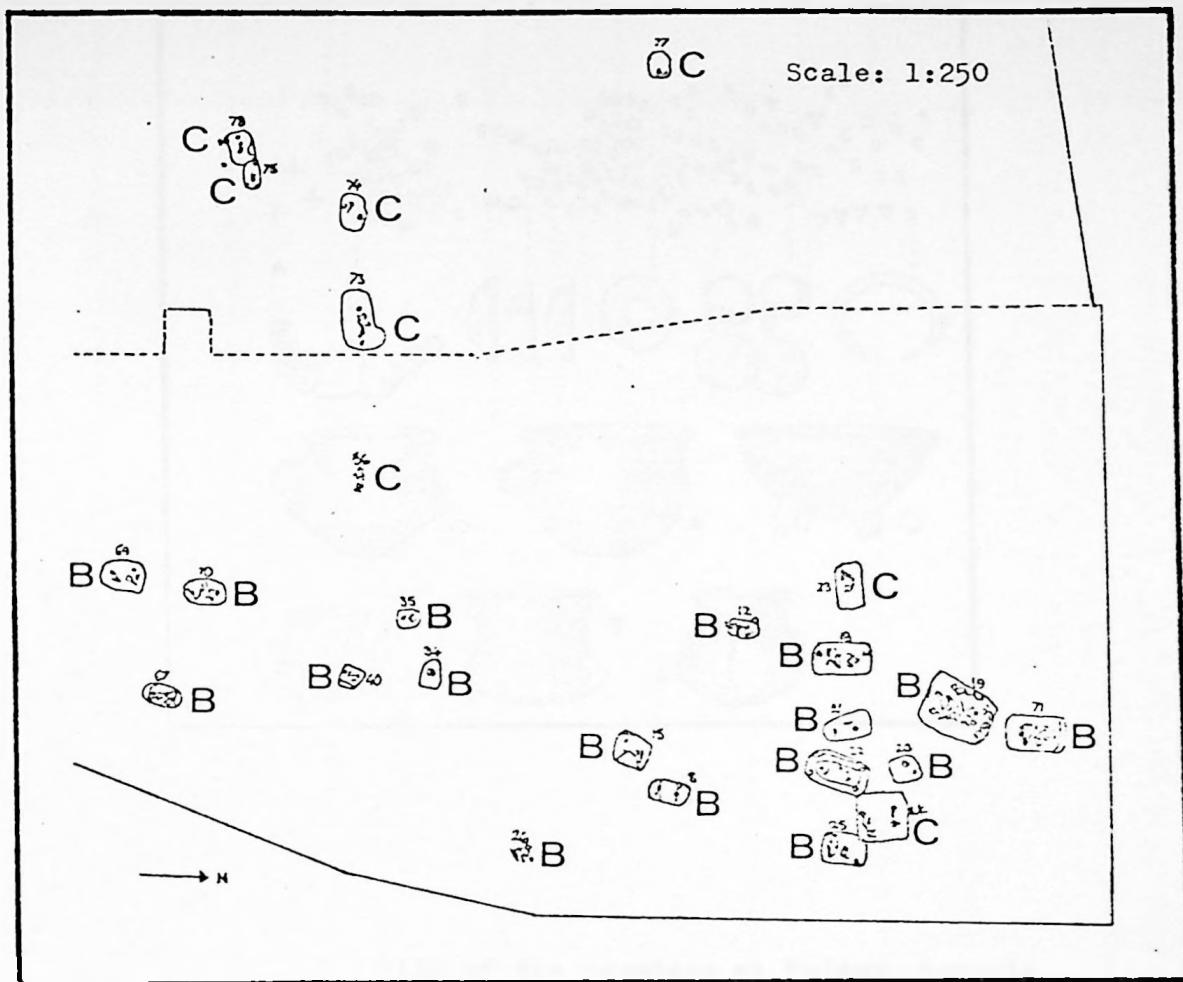


Figure 8.4 Plan of the Bell Beaker and Corded Ware graves at Brandyšek. Source: Hytlicová 1960.

Key: C Corded Ware graves

B Bell Beaker graves



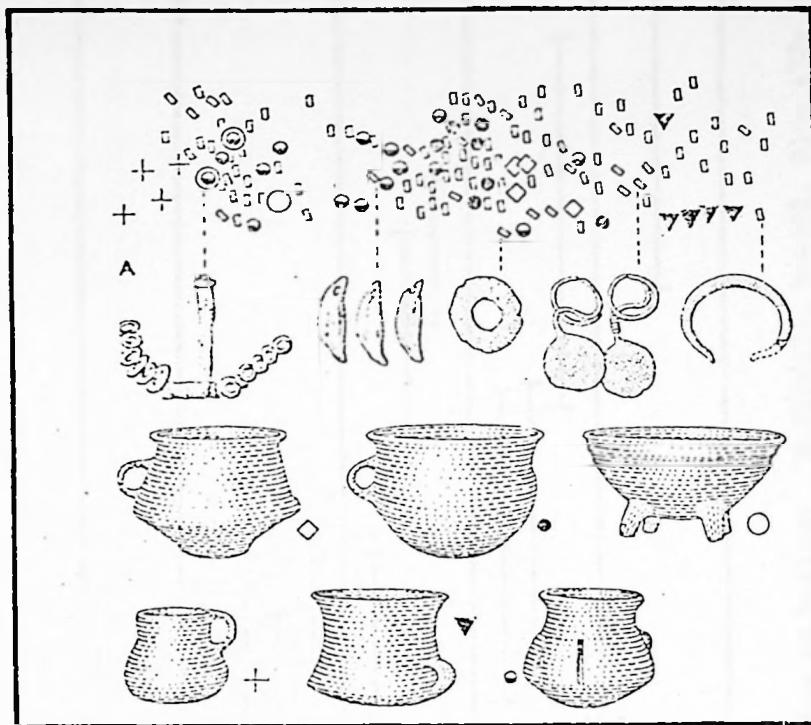


Figure 8.5 Plan of the cemetery at Polepy, Bohemia.

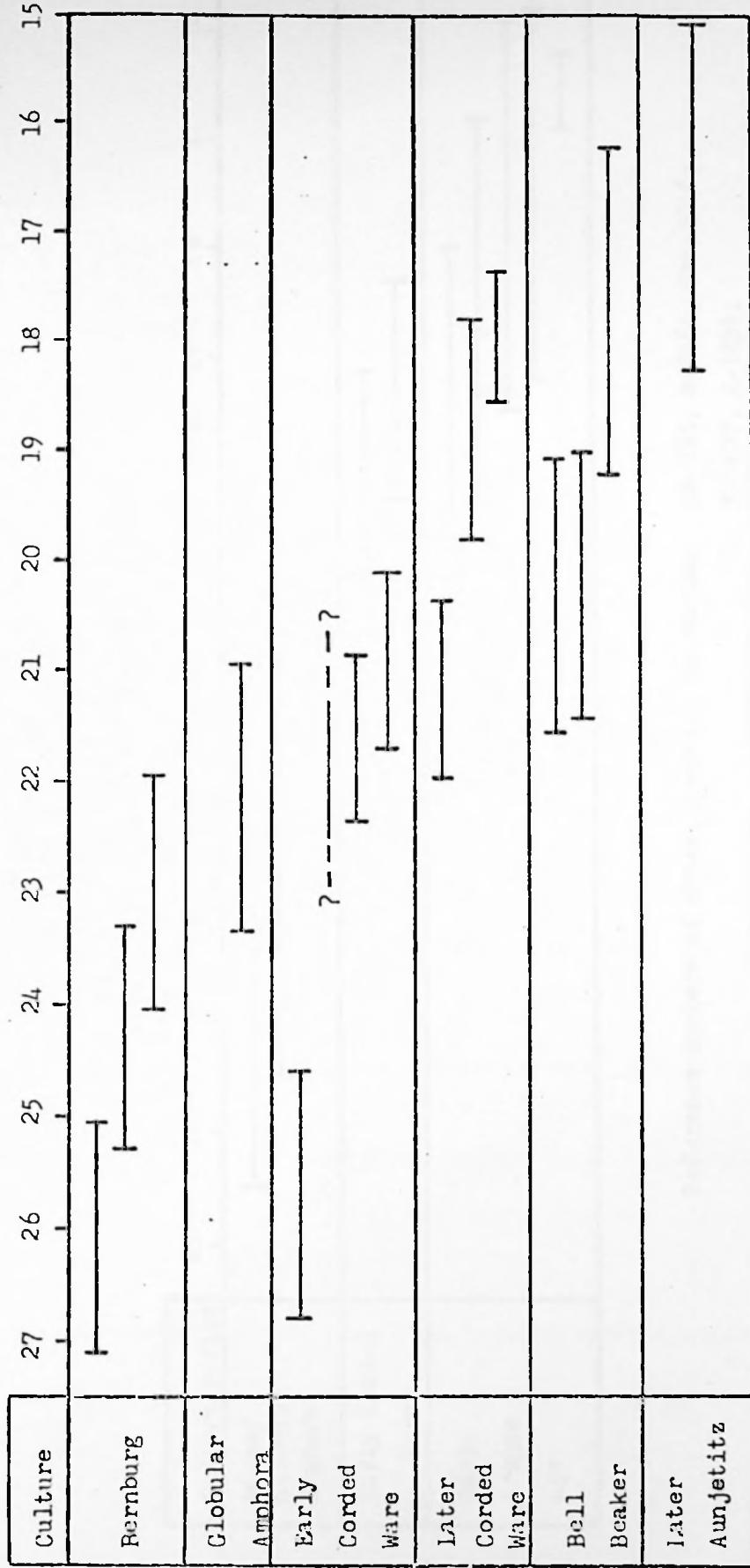
Source: Müller-Karpe 1974, Plate 525.

Key: + Graves with jugs of the type associated
with Bell Beakers.

▼ Late Unetice cups.



Radiocarbon Years b.c. (numbers are in 100s)

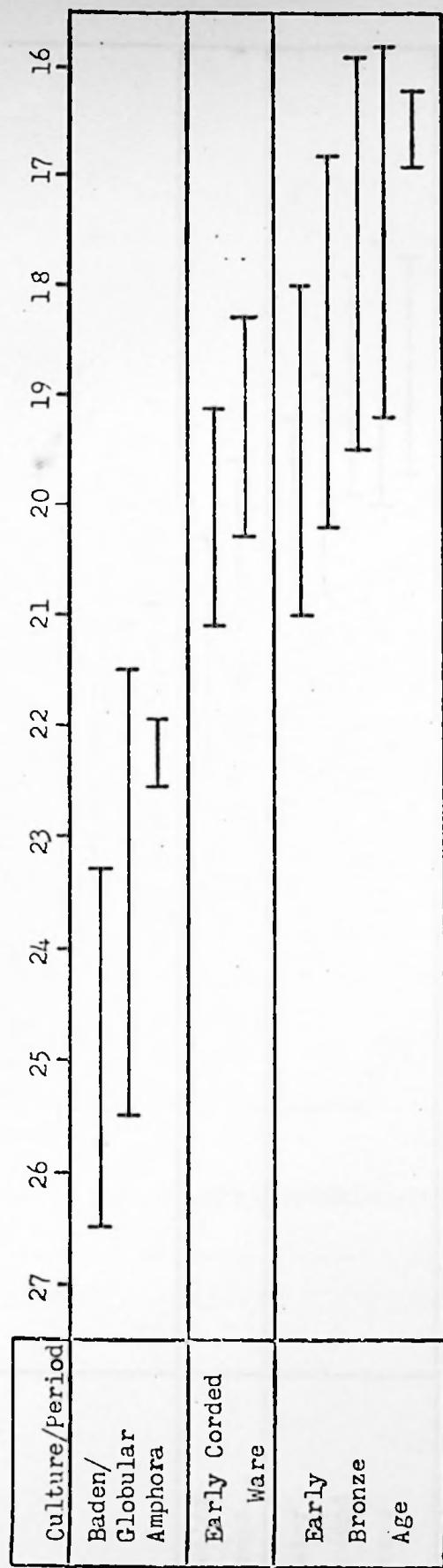


Reference numbers of dates, from top to bottom: H-210/271, Hv-582, Bln-472; Bln-342;
 H-253/208, K-?, H-572/919, Grn-4058; Bln-533, Bln-166, H-2123/1538; Bln-550, H-28/33, H-27/25; Bln-248.

Figure 8.6 Radiocarbon dates for the later Neolithic in Central Germany. Bars represent 1 standard deviation.



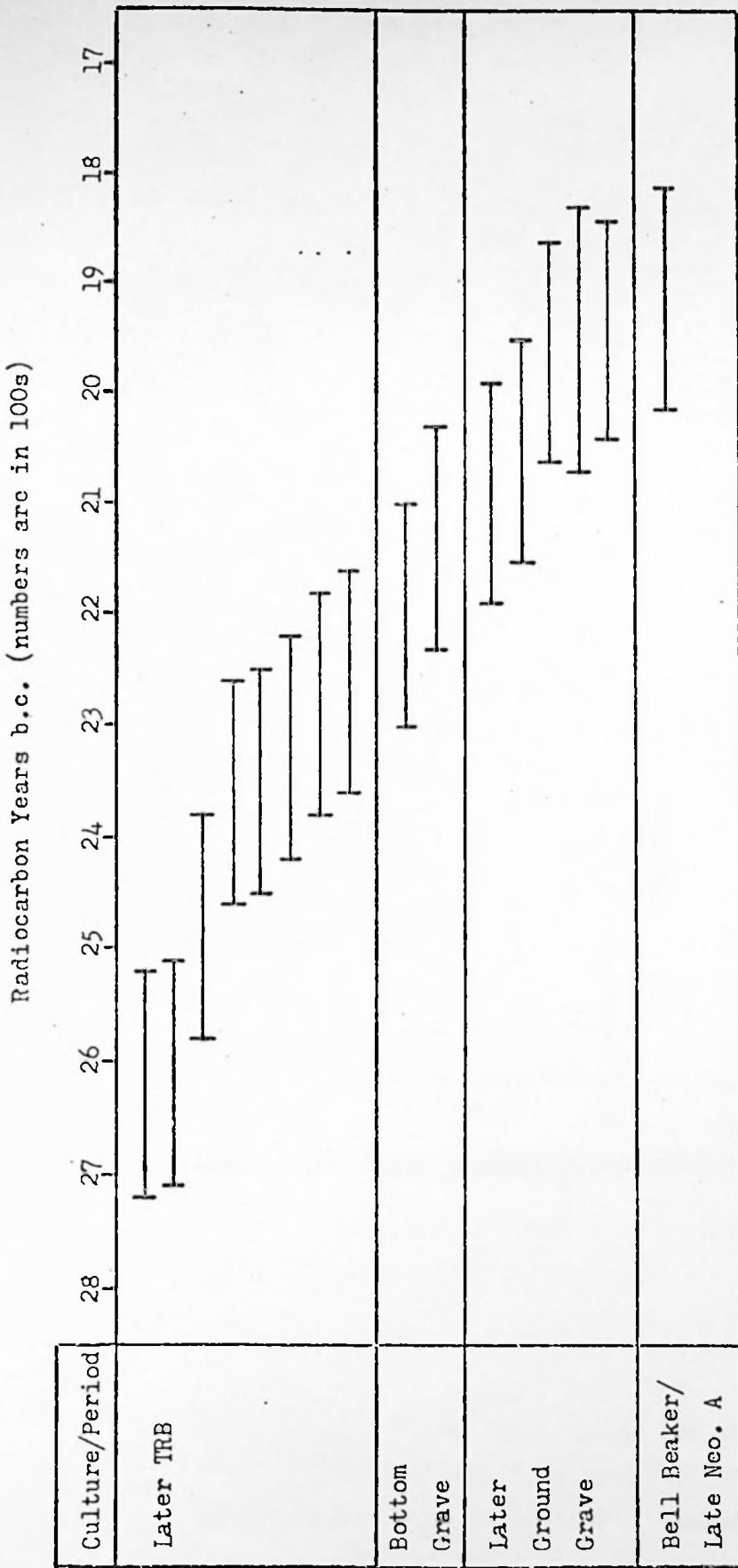
Radiocarbon Years b.c. (numbers are in 100s)



Reference numbers of dates, from top to bottom: KN-225, M-2166, Grn-5046;
 K-1837, K-1836;
 M-1325, M-2328, M-2168, M-2325, Grn-5037.

Figure 8.7 Radiocarbon dates for the later Neolithic and Early Bronze Age in Poland (bars represent 1 standard deviation).





Reference numbers of dates, from top to bottom: K-1566, K-1568, K-1567, K-1789, K-1571, K-1573, K-1572, K-1574;
 K-1582, K-1483;
 K-1569, K-1451, K-1831, K-1284, K-1138;
 K-2067

Figure 8.8 Radiocarbon dates for the later Neolithic in Denmark (bars represent 1 standard deviation).



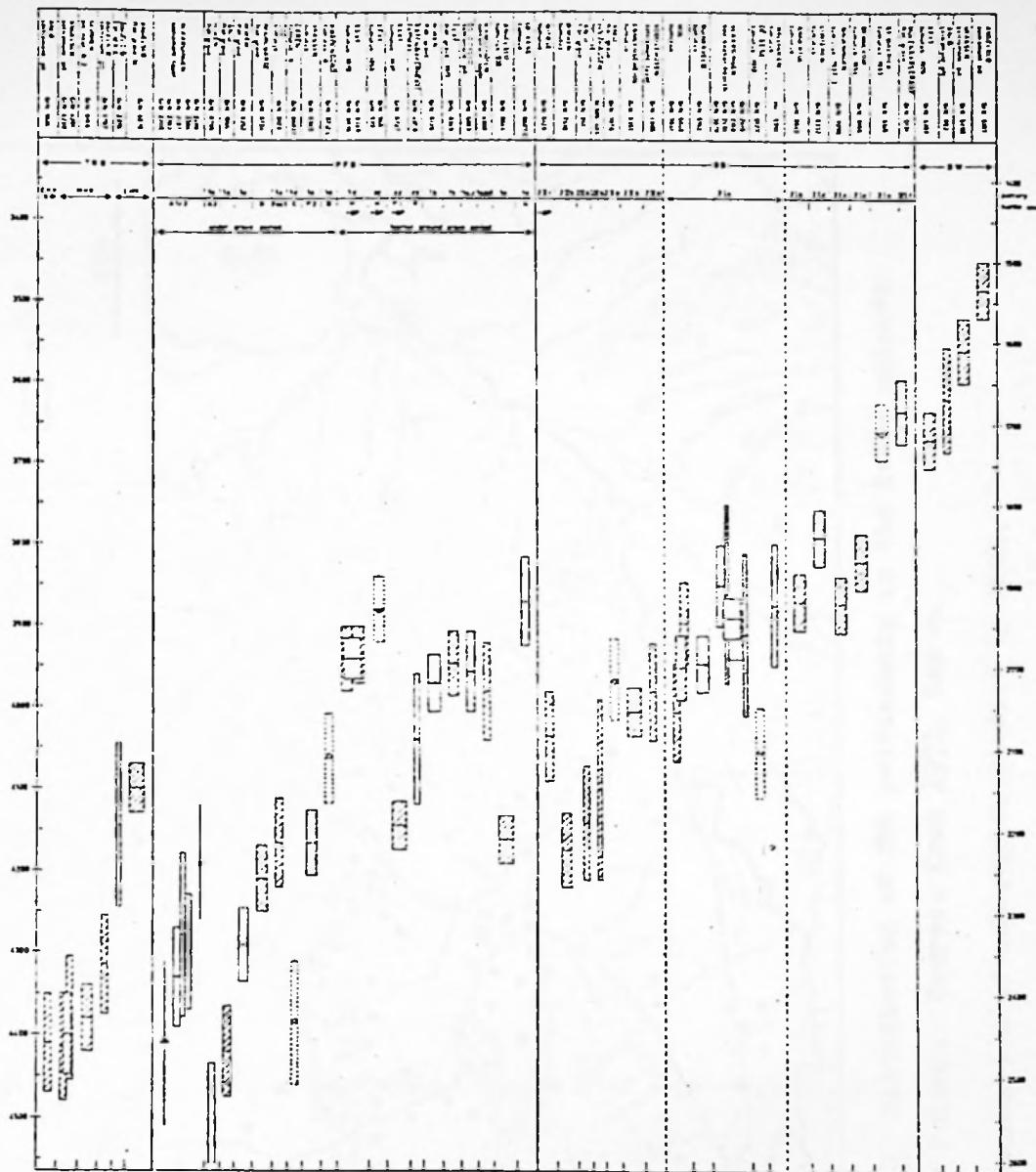


Figure 8.9 Radiocarbon dates for the later Neolithic in the Netherlands. From Lanting, Mook, and van der Waals 1973. Bars represent 1 standard deviation.



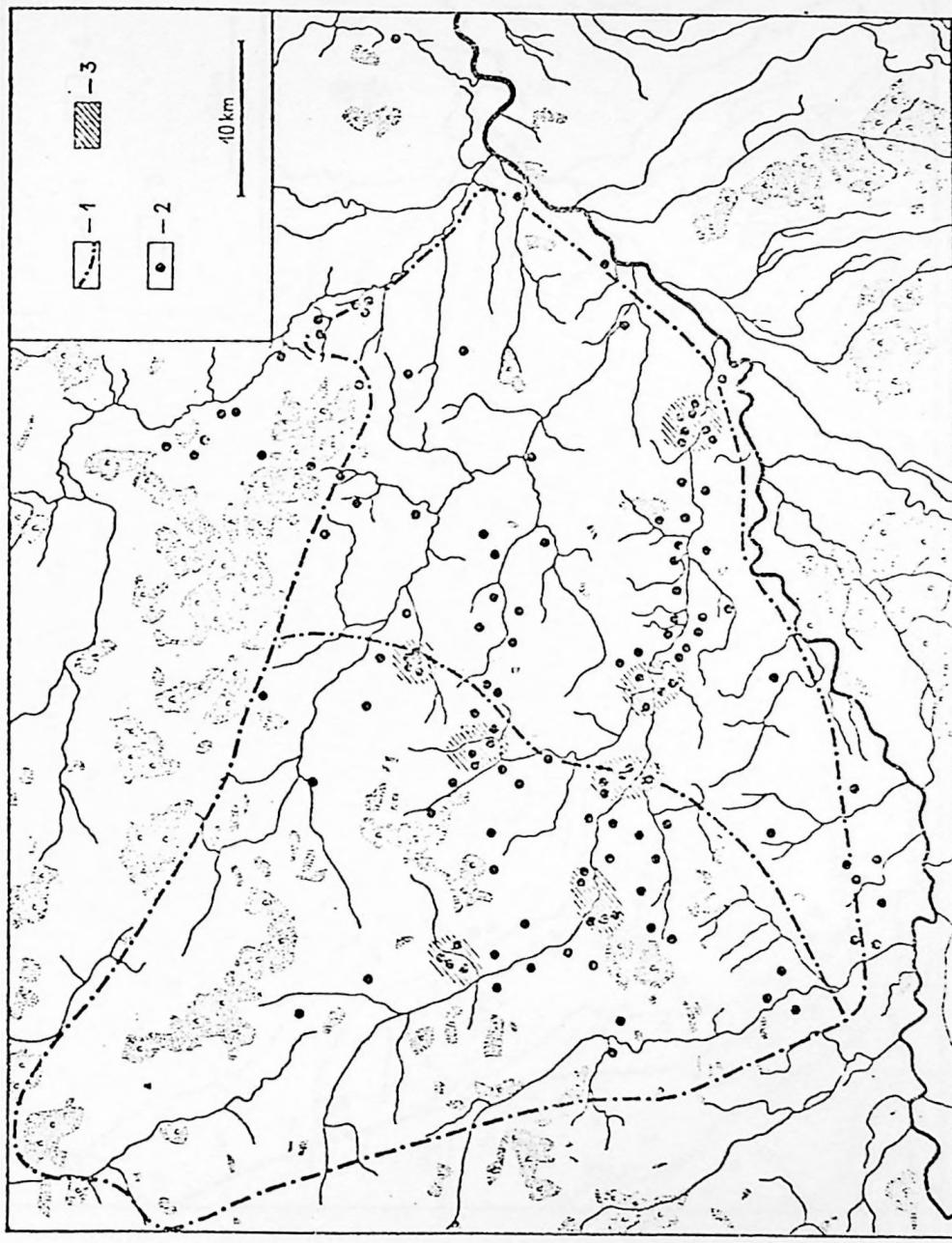
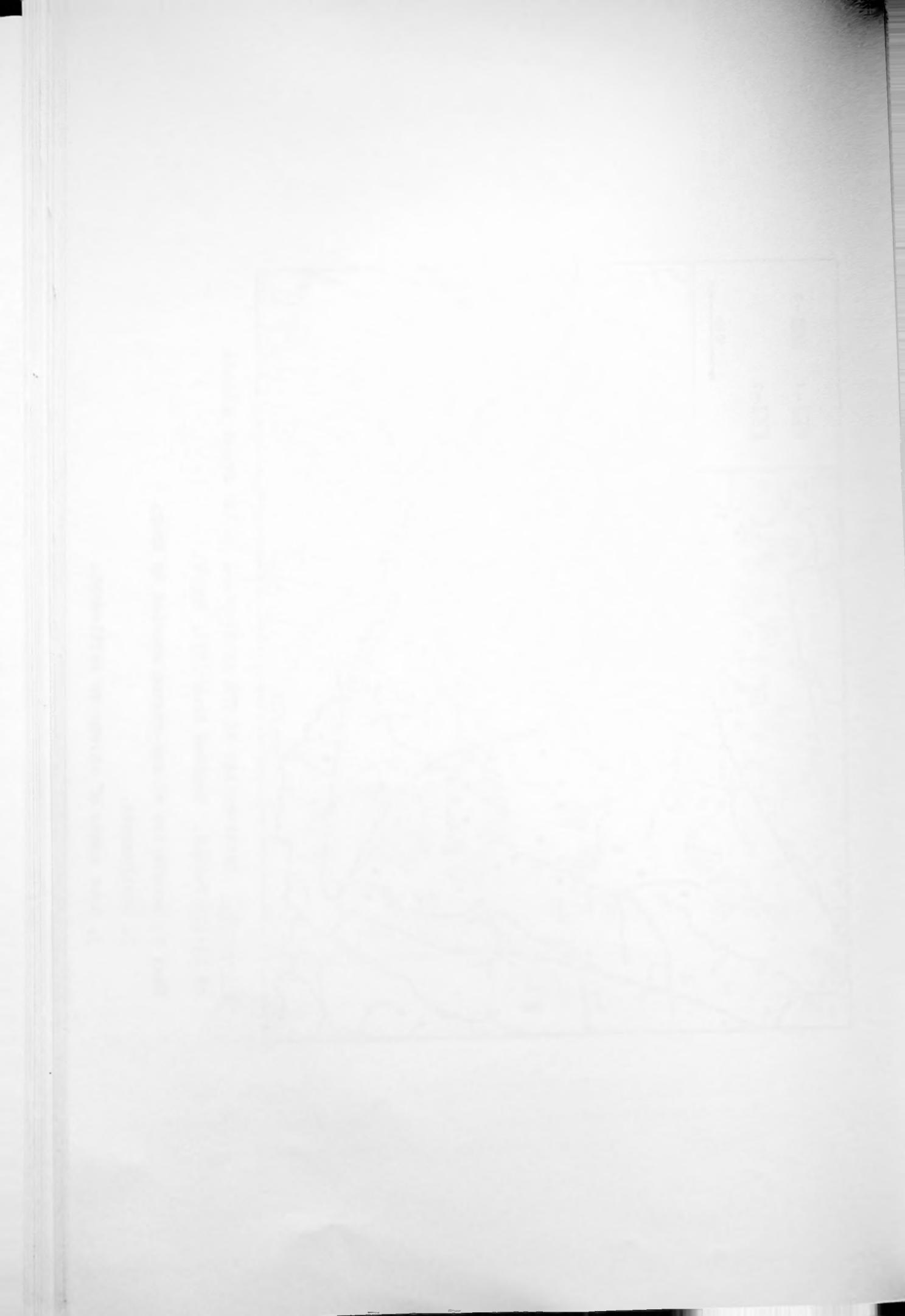


Figure 9.1 Distribution of TRB settlements in the lesser uplands of Little Poland. Source: Kruk 1973, Map 6.

- Key:**
1. Boundaries of sub-section studied by Kruk.
 2. Settlements.
 3. Some zones of intensive settlement.



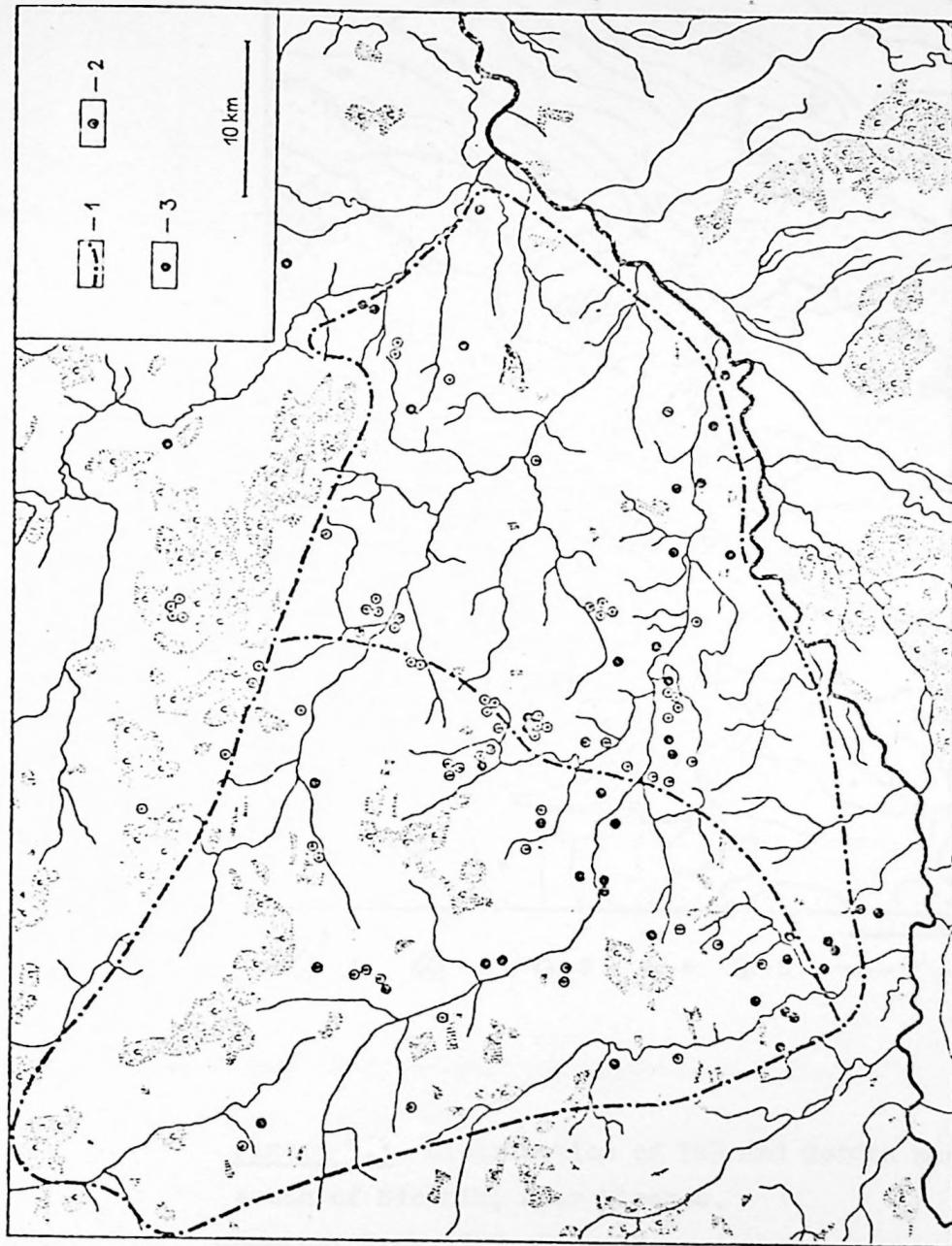


Figure 9.2 Distribution of Corded Ware sites in the loess uplands

of Little Poland. Source: Kruk 1973, Map 7.

- Key:
1. Boundaries of sub-region studied by Kruk.
 2. Barrows.
 3. Flat graves and isolated finds.



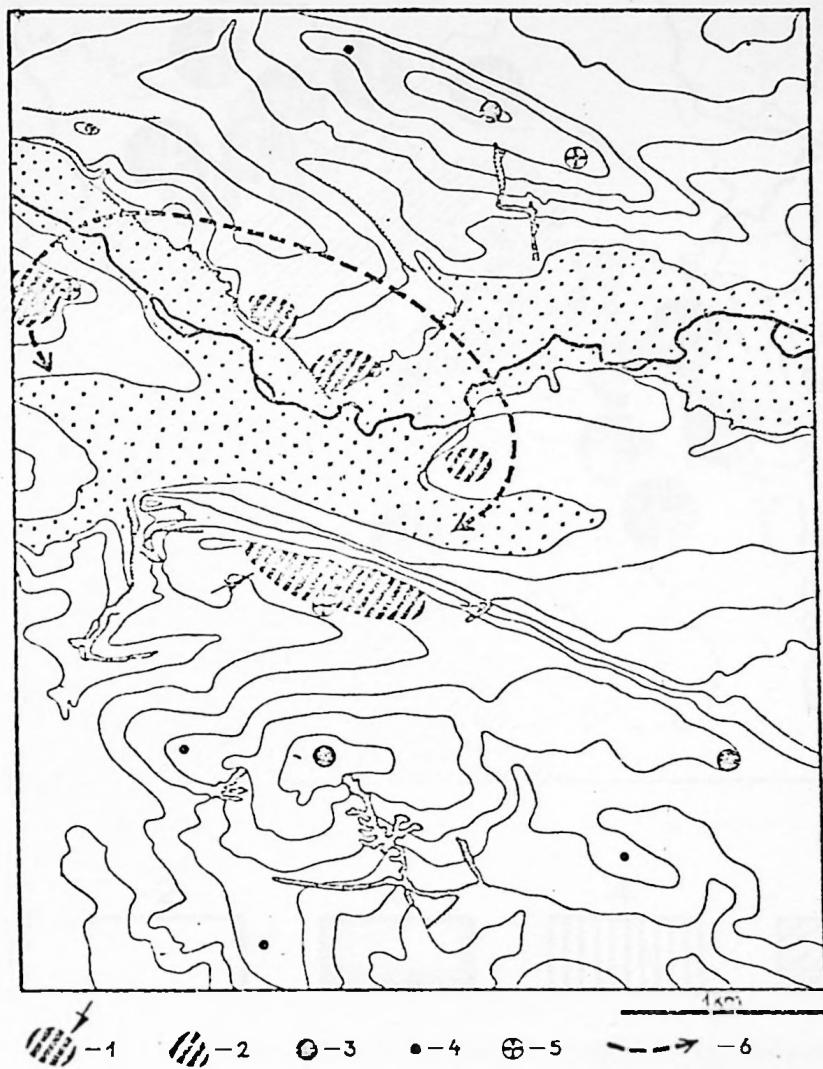
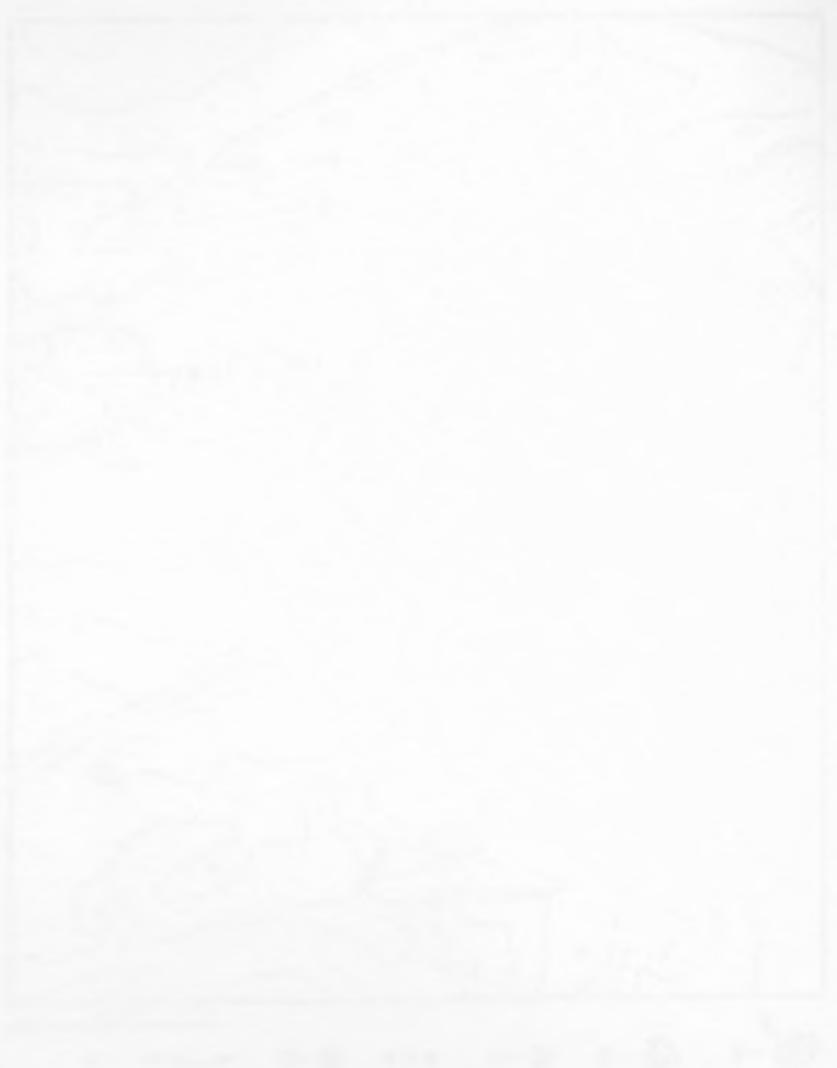


Figure 9.3 Distribution of TRB and Corded Ware sites south of Slomnik, near Miechow.

Source: Kruk 1973, Fig. 13.

- Key:
1. Large settlements.
 2. Smaller settlements.
 3. Camps.
 4. Isolated Finds.
 5. Corded Ware flat graves.
 6. Grouping of valley settlement of TRB culture.



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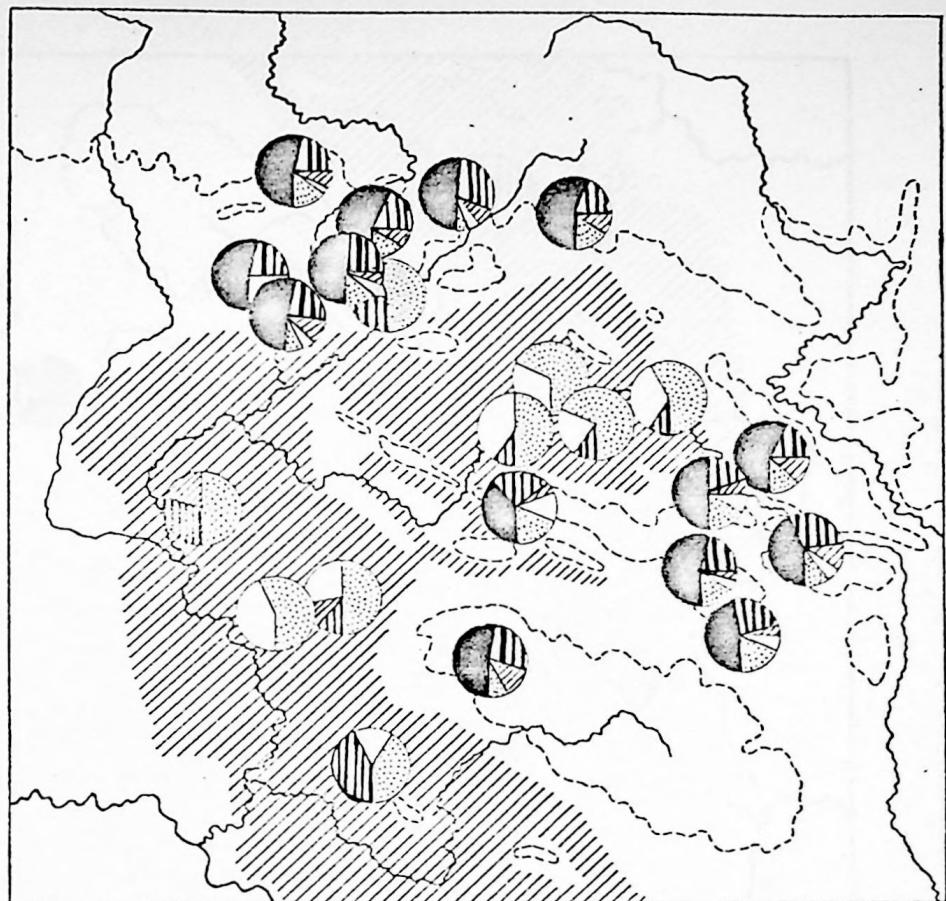


Figure 9.4 Relative proportions of different types in mollusc associations of the Atlantic period from the middle Elbe-Saale area. Source: Mania 1972, Fig.10.

Key: 1. Open landscape types

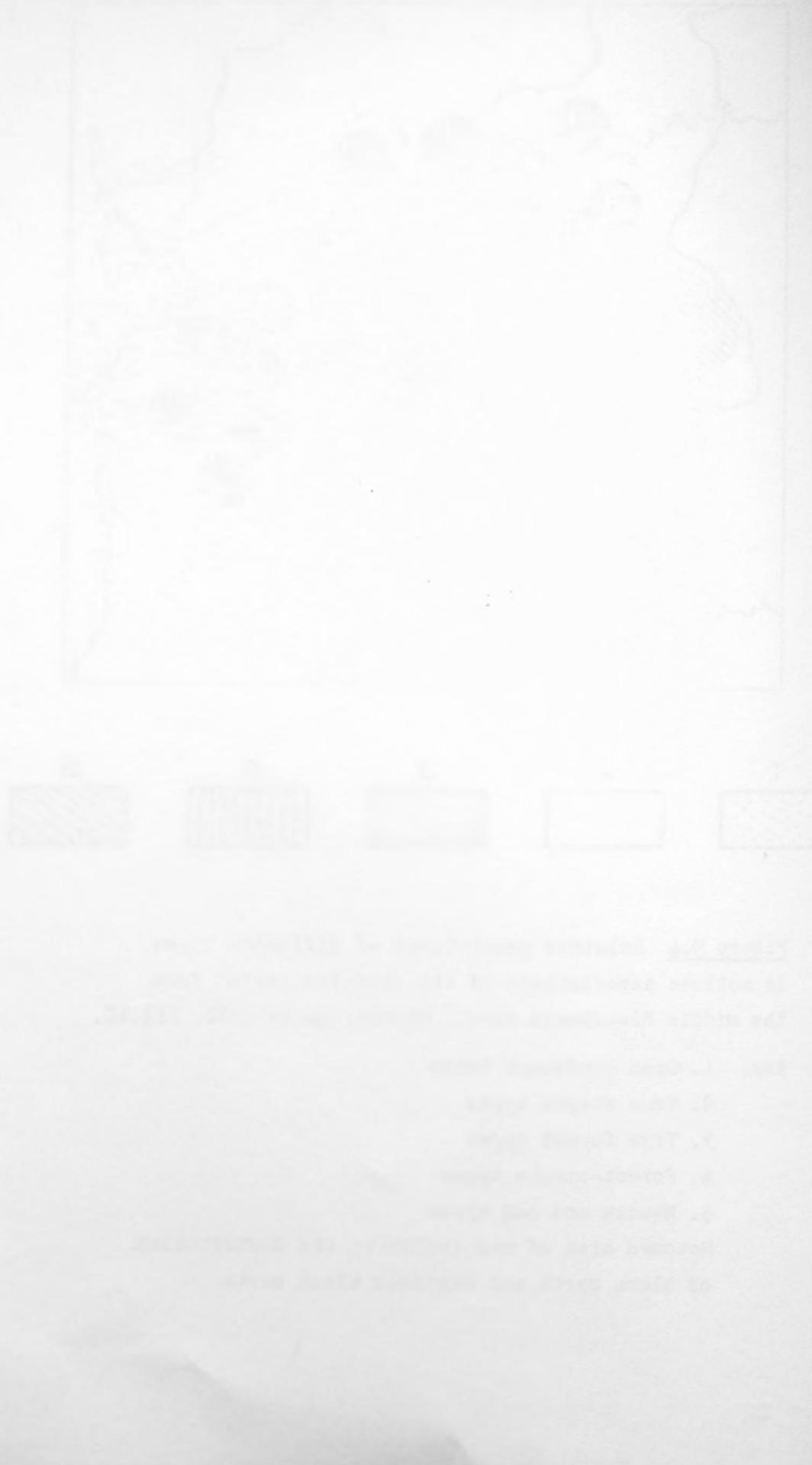
2. True steppe types

3. True forest types

4. Forest-steppe types

5. Meadow and bog types

Hatched area of map indicates the distribution of black earth and degraded black earth.



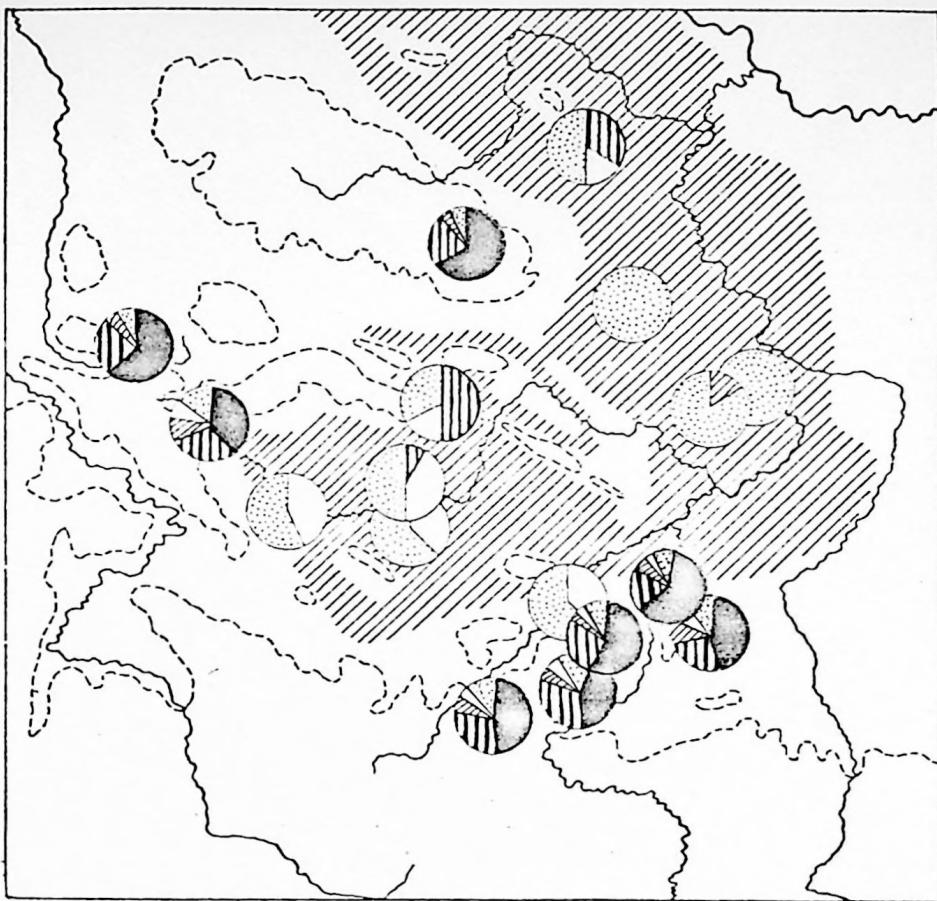


Figure 9.5 Relative proportions of different types in mollusc associations of the Sub-boreal period from the middle Elbe-Saale area. Source: Mania 1972, Fig.11.

- Key:
1. Open landscape types
 2. True steppe types
 3. True forest types
 4. Forest-steppe types
 5. Meadow and bog types

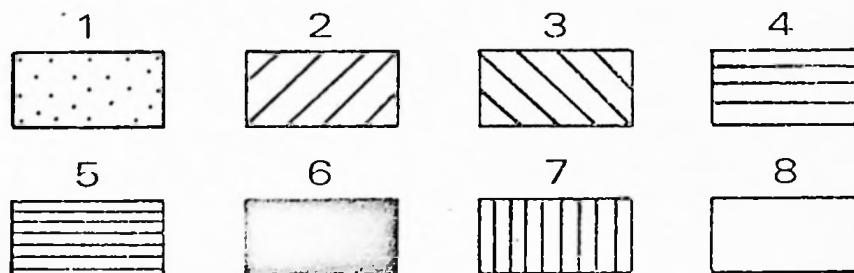
Hatched area of map indicates the distribution of black earth and degraded black earth.

Figure 9.6 The distribution of the later Neolithic cultures of the Saale area, Central Germany, in relation to soil types.

- a) The Baalberg group
- b) The Walternienburg-Bernburg group
- c) Corded Ware
- d) Bell Beakers

Source: Soil map: Preuss 1966

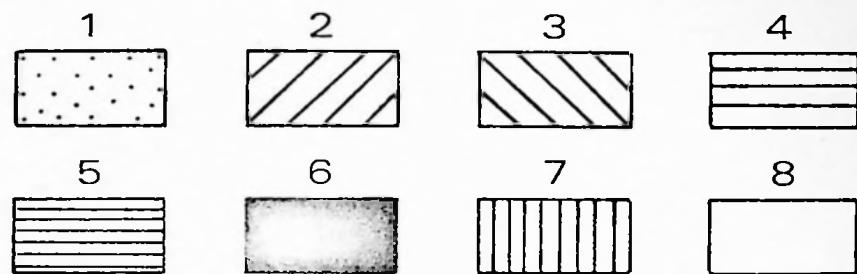
Distributions: Behrens 1973



- Key:
- 1. Black earth on loess
 - 2. Black earth on detritus marl
 - 3. Degraded black earth on loess
 - 4. Forest soils on loess
 - 5. Forest soils on silt and sand
 - 6. Moorland soils
 - 7. Rocky soils
 - 8. Wet soils



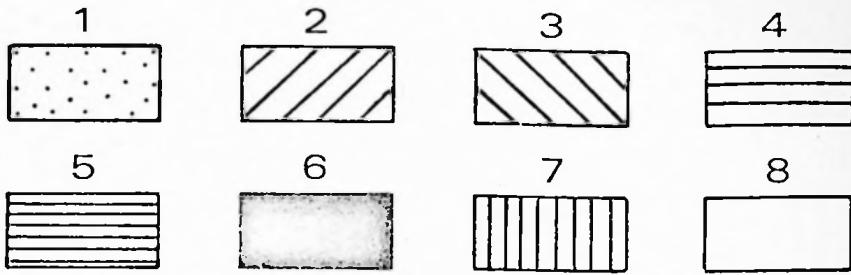
Figure 9.6a Baalberg group



- Key:
- 1. Black earth on loess
 - 2. Black earth on detritus marl
 - 3. Degraded black earth on loess
 - 4. Forest soils on loess
 - 5. Forest soils on silt and sand
 - 6. Moorland soils
 - 7. Rocky soils
 - 8. Wet soils



Figure 9.6b Walternienburg-Bernburg group



- Key:
1. Black earth on loess
 2. Black earth on detritus marl
 3. Degraded black earth on loess
 4. Forest soils on loess
 5. Forest soils on silt and sand
 6. Moorland soils
 7. Rocky soils
 8. Wet soils

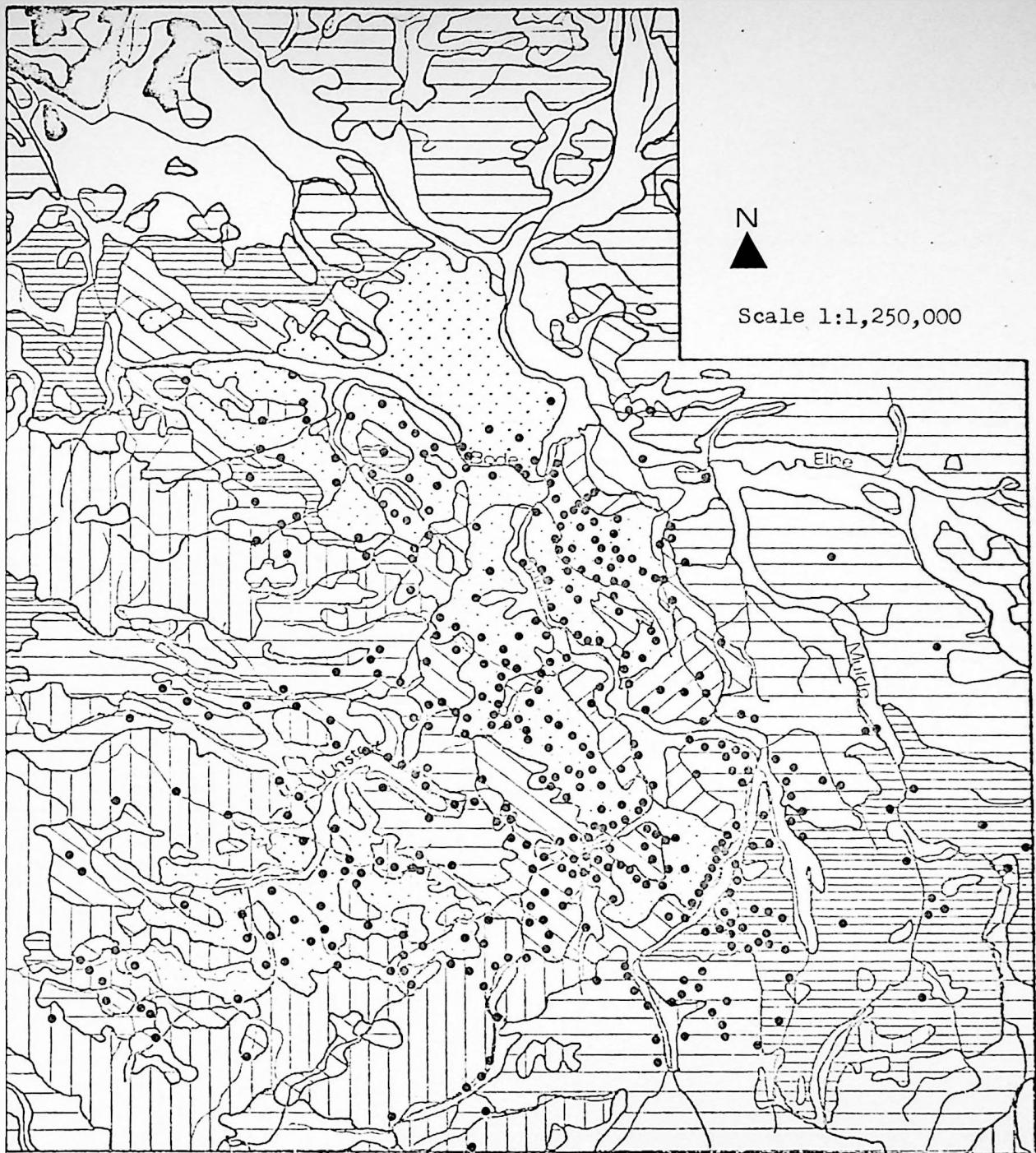
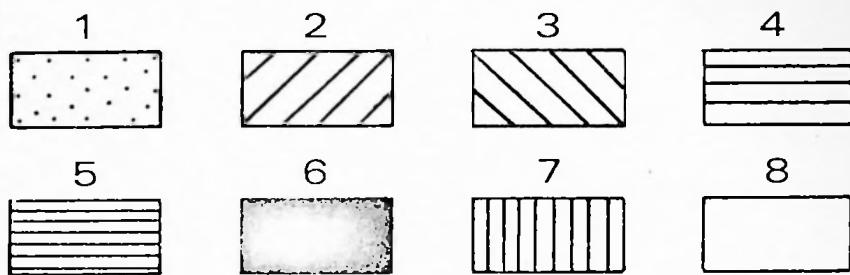


Figure 9.6c Corded Ware



- Key:
- 1. Black earth on loess
 - 2. Black earth on detritus marl
 - 3. Degraded black earth on loess
 - 4. Forest soils on loess
 - 5. Forest soils on silt and sand
 - 6. Moorland soils
 - 7. Rocky soils
 - 8. Wet soils

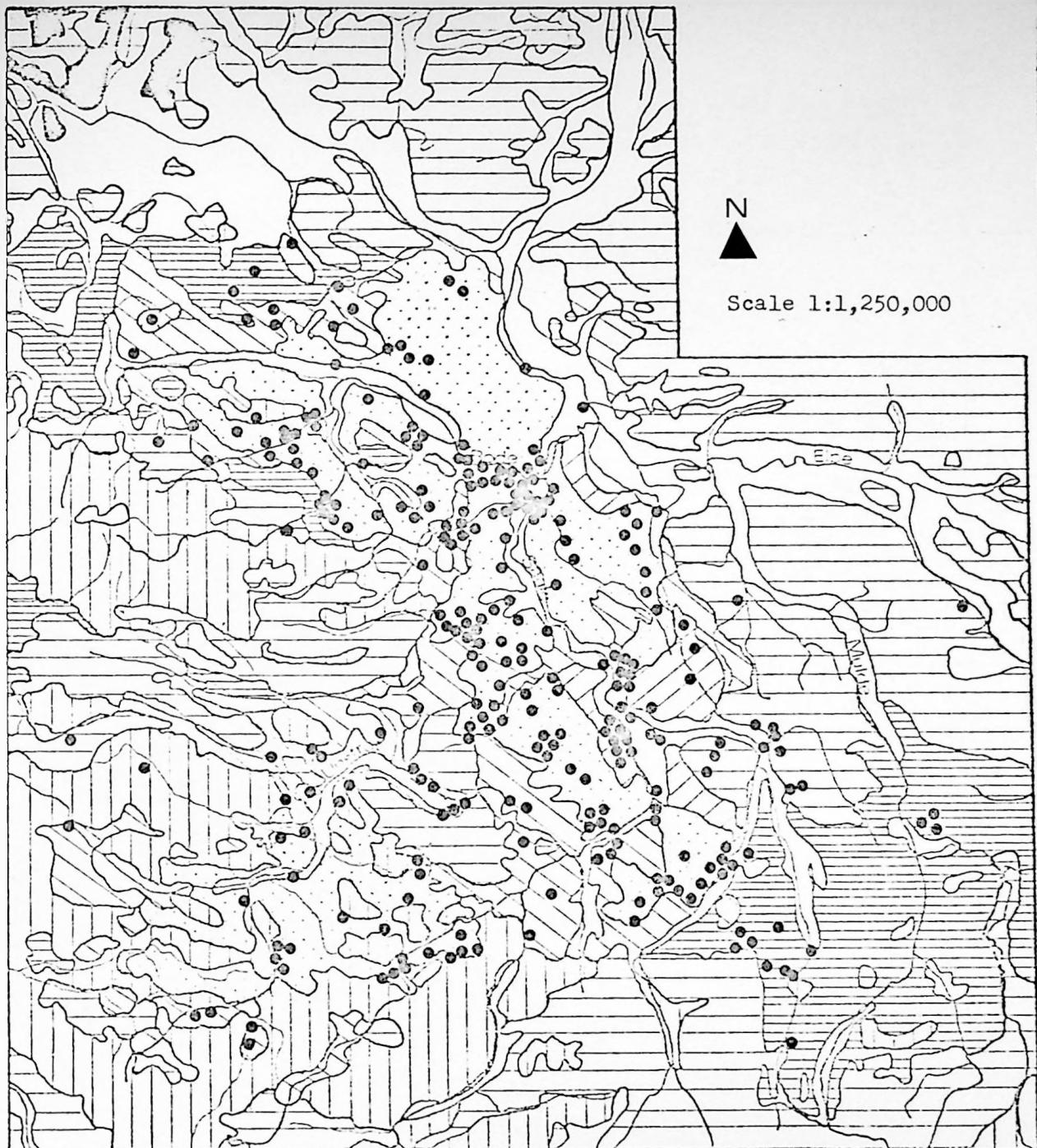


Figure 9.6d Bell Beakers

Figure 9.7 The distribution of the Eneolithic cultures of Bohemia and Moravia, in relation to soil types.

- a) TRB
- b) Rovnáč and Jevišovice B
- c) Corded Ware
- d) Bell Beakers

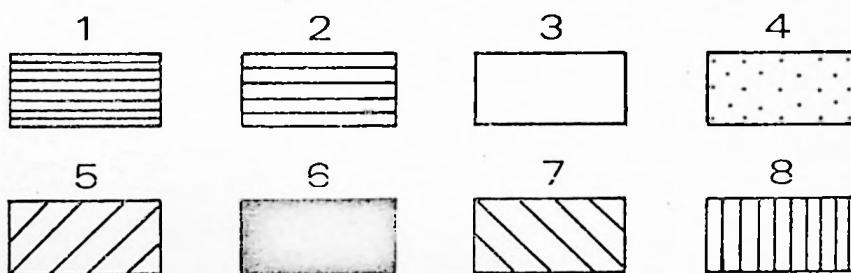
Sources: soil map: *Atlas Československé Socialistické Republiky*
Republiky, Prague 1966.

distributions: TRB: Preuss 1966

Rovnáč/Jevišovice B: Pleslová-Stiková 1966.

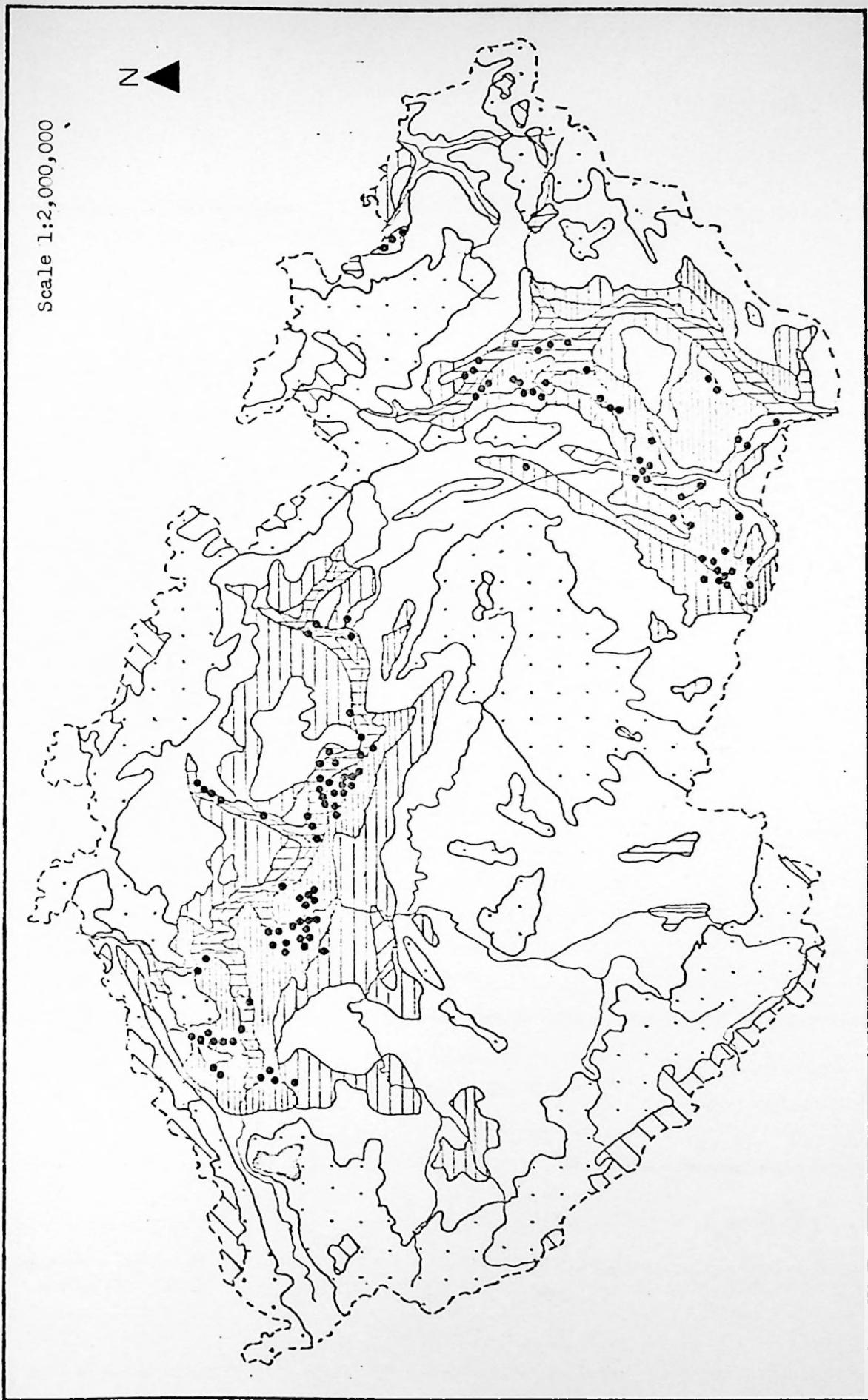
Corded Ware: Buchvaldek 1968

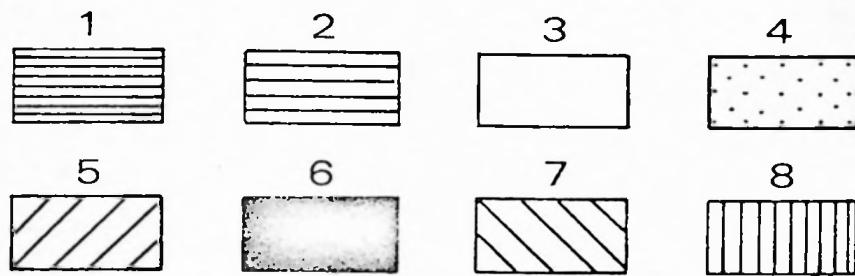
Bell Beakers: Hájek 1966a



- Key:
- 1. Chernozem
 - 2. Brown soils
 - 3. Podsolic soils and brown forest soils
 - 4. Brown forest soils of mountains.
 - 5. Podsolts of mountains
 - 6. Grey forest soils
 - 7. Rendzina soils
 - 8. Soils of flood plain

Figure 9.7a TRB culture





- Key:
- 1. Chernozem
 - 2. Brown soils
 - 3. Podsolic soils and brown forest soils
 - 4. Brown forest soils of mountains.
 - 5. Podsolts of mountains
 - 6. Grey forest soils
 - 7. Rendzina soils
 - 8. Soils of flood plain

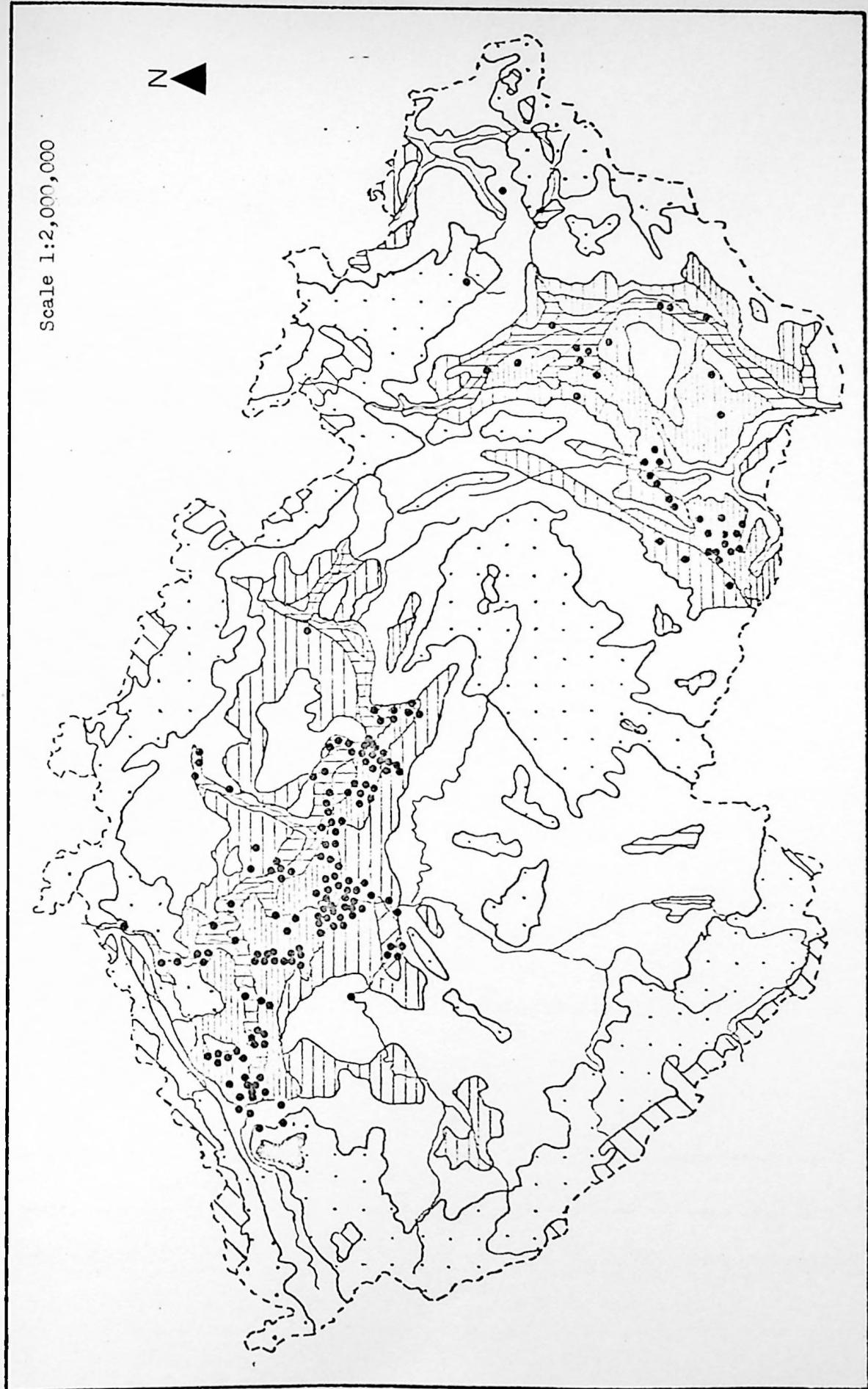
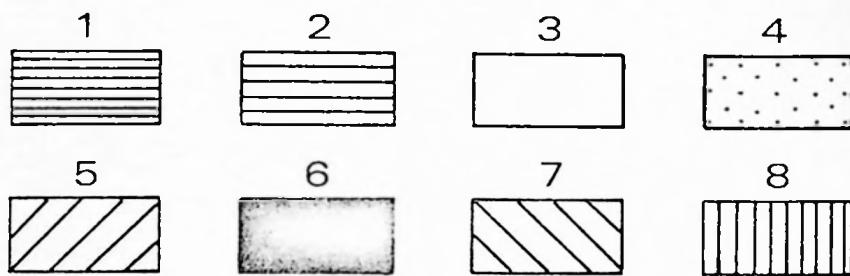


Figure 9.7b Rijmac and Jevišovice B groups



- Key:
1. Chernozem
 2. Brown soils
 3. Podzolic soils and brown forest soils
 4. Brown forest soils of mountains.
 5. Podsols of mountains
 6. Grey forest soils
 7. Rendzina soils
 8. Soils of flood plain

Scale 1:2,000,000

N ▲

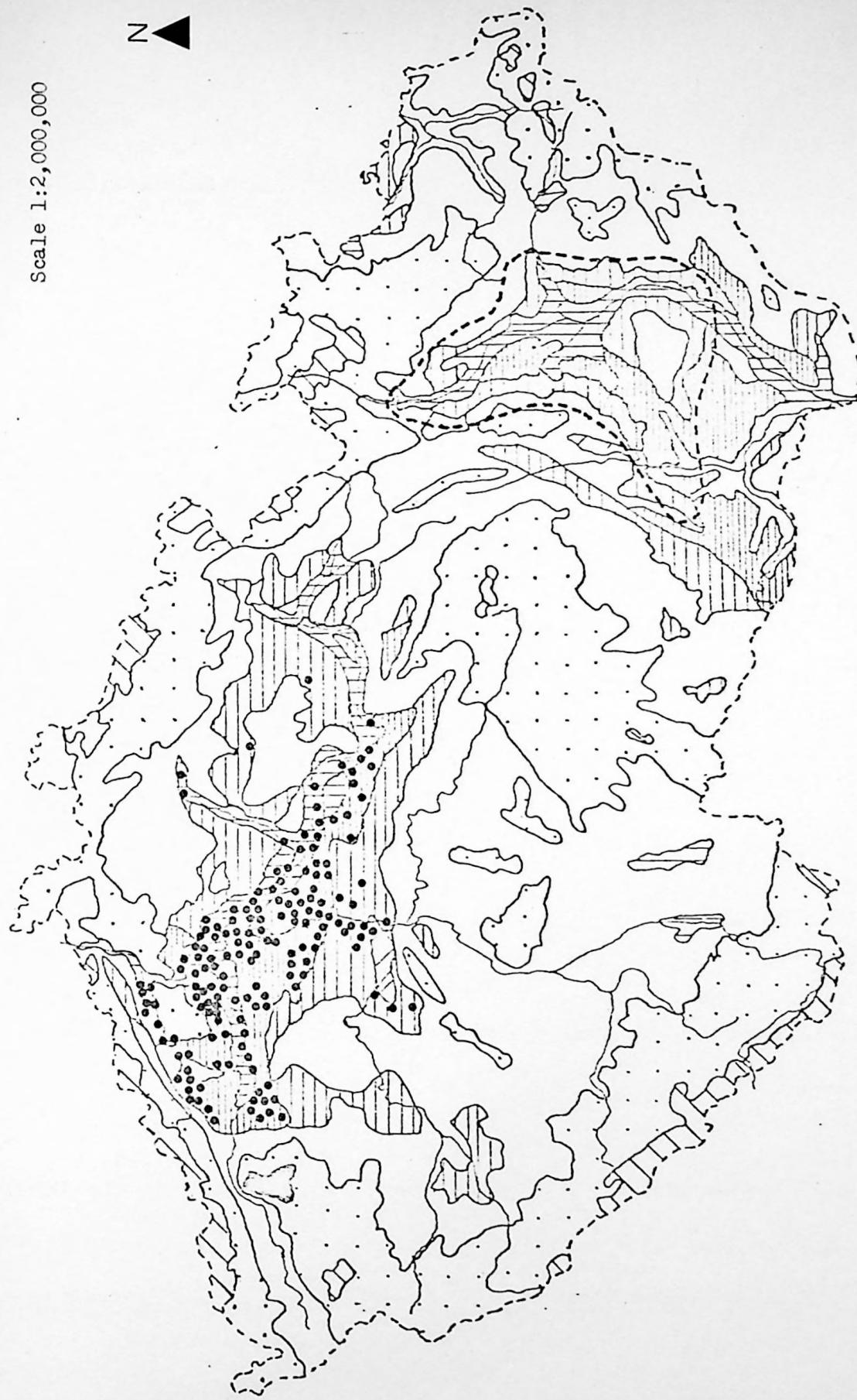
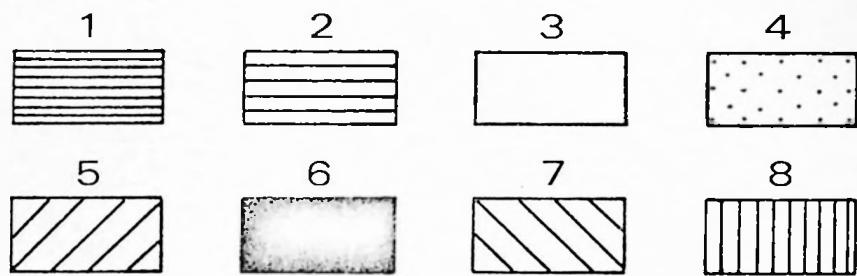


Figure 9.7c Corded Ware

Information on site locations unavailable for Moravia



- Key:
- 1. Chernozem
 - 2. Brown soils
 - 3. Podzolic soils and brown forest soils
 - 4. Brown forest soils of mountains.
 - 5. Podzols of mountains
 - 6. Grey forest soils
 - 7. Rendzina soils
 - 8. Soils of flood plain

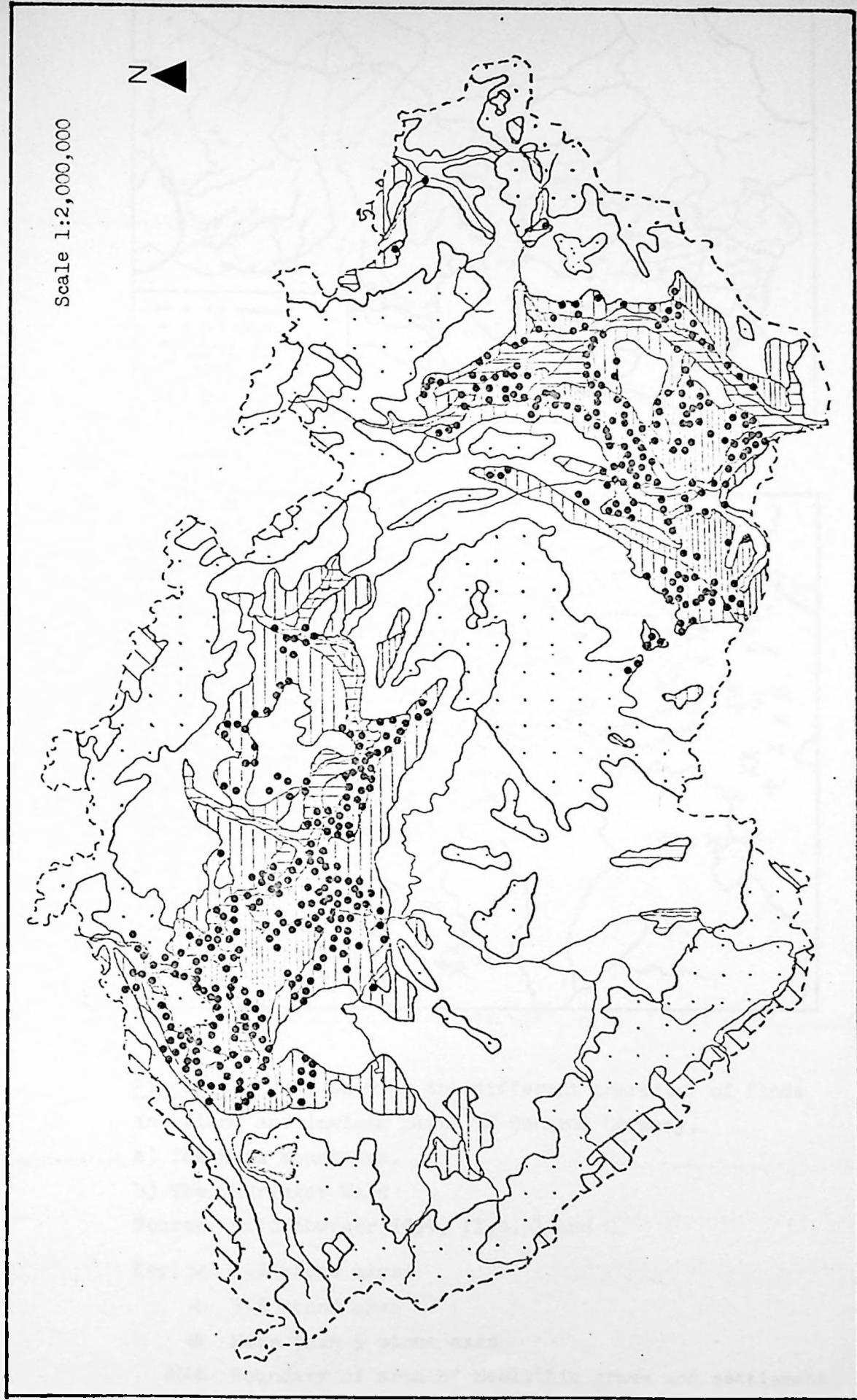
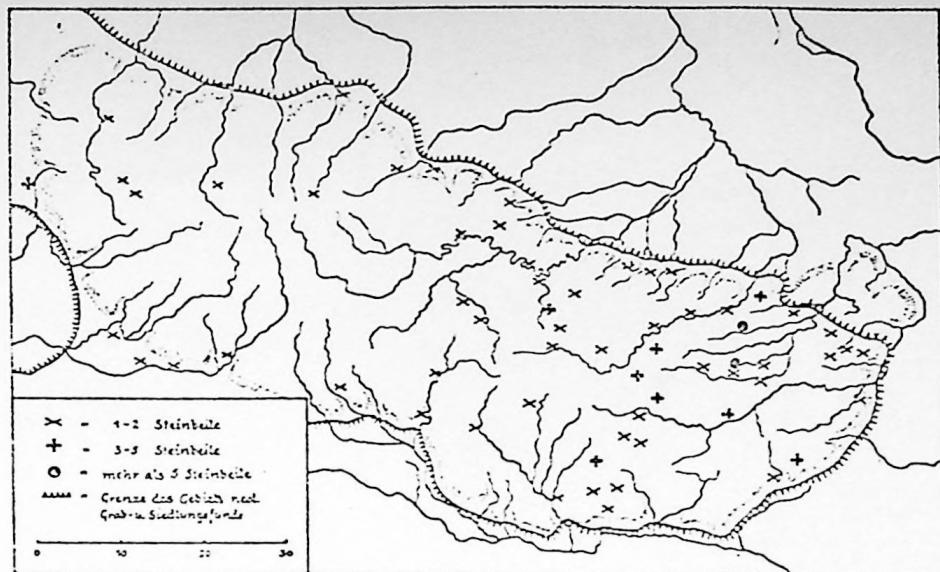
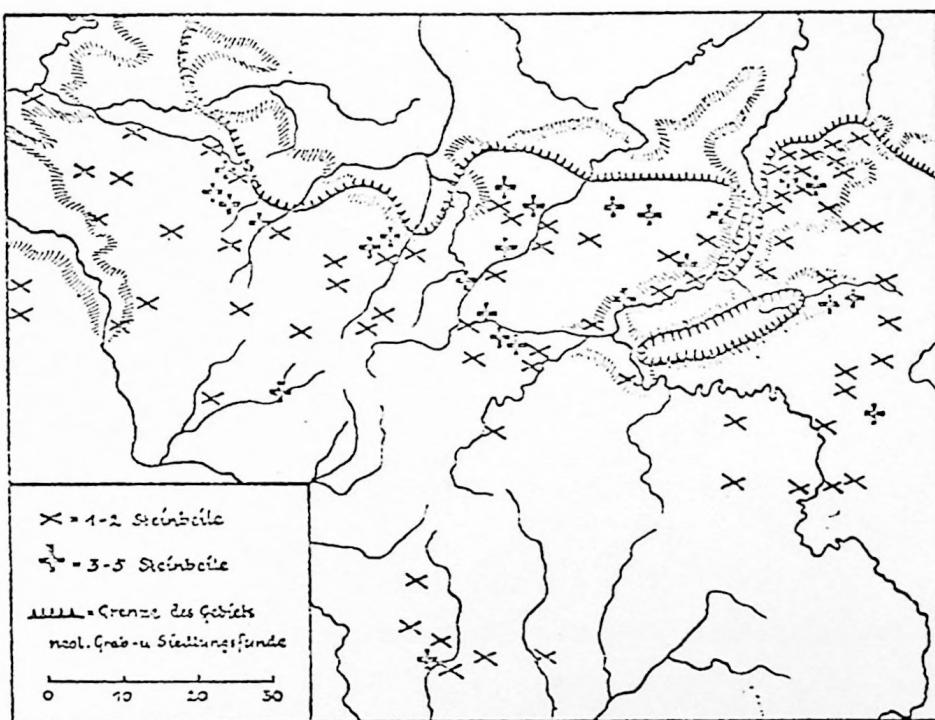


Figure 9.7d Bell Beaker





a



b

Figure 9.8 Map showing the different character of finds in upland and lowland parts of Central Germany.

a) The Harz mountains.

b) The Thüringer Wald

Source: Mildenberger 1959, figs. 1 and 2.

Key: **X** 1-2 stone axes

+ 3-5 stone axes

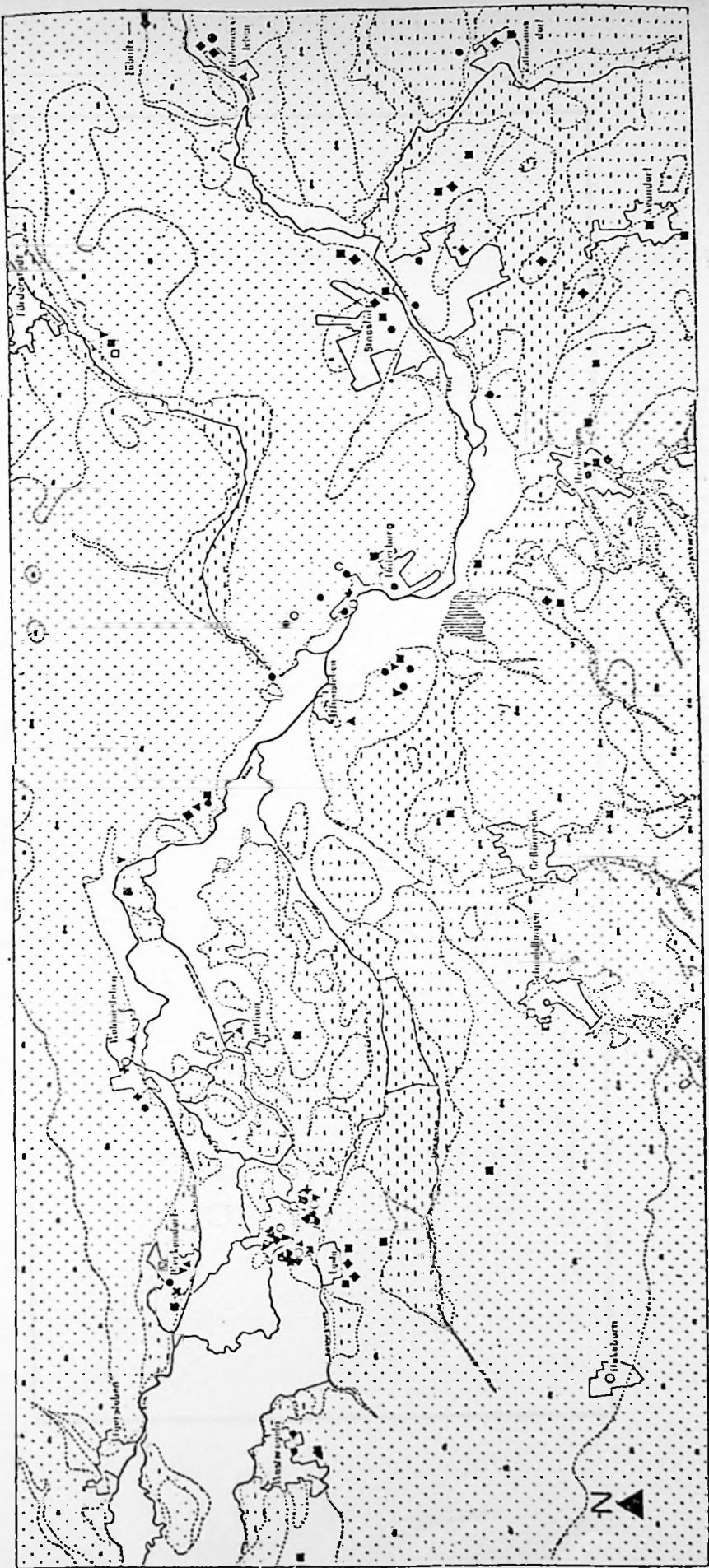
● More than 5 stone axes

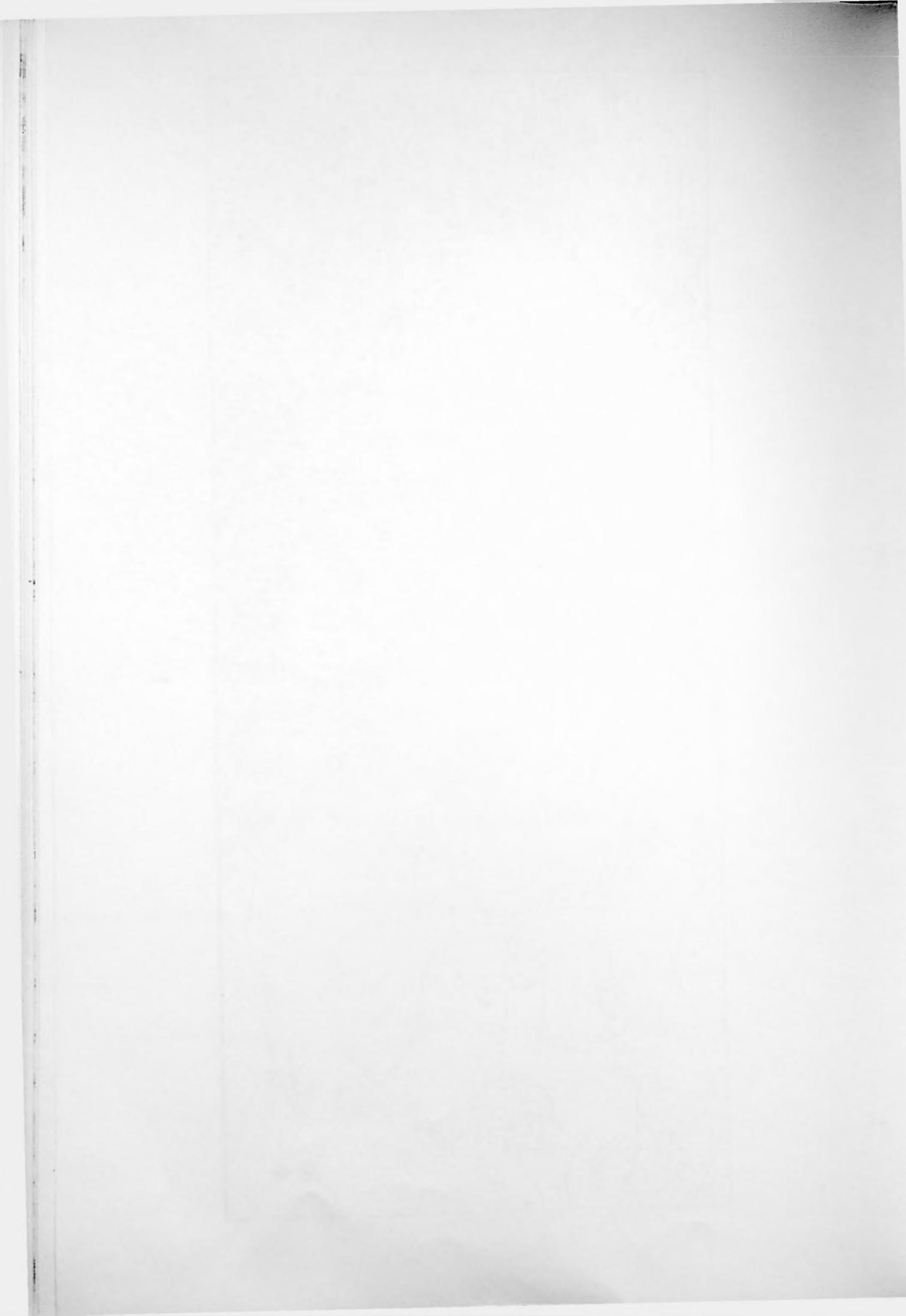
AAAA Boundary of area of Neolithic grave and settlement finds.

Figure 9.9 Distribution of Neolithic sites on
the lower Bode, Central Germany.
Source: Kaufmann 1967, Beilage 1.

Key

- [Loess pattern] Loess
- [Degraded loess pattern] Degraded loess
- [Loess on shelly limestone pattern] Loess on shelly limestone
- [Loess on new red sandstone pattern] Loess on new red sandstone
- [Loess on sandy and marly glacial sediments pattern] Loess on sandy (ds) and marly (dm) glacial sediments
- [Chalky humus pattern] Chalky humus
- [Chalky humus on loess pattern] Chalky humus on loess
- [Flood plain soils pattern] Flood plain soils
- [Holocene limestone pattern] Holocene limestone
- Linearbandkeramik
- Stichbandkeramik
- ✖ Rössen
- ✗ Gatersleben
- ▲ Baalberg
- ▼ Walternienburg-Bernburg
- Corded Ware
- Schönfeld-Ammensleben
- ◆ Bell Beaker
- △ Alttiefstichkeramik
- ▽ Globular Amphora





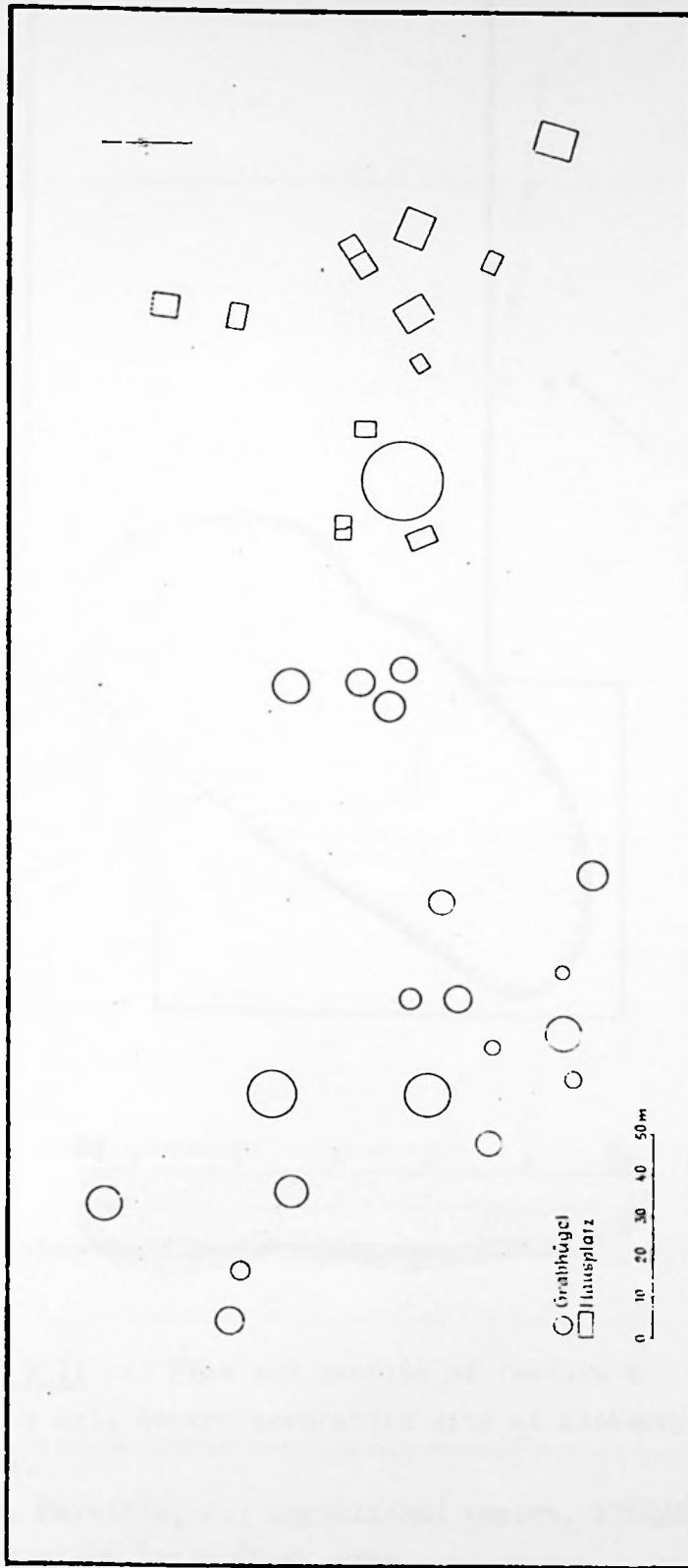
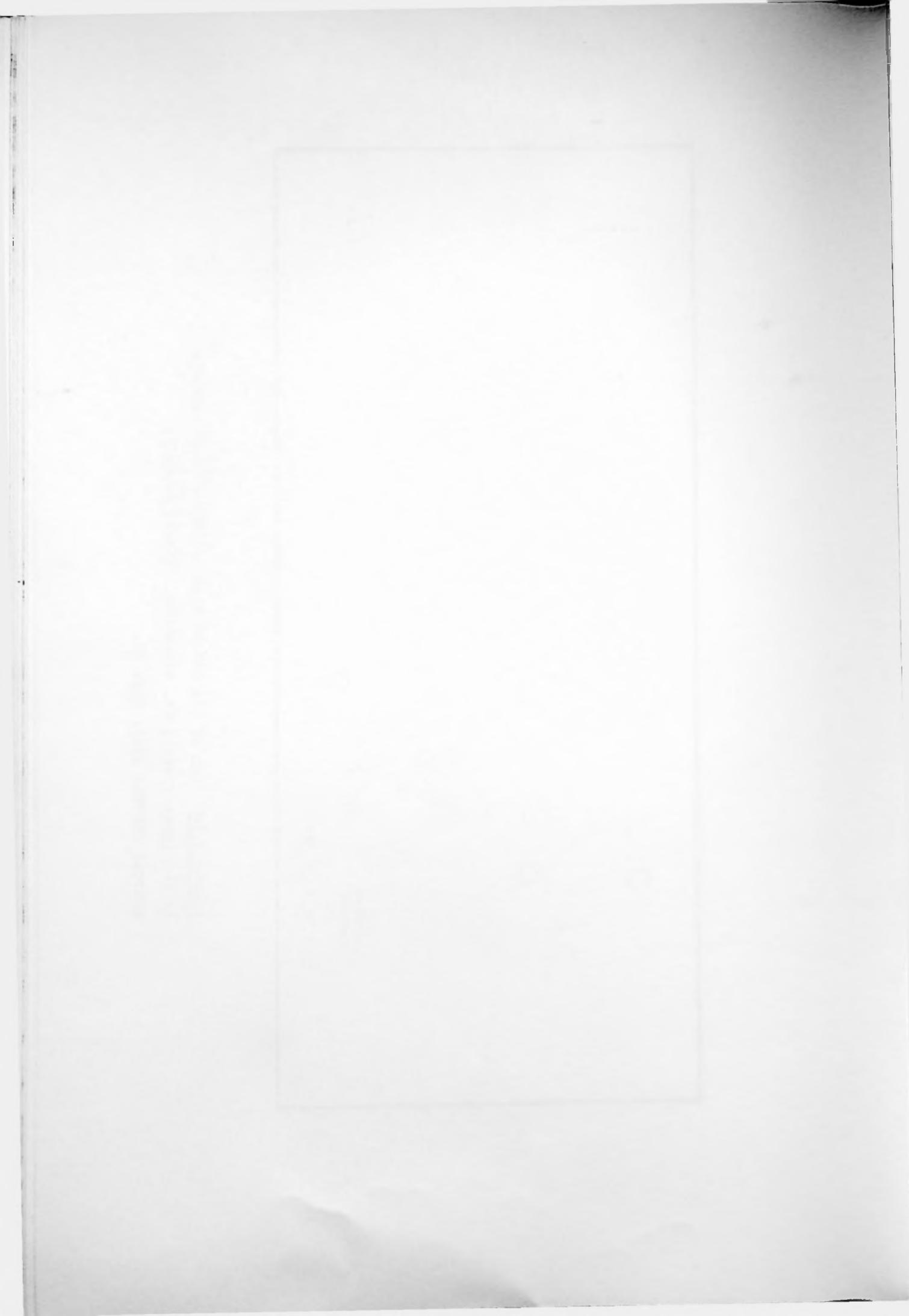


Figure 9.10 Plan of the Corded Ware settlement and cemetery
in the Lucka Forest, Kr. Altenburg, Central Germany.

Source: Behrens 1973, fig. 82.



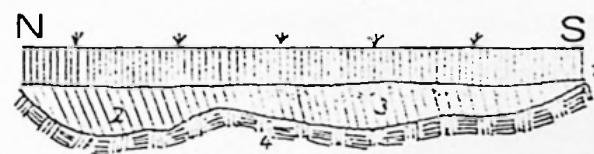
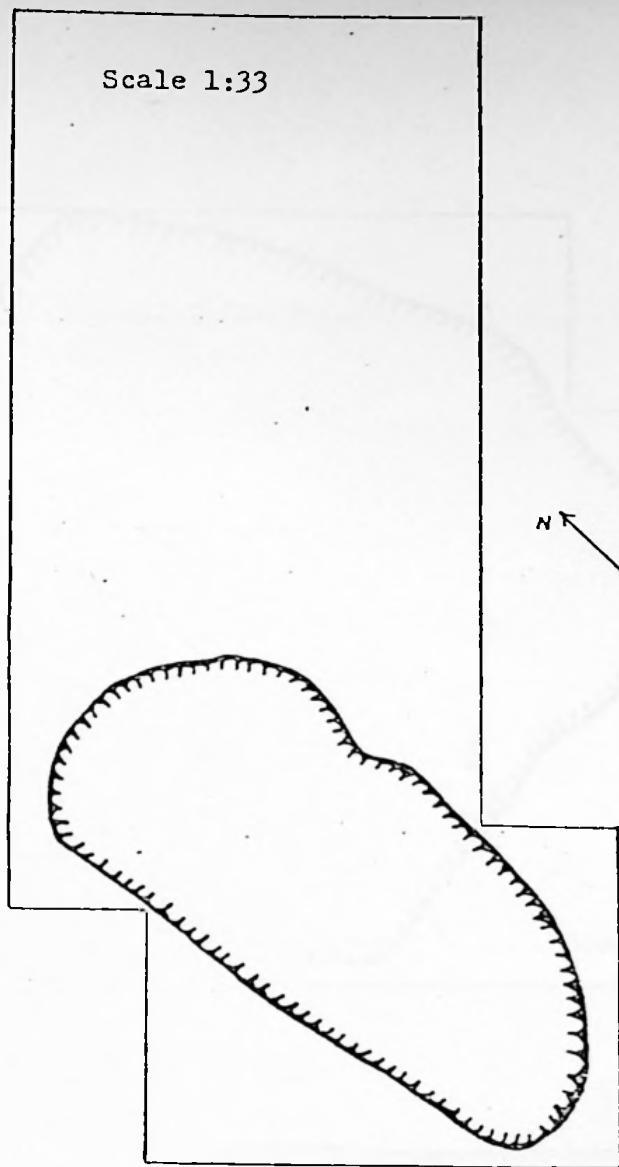
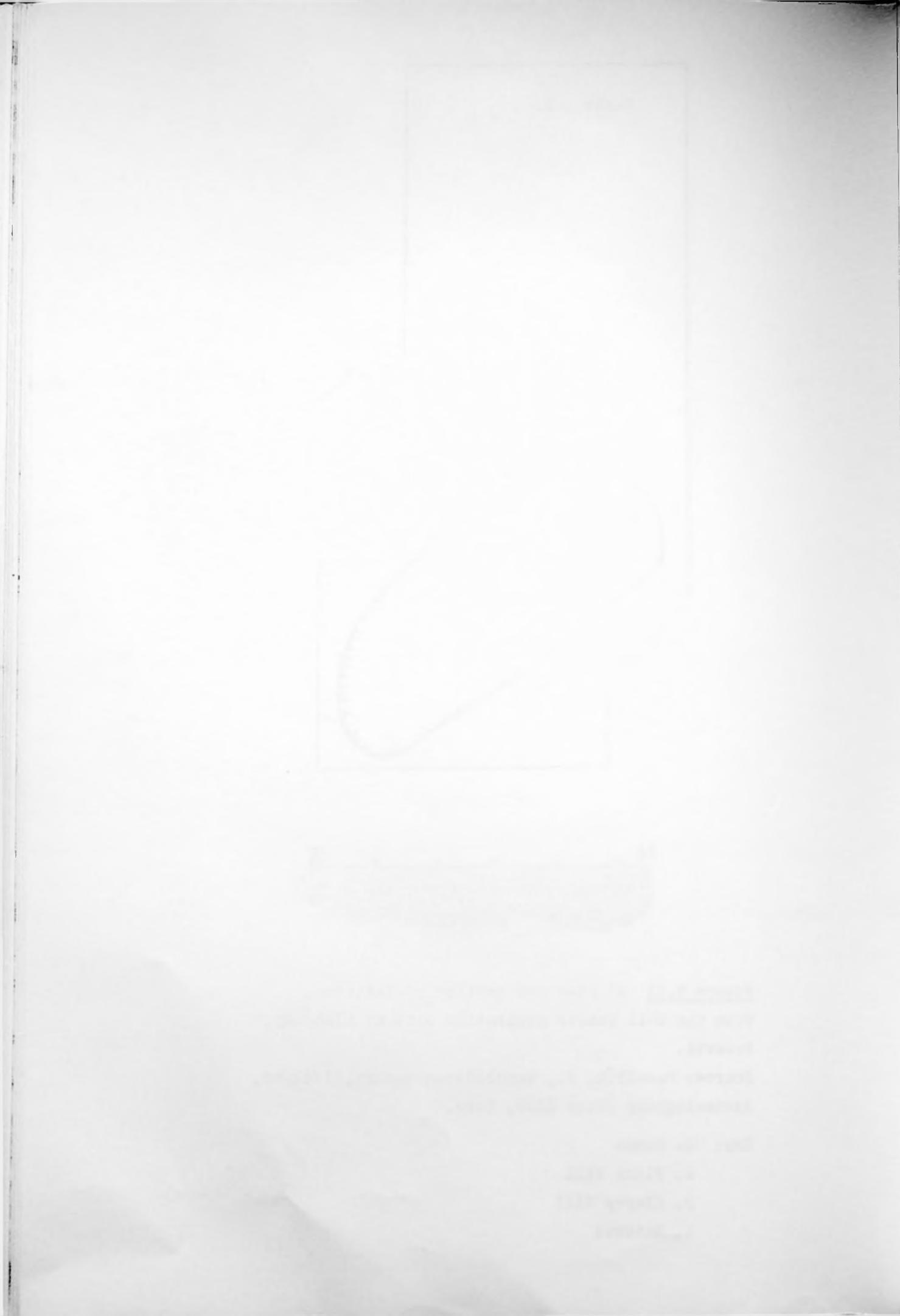


Figure 9.11 a) Plan and section of feature 4
from the Bell Beaker occupation site at Klobouky,
Moravia.

Source: Pavelčík, J., unpublished report, 1762/68,
Archeologický Ústav ČSAV, Brno.

- Key:
- 1. Humus
 - 2. Black fill
 - 3. Clayey fill
 - 4. Natural



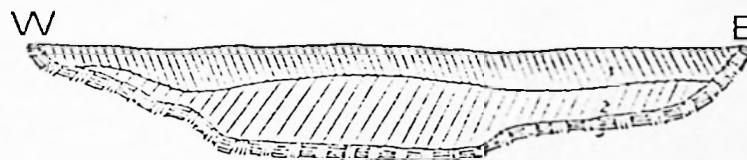
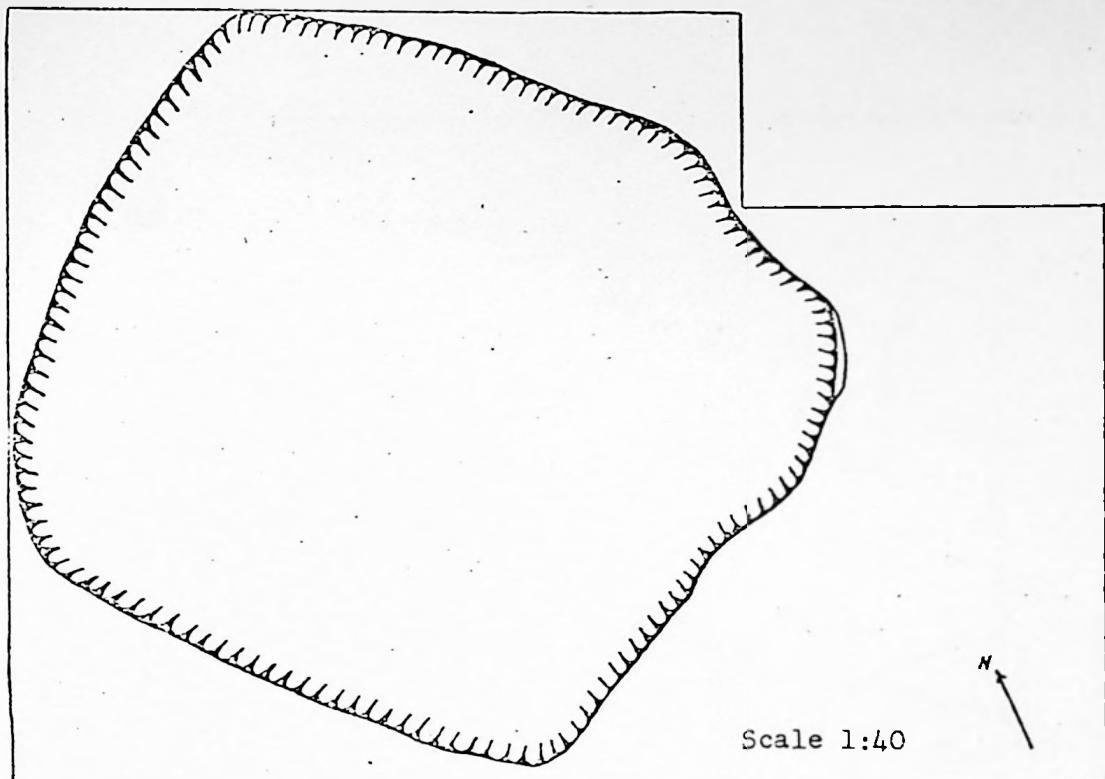


Figure 9.11 b) Plan and section of feature 6
from the Bell Beaker occupation site at Klobouky,
Moravia.

Source: Pavelcík J., report number 1762/68, Archeologicky
Ústav ČSAV, Brno.

- Key:
1. Black layer
 2. Grey layer
 3. Natural



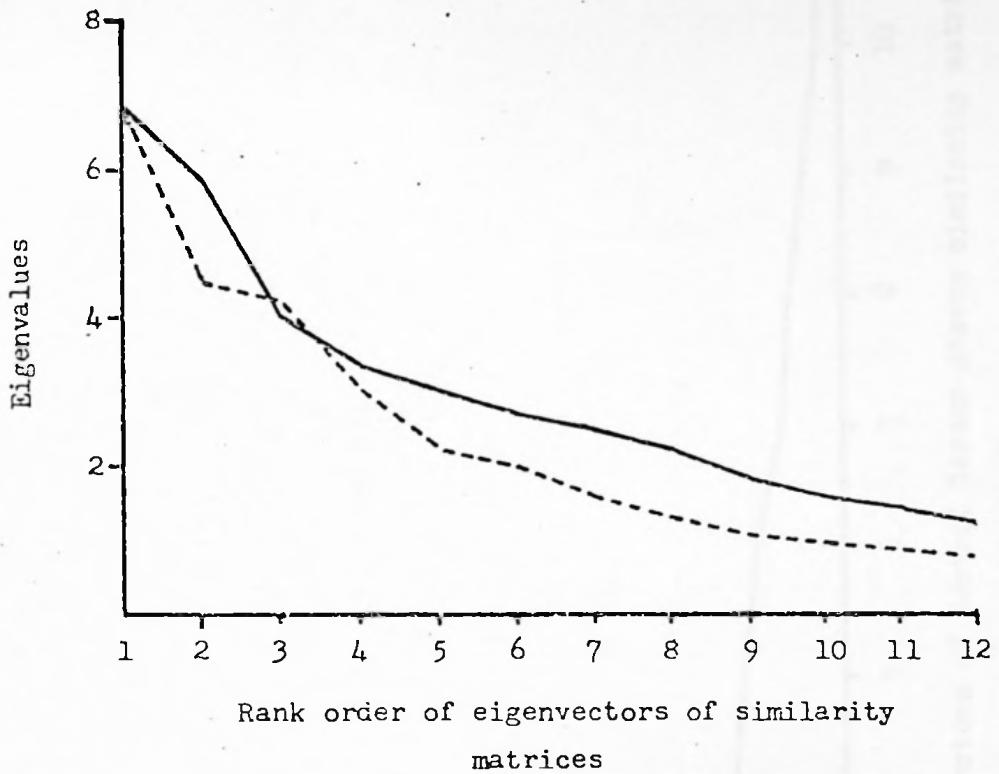
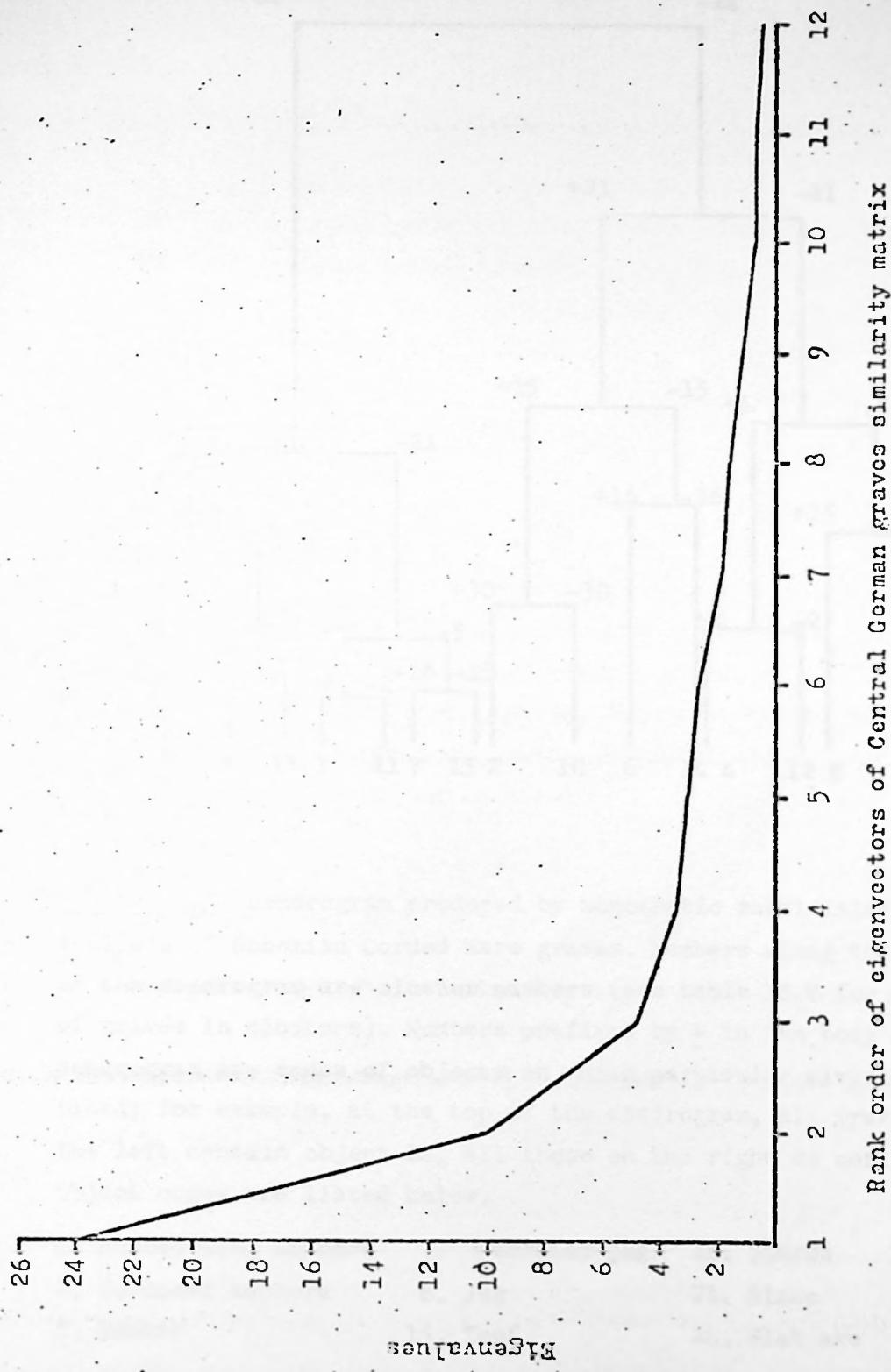


Figure 10.1 Graph of eigenvectors against their corresponding eigenvalues, from principal coordinates analyses of the Vikletice and Bohemian Corded Ware similarity matrices.

Key: —— Bohemian Corded Ware

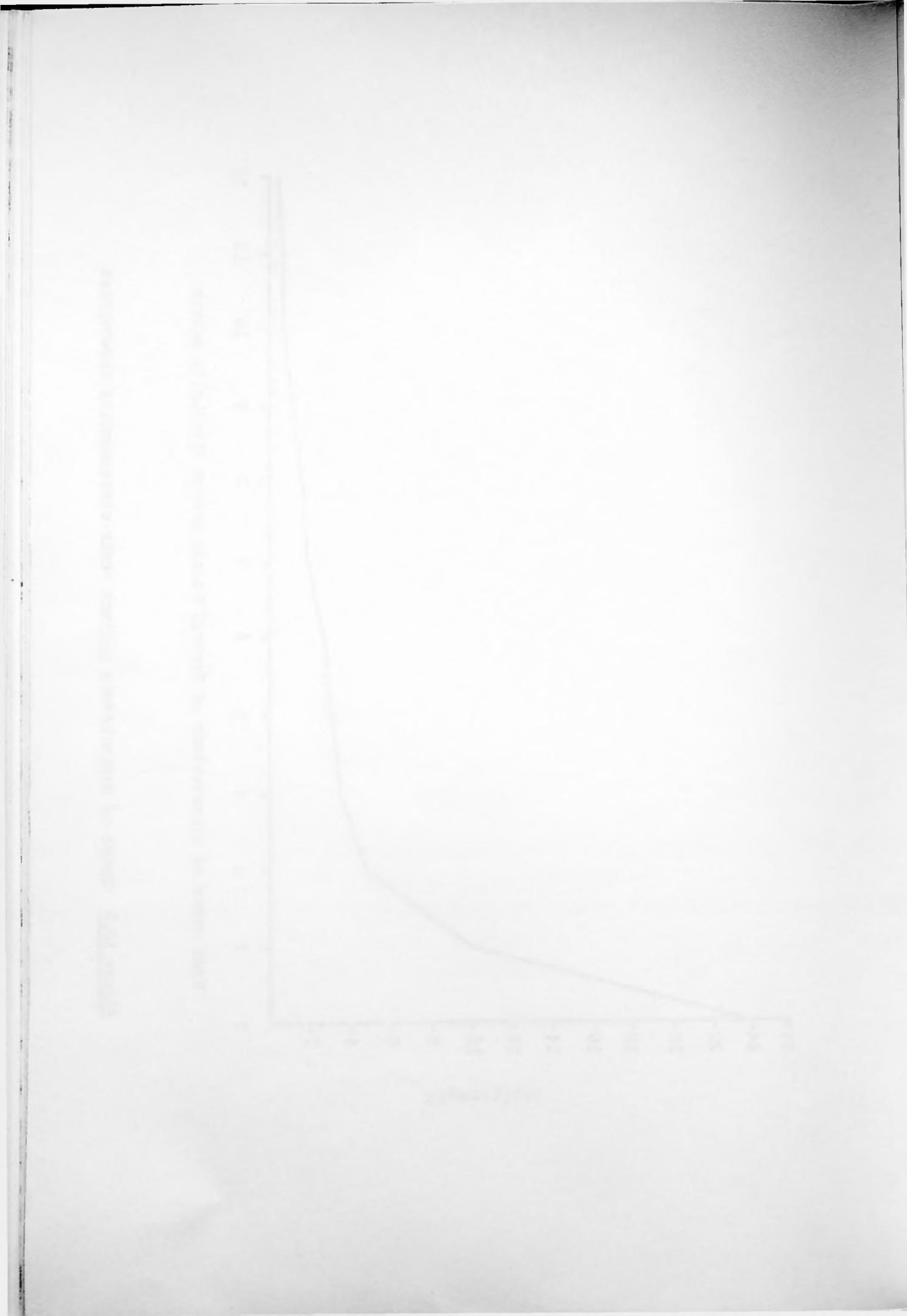
----- Vikletice





Rank order of eigenvectors of Central German Graves similarity matrix

Figure 10.2 Graph of eigenvectors against their corresponding eigenvalues



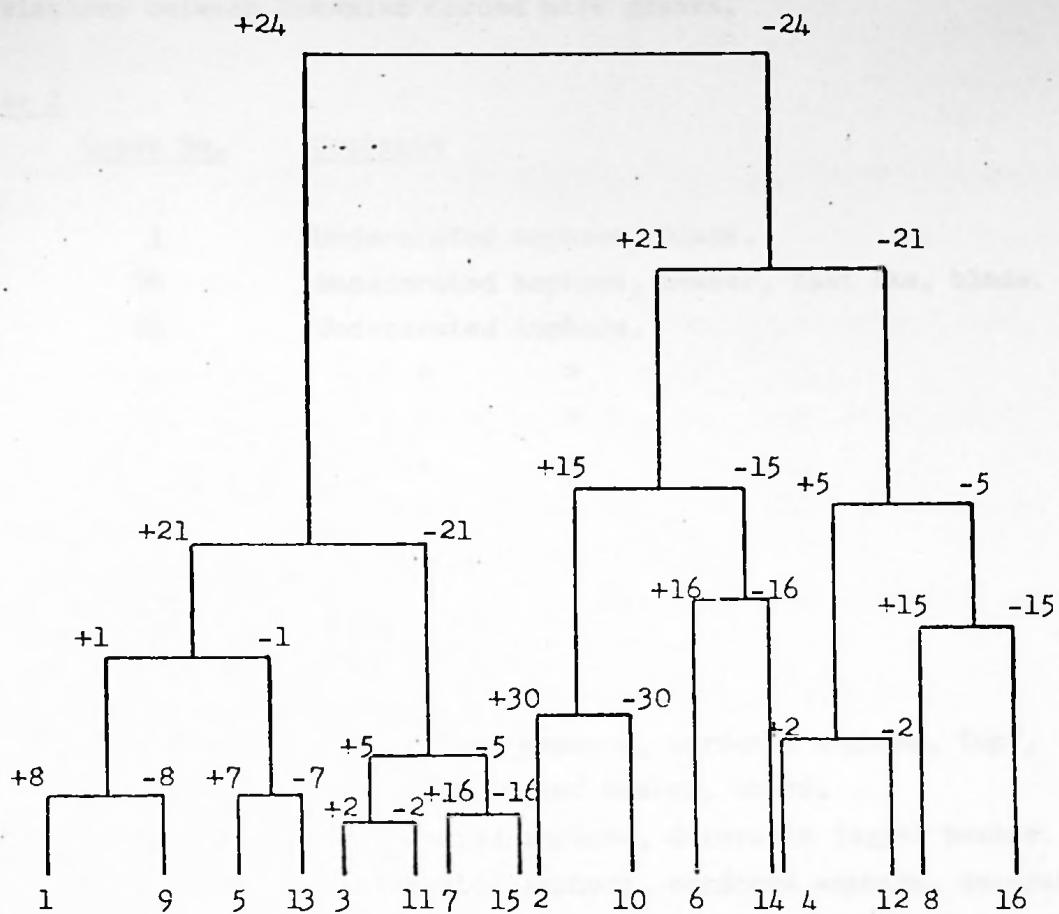


Figure 10.3 Dendrogram produced by monothetic subdivisive cluster analysis of Bohemian Corded Ware graves. Numbers along the bottom of the dendrogram are cluster numbers (see table 10.V for details of graves in clusters). Numbers prefixed by + in the body of the dendrogram are codes of objects on which particular divisions are based; for example, at the top of the dendrogram, all graves on the left contain object 24, all those on the right do not.

Object codes are listed below:

- | | | | |
|------------------------|------------------|--------------|------------|
| 1. Undecorated amphora | 7. Decorated jug | 16. Sherds | 30. Copper |
| 2. Cordoned amphora | 8. Jug | 21. Blade | |
| 5. Beaker | 15. Topf | 24. Flat axe | |

and the first time I have seen it. It is a very
handsome specimen and I am sure it will
make a good addition to your collection.
I hope you will let me know when you
will be able to get it. I will be happy to
send it to you by express or by mail.
I hope you will let me know when you
will be able to get it. I will be happy to
send it to you by express or by mail.

Figure 10.4 Dendrogram produced by average-link cluster analysis of the relations between Bohemian Corded Ware graves.

Cluster 1

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	1	Undecorated amphora, blade.
RHS	76	Undecorated amphora, beaker, flat axe, blade.
RHS	26	Undecorated amphora.
LHS	31	" "
LHS	62	" "
LHS	93	" "
LHS	100	" "

Cluster 2

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	18	Undecorated amphora, cordoned amphora, Topf, decorated lugged beaker, sherd.
-	34	Undecorated amphora, decorated lugged beaker.
RHS	51	Undecorated amphora, cordoned amphora, decorated lugged beaker.

Cluster 3

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	19	Undecorated amphora, jug, perforated teeth, copper, blade.
-	67	Incised amphora, undecorated amphora, amphora, 3 jugs, perforated shell, perforated teeth, copper, blade.
LHS	27	Undecorated amphora, 2 jugs, cylindrical vessel, blade, animal bones.
LHS	35	Undecorated amphora, decorated amphora, jug, Topf, blade.
LHS	70	Undecorated amphora, 2 jugs, Topf, blade.
LHS	95	Undecorated amphora, cordoned amphora, ribbed jug, blade.
RHS	21	Undecorated amphora, jug, decorated lugged beaker, mace head, flat axe, blade.



Fig. 10.4 (continued)

Cluster 3 (continued)

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	48	Undecorated amphora, jug, decorated lugged beaker, undecorated lugged beaker, flat axe, blade, spindle whorl.
LHS	104	Undecorated amphora, jug, undecorated lugged beaker, flat axe, blade.
RHS	64	Undecorated amphora, jug, undecorated lugged beaker.
LHS	40	Undecorated amphora, Topf, small handled Topf, grindstone, blade.
RHS	46	Undecorated amphora, Topf, lugged beaker, sherd, blade.
RHS	84	Undecorated amphora, Topf, sherd, blade.

Cluster 4

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	22	Undecorated amphora, jug, Topf, small 2-lugged Topf, copper.
LHS	101	Cordoned amphora, jug, Topf, cylindrical vessel, small 2-lugged Topf, copper.
RHS	105	Cordoned amphora, 3 small 2-lugged Töpfe, undecorated amphora, decorated jug, 2 jugs, 2 Töpfe, cylindrical vessel, decorated shell, copper, blade.
-	99	2 jugs, Topf, decorated shell, copper, blade.
LHS	39	Cordoned amphora, jug, Topf, undecorated handled beaker, small handled Topf, clay disc, blade.

Other

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	20	Topf.
LHS	69	Undecorated amphora, decorated jug, Topf, animal bones.

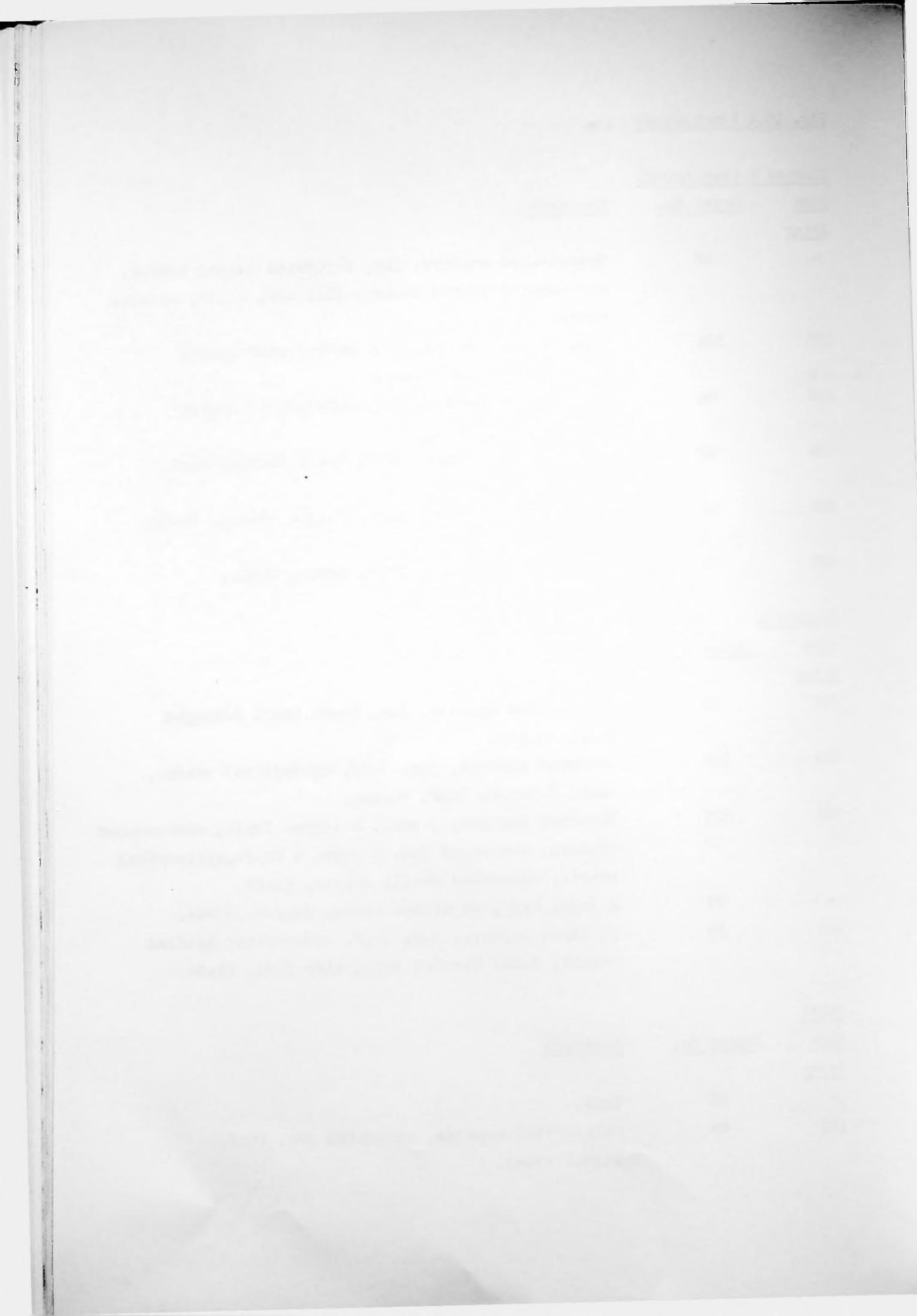


Fig. 10.4 (continued)

Cluster 5

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	73	Cordoned amphora, Topf, undecorated lugged beaker, decorated shell, perforated shell, perforated teeth.
-	74	Cordoned amphora, Topf, undecorated lugged beaker, cylindrical vessel, decorated shell.
LHS	79	Cordoned amphora, amphora, beaker, Topf, sherd.
-	97	Cordoned amphora, beaker, Topf, copper.

Cluster 6

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	41	Undecorated amphora, cylindrical vessel.
-	53	Cylindrical vessel.
RHS	42	Small lugged Topf, cylindrical vessel, polypod bowl.
-	44	Decorated amphora, Topf, cylindrical vessel, blade.
LHS	57	Amphora, beaker, cylindrical vessel, decorated shell, blade.

Cluster 7

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	2	Beaker, decorated jug.
RHS	16	Cordoned amphora, beaker, decorated jug.
LHS	72	Cordoned amphora, decorated jug.
-	94	2 cordoned amphorae, decorated jug, blade.

Other

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	3	Decorated jug, lugged bowl, 2 basins, grindstone, bone point, blade.



Fig. 10.4 (continued)

Cluster 8

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	6	2 flat axes, bone chisel.
RHS	7	4 flat axes, bone disc, blade.
LHS	8	Flat axe, blade.
RHS	45	Amphora, beaker, undecorated lugged beaker, flat axe, blade.
-	78	Lugged beaker, flat axe, blade.
RHS	75	Undecorated amphora, undecorated lugged beaker, hammer axe, flat axe, blade.
RHS	23	Cordoned amphora, 2 flat axes.
RHS	103	Cordoned amphora, beaker, mace head, flat axe, blade.
RHS	10	Decorated jug, decorated lugged beaker, cylindrical vessel, 2 flat axes, blade.
-	47	Undecorated amphora, decorated jug, decorated lugged beaker, flat axe, blade.
RHS	88	Undecorated amphora, decorated jug, decorated lugged beaker, hammer-axe, flat axe, blade.

Cluster 9

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	9	Jug, hammer-axe, blade.
RHS	55	Jug, hammer-axe, blade, animal bones.
RHS	96	Hammer-axe, blade.
-	33	Hammer-axe.

Cluster 10

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	11	Beaker, hammer-axe, flat axe.
-	43	Cordoned amphora, beaker, hammer-axe, flat axe.
RHS	92	Cordoned amphora, beaker, flat axe.



Fig. 10.4 (continued)

Cluster 10 (continued)

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	66	Cordoned amphora, beaker, undecorated lugged beaker, hammer-axe, flat axe, grindstone.
LHS	15	Cordoned amphora, beaker, hammer-axe.
-	68	2 cordoned amphorae, 2 beakers, hammer-axe, blade.
-	98	Cordoned amphora, beaker, shard, hammer-axe, blade.
RHS	65	Cordoned amphora, undecorated lugged beaker, hammer-axe.
RHS	52	Undecorated amphora, beaker, hammer-axe, mace head.
RHS	13	Sherds, hammer-axe, flat axe.
RHS	24	Undecorated amphora, 2 flat axes.
RHS	29	Cordoned amphora, undecorated jug, hammer-axe, flat axe.
RHS	28	Amphora, beaker, 2 decorated jugs, hammer-axe, flat axe.

Cluster 11

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	17	Sherds, blade.
-	59	" "
LHS	36	Sherds, blade, animal bones.
RHS	56	Sherds, blade, mace head.
LHS	77	Cordoned amphora, sherds, blade.
LHS	102	Jug, small 2-lugged Topf, sherds, blade.
RHS	49	Bone pin, blade.
-	108	Blade.
-	82	Sherds, lugged beaker.

Cluster 12

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	25	Beaker, perforated shell disc, perforated teeth, blade.

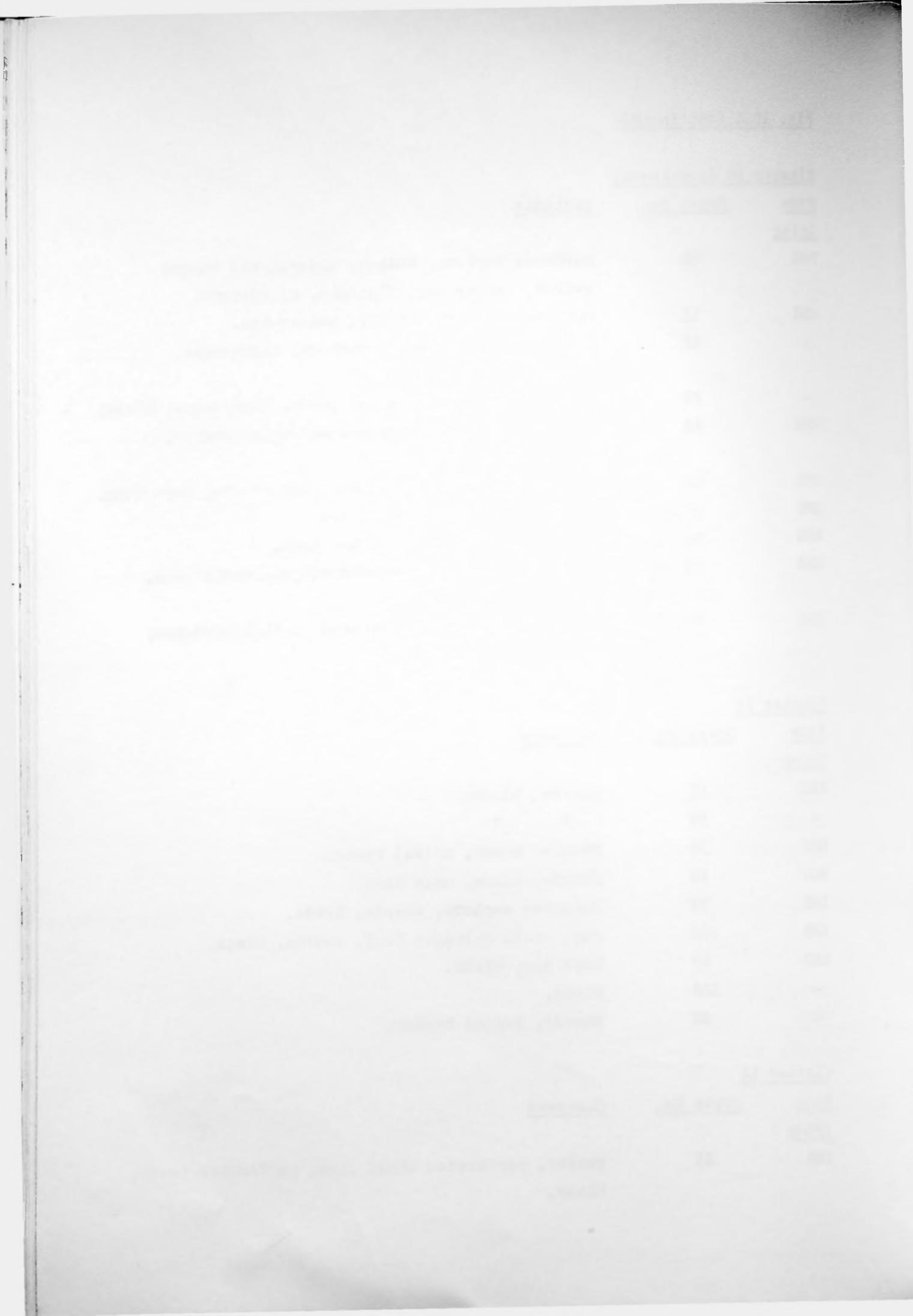


Fig. 10.4 (continued)

Cluster 12 (continued)

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	38	Perforated shell disc, perforated teeth, blade.
LHS	63	Cylindrical vessel, perforated shell, perforated teeth, blade.
LHS	50	Perforated teeth, blade.
IHS	60	Undecorated amphora, perforated shell, perforated teeth.

Cluster 13

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	80	Amphora, undecorated handled beaker, blade.
IHS	89	Amphora, beaker, decorated shell, perforated shell, blade.
-	90	Amphora, beaker, copper, blade.
RHS	91	Amphora.
-	107	Amphora, perforated shell.

Cluster 14

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	83	Amphora, decorated jug, sherds, flat axe, blade.
RHS	86	Amphora, cylindrical vessel, sherds, flat axe.
IHS	87	Amphora, cylindrical vessel, sherds, perforated shell, perforated teeth.

Cluster 15

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	4	Decorated amphora, beaker.
RHS	54	Decorated amphora, beaker, decorated jug.
-	14	Beaker.
-	81	"
-	85	Beaker, jug.
-	106	Beaker, decorated shell.
IHS	61	Beaker, lugged beaker, lugged bowl.



Fig. 10.4 (continued)

Cluster 16

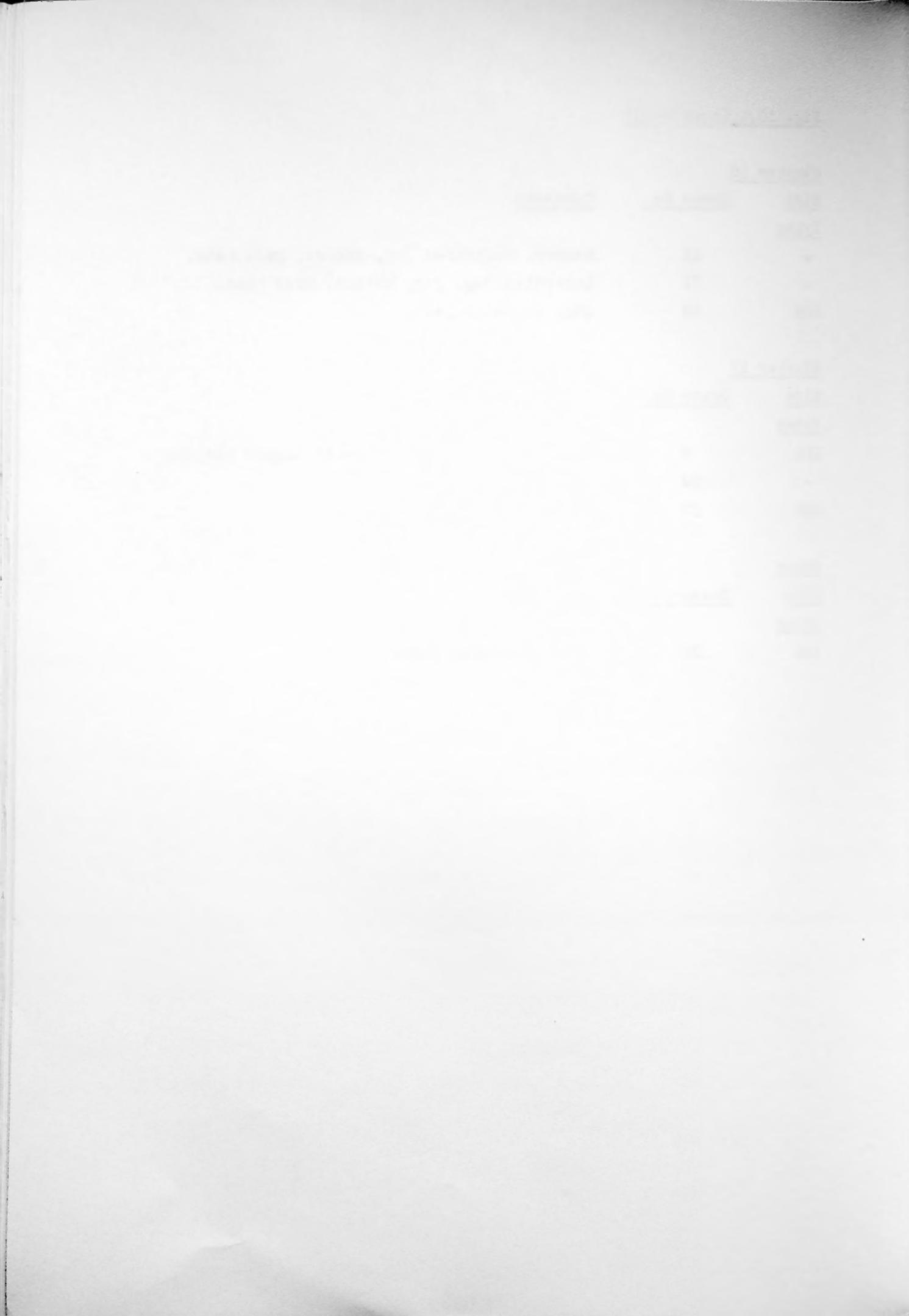
<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	12	Beaker, decorated jug, sherds, mace head.
-	71	Decorated jug, jug, sherds, mace head.
RHS	58	Jug, animal bones.

Cluster 17

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	5	Decorated amphora, decorated lugged beaker.
-	32	Decorated lugged beaker.
RHS	37	Decorated amphora.

Other

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	30	Small 2-lugged Topf.



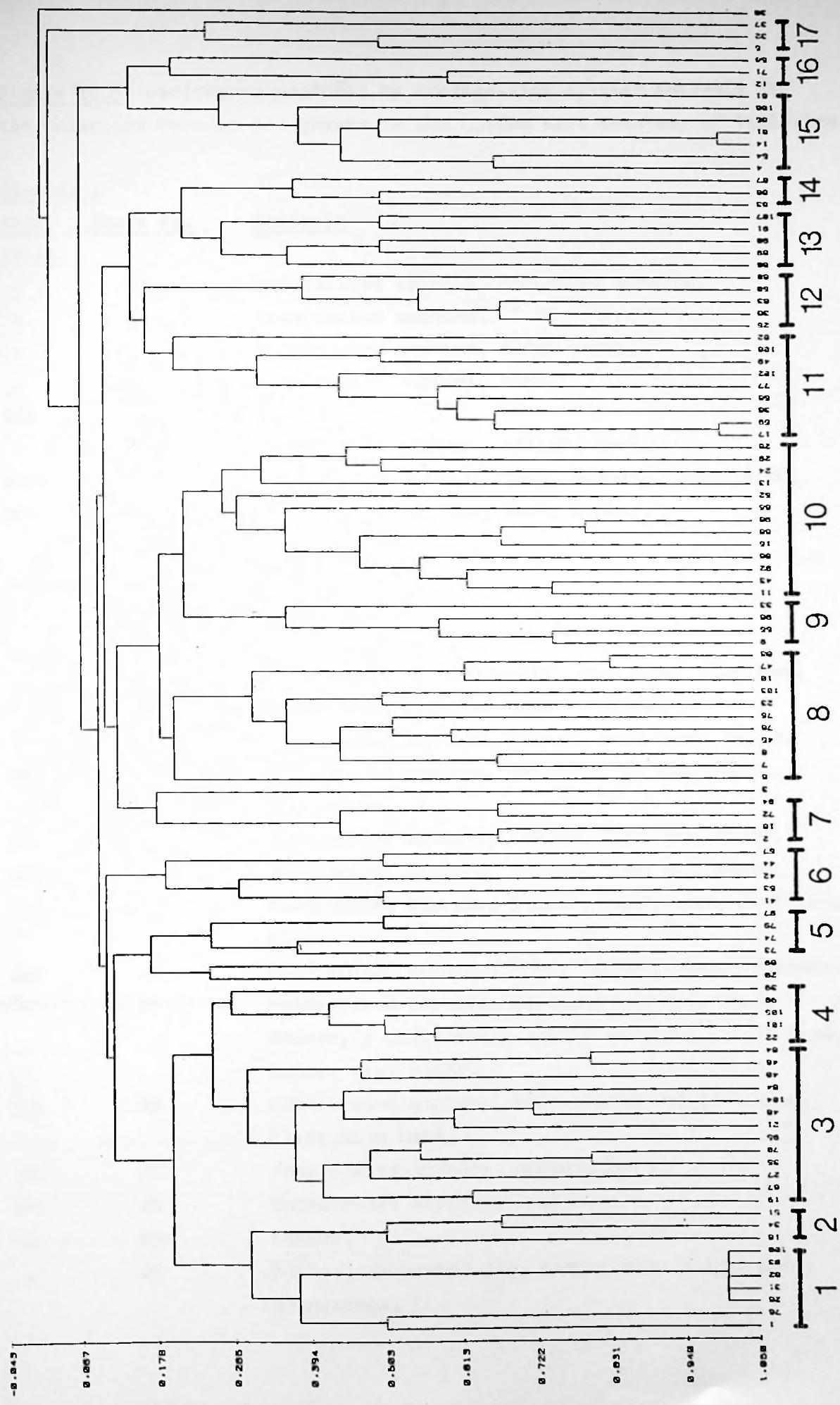




Figure 10.5 Dendrogram produced by average-link cluster analysis of the relations between the graves in the Corded Ware cemetery of Vikletice.

Cluster 1

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	1	Undecorated amphora, decorated amphora.
-	11	Undecorated amphora.
-	22	Undecorated amphora, flint point.
-	47	Undecorated amphora, bowl.
LHS	85	" " "
-	75	Undecorated amphora, beaker, bowl.
RHS	55	Undecorated amphora, bowl, beaker, flint point.
RHS	90	Undecorated amphora, bowl, beaker.

Cluster 2

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	14	Beaker, blade, hammer-axe, mace head, flat axe.
-	20	Undecorated amphora, beaker, blade.
-	31	Undecorated amphora, beaker, mace head, blade.
RHS	30	Undecorated amphora, beaker, flat axe, blade, grindstone.
RHS	79	Undecorated amphora, beaker, flat axe, blade.
RHS	84	Undecorated amphora, beaker, flat axe, blade.
RHS	78	Undecorated amphora, beaker, hammer-axe, flat axe, blade.
RHS	48	Undecorated amphora, bowl, beaker, blade, grindstone.
-	77	Undecorated amphora, cordoned amphora, Topf, beaker, 2 undecorated lugged beakers, 2 flat axes, hammer axe, blade.
RHS	65	Undecorated amphora, undecorated lugged beaker, blade, mace head.
LHS	37	Undecorated amphora, beaker, Topf.
RHS	86	Undecorated amphora, beaker.
-	87	Beaker.
-	26	Beaker, decorated jug, hammer axe, 2 flat axes, grindstone.



Fig. 10.5 (continued)

Cluster 3

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	6	Topf, jug, small 2-lugged Topf.
LHS	59	Undecorated amphora, jug, Topf, vessel.
LHS	80	2 undecorated amphorae, jug, Topf, blade.
-	17	Undecorated amphora, Topf, undecorated lugged beaker.
LHS	83	" " " "
LHS	24	2 undecorated amphorae, 2 Töpfe, small 2 lugged Topf, undecorated lugged beaker.
LHS	52	Undecorated amphora, decorated amphora, Topf, small 2-lugged Topf.
LHS	36	Undecorated amphora, decorated amphora, Topf, 2 blades, 3 flakes, flint point, perforated teeth.
LHS	51	Undecorated amphora, small handled Topf, Topf, blade, flake.
LHS	53	Undecorated amphora, small handled Topf, Topf, blade.

Cluster 4

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	18	2 polypod bowls, jugs, decorated jug, decorated lugged beaker, beaker, 5 undecorated amphorae, decorated amphora, 2 small 2-lugged Töpfe, 3 Töpfe, hammer-axe, mace head, 2 blades, flake.
RHS	19	Undecorated lugged beaker, 2 decorated lugged beakers, Topf, small 2-lugged Topf, undecorated amphora, mace head, 2 blades, flint point, 3 arrowheads, flake.
-	60	2 Töpfe, small 2-lugged Topf, 3 undecorated amphorae, 2 undecorated lugged beakers, beaker, jug, blade, copper, bone tool, bone awl.



Fig. 10.5 (continued)

Cluster 5

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
RHS	25	Decorated lugged beaker, undecorated amphora, hammer-axe.
RHS	34	Undecorated amphora, decorated lugged beaker, cordoned amphora, hammer-axe, blade.
RHS	74	Undecorated amphora, decorated lugged beaker, blade.
-	33	Undecorated amphora, decorated lugged beaker, Topf, cylindrical vessel.
-	45	Undecorated amphora, decorated lugged beaker, Topf, lugged Topf, flint point..
LHS	57	Undecorated amphora, Topf, cylindrical vessel, basin, polypod bowl.

Cluster 6

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	9	Decorated lugged beaker, flat axe, 2 flakes.
-	13	Decorated lugged beaker, flat axe, sherd, mace head, blade.
-	16	Undecorated amphora, decorated jug, sherds, 2 flat axes, blade, mace head, grindstone.
RHS	58	Sherds, flat axe, blade, flake.

Cluster 7

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	8	Amphora, flat axe, blade, animal bones, bone point, grindstone.
LHS	67	2 amphorae, Topf, small 2 lugged Topf, animal bones, grindstone, copper.
LHS	66	Amphora, Topf, 2 cylindrical vessels, blade, bone point, copper, clay ball, shell necklace.



Fig. 10.5 (continued)

Cluster 8

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	10	2 small 2-lugged Topfe, undecorated amphora, Topf, decorated jug, flake, grindstone.
LHS	27	Cordoned amphora, 2 lugged amphorae, Topf, decorated jug, flint point, flake.
-	21	Cordoned amphora, lugged amphora, jug, flake, blade, grindstone, perforated dog teeth, perforated shell disc.

Cluster 9

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	12	Cordoned amphora, small 2-lugged Topf, decorated jug, Topf, cylindrical vessel, blade, copper.
-	76	Cordoned amphora, small 2-lugged Topf, Topf, undecorated lugged beaker, 3 blades.
LHS	54	Cordoned amphora, Topf, stone disc, blade.
LHS	81	Cordoned amphora, Topf, small handled Topf, basin, blade.
LHS	38	Cordoned amphora, undecorated amphora, blade.
RHS	46	Cordoned amphora, decorated jug, blade, flat axe.

Other

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	41	Cordoned amphora, undecorated lugged beaker, bowl.
LHS	62	Cordoned amphora, decorated shell.
RHS	68	Cylindrical vessel.
LHS	71	Undecorated amphora, cylindrical vessel.



Fig. 10.5 (continued)

Cluster 10

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	2	Beaker, sherds, 2 blades.
-	40	Beaker, blade, decorated amphora.
-	61	Decorated amphora, 2 blades, bone awl, antler fragments.
-	69	Decorated amphora, beaker, blade.
RHS	82	" " " "
-	39	Undecorated amphora, decorated amphora, cylindrical vessel, undecorated lugged beaker, bowl, flint blade.
LHS	49	Decorated amphora, cylindrical vessel, decorated lugged beaker, bowl, blade.

Cluster 11

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	23	Decorated jug, decorated amphora, Topf.
-	73	Cordoned amphora, 2 decorated amphorae, beaker, Topf, copper, hammer-axe.
LHS	70	Decorated amphora, Topf, basin.

Cluster 12

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
-	43	Decorated amphora.
-	50	" "
LHS	88	Decorated amphora, decorated lugged beaker.



Fig. 10.5 (continued)

Other

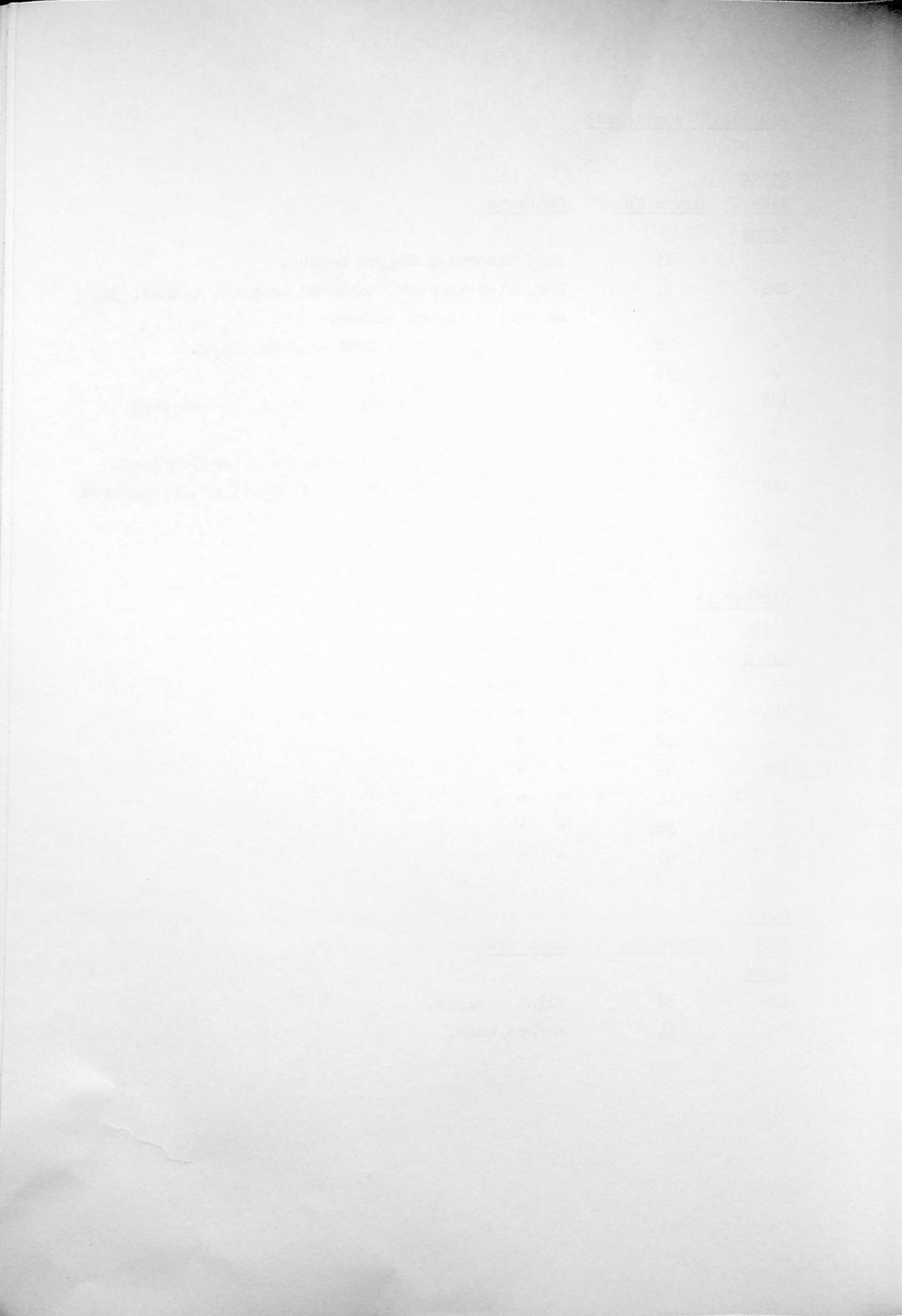
<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	15	Jug, decorated lugged beaker.
LHS	91	Decorated amphora, cordoned amphora, beaker, jug, decorated lugged beaker.
-	28	Jug, small handled Topf, copper, blade.
-	35	Jug, beaker, copper.
LHS	3	Cordoned amphora, beaker, small handled Topf, small lugged Topf.
LHS	72	Undecorated lugged beaker, small handled Topf.
LHS	5	Cordoned amphora, sherds, flint point, perforated teeth, bone bead.
LHS	7	Sherds.

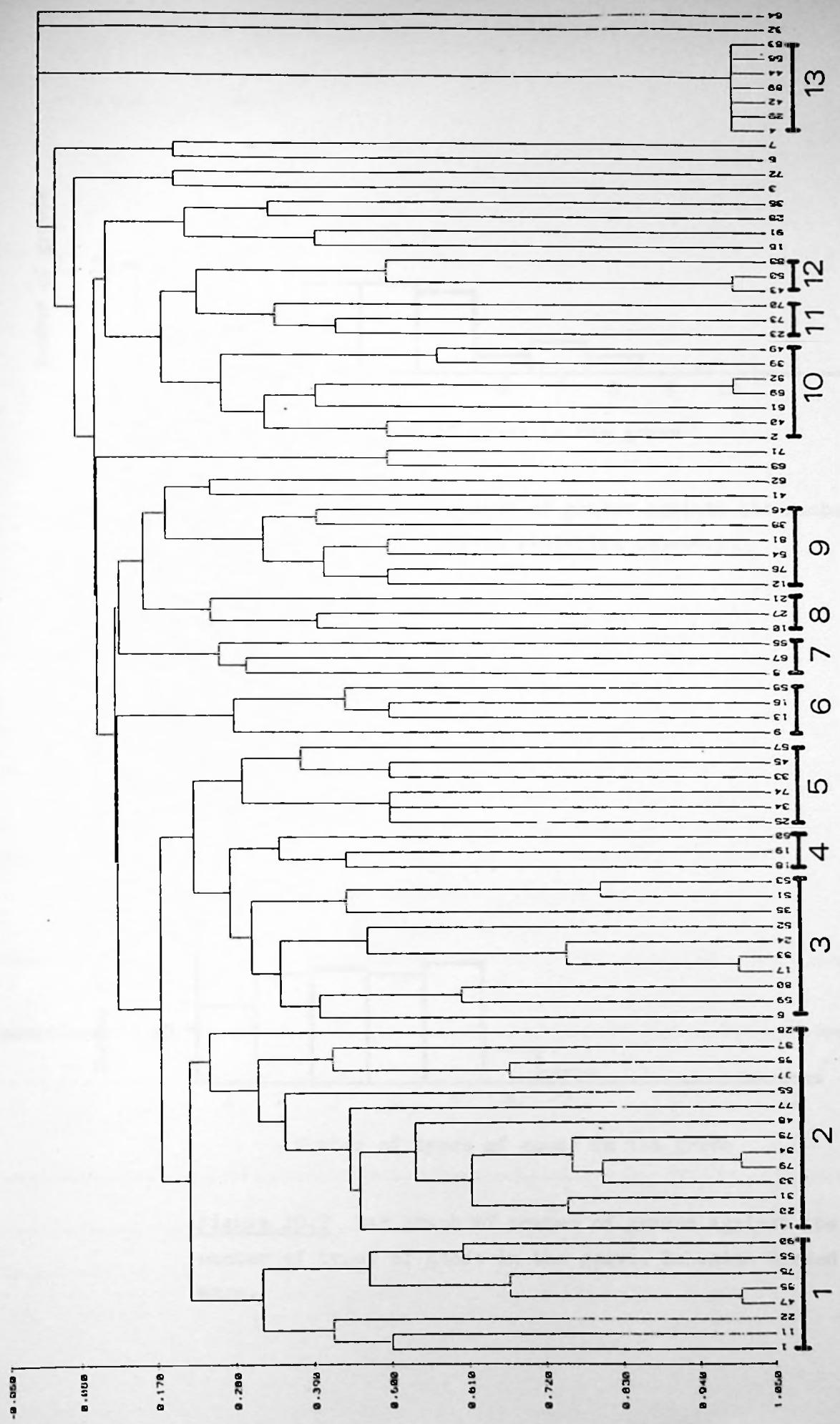
Cluster 13

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
-	4	No goods.
RHS	29	" "
-	42	" "
LHS	89	" "
-	44	" "
-	56	" "
-	63	" "

Other

<u>Side</u>	<u>Grave No.</u>	<u>Contents</u>
<u>lying</u>		
LHS	32	Flint scraper.
-	64	Worked bone.







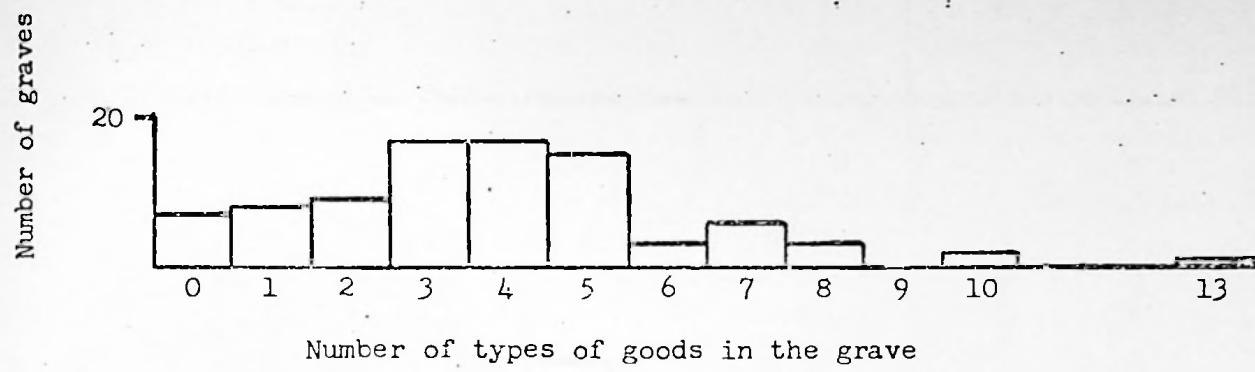


Figure 10.6 Bar graph of number of graves against the number of types of goods in the grave. Vikletice cemetery.

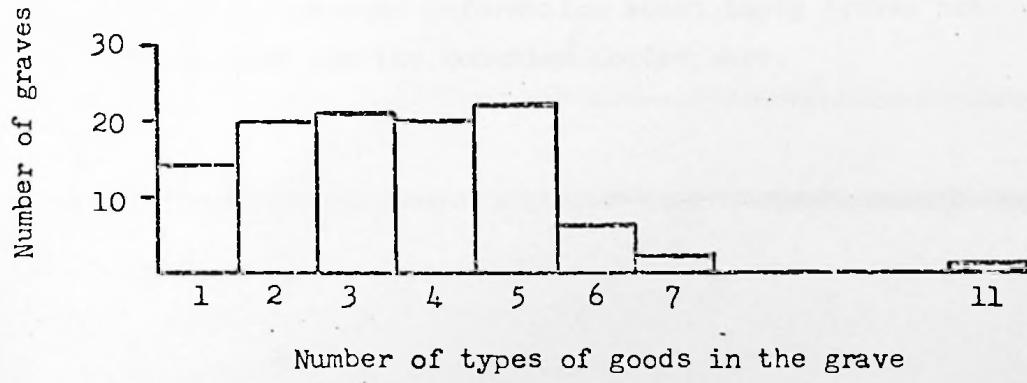


Figure 10.7 Bar graph of number of graves against the number of types of goods in the grave. Bohemian Corded Ware.



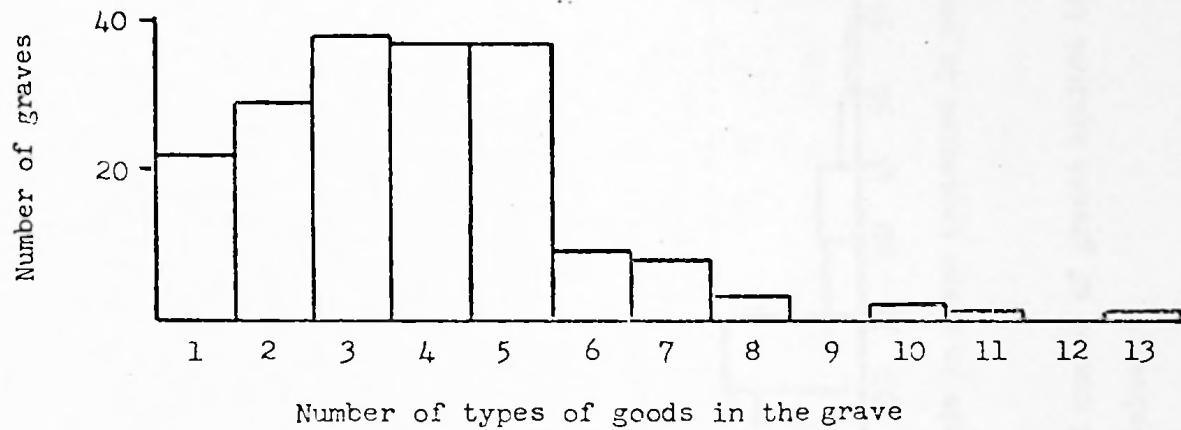


Figure 10.8 Bar graph of number of graves against the number of types of goods in the grave. Figures 10.6 and 10.7 combined. Graves from Vikletice with no goods excluded because information about empty graves not available for the Bohemian Corded Ware.



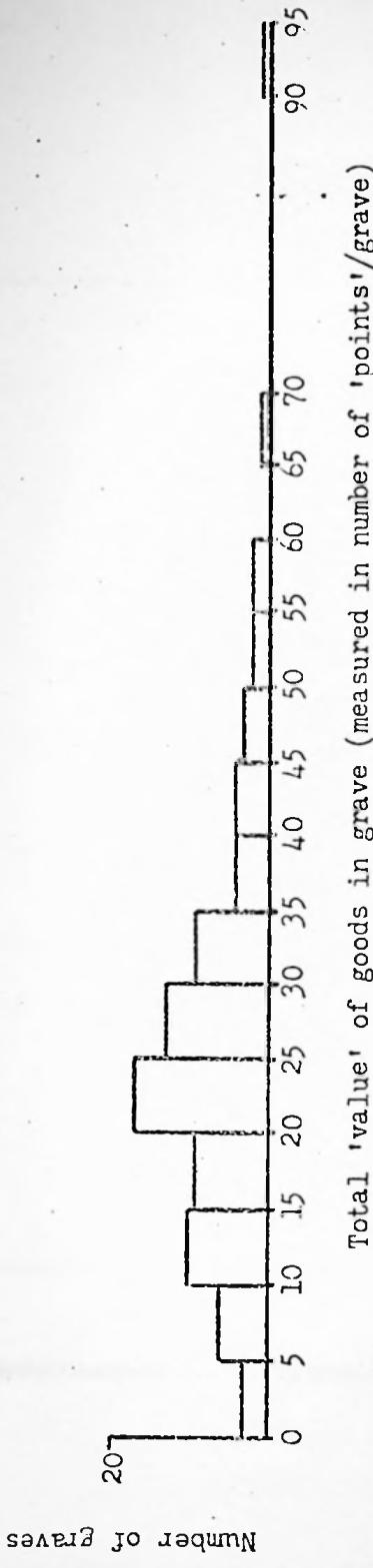


Figure 10.9 Bar graph of number of graves against total 'value' of goods in grave.
See text for meaning of 'value'.

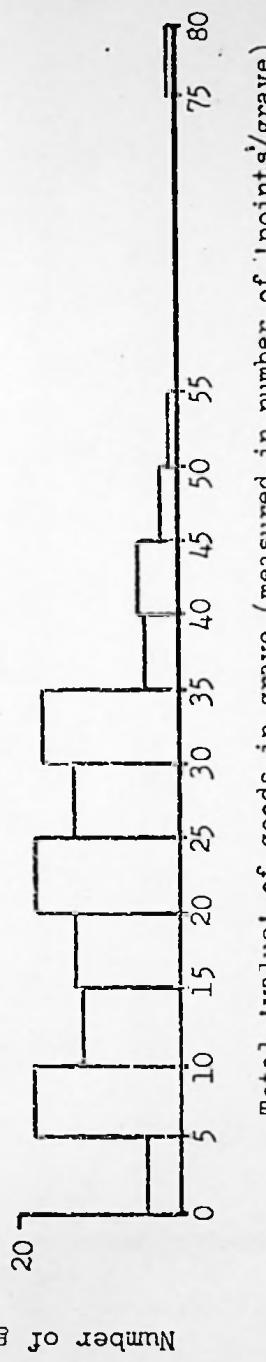
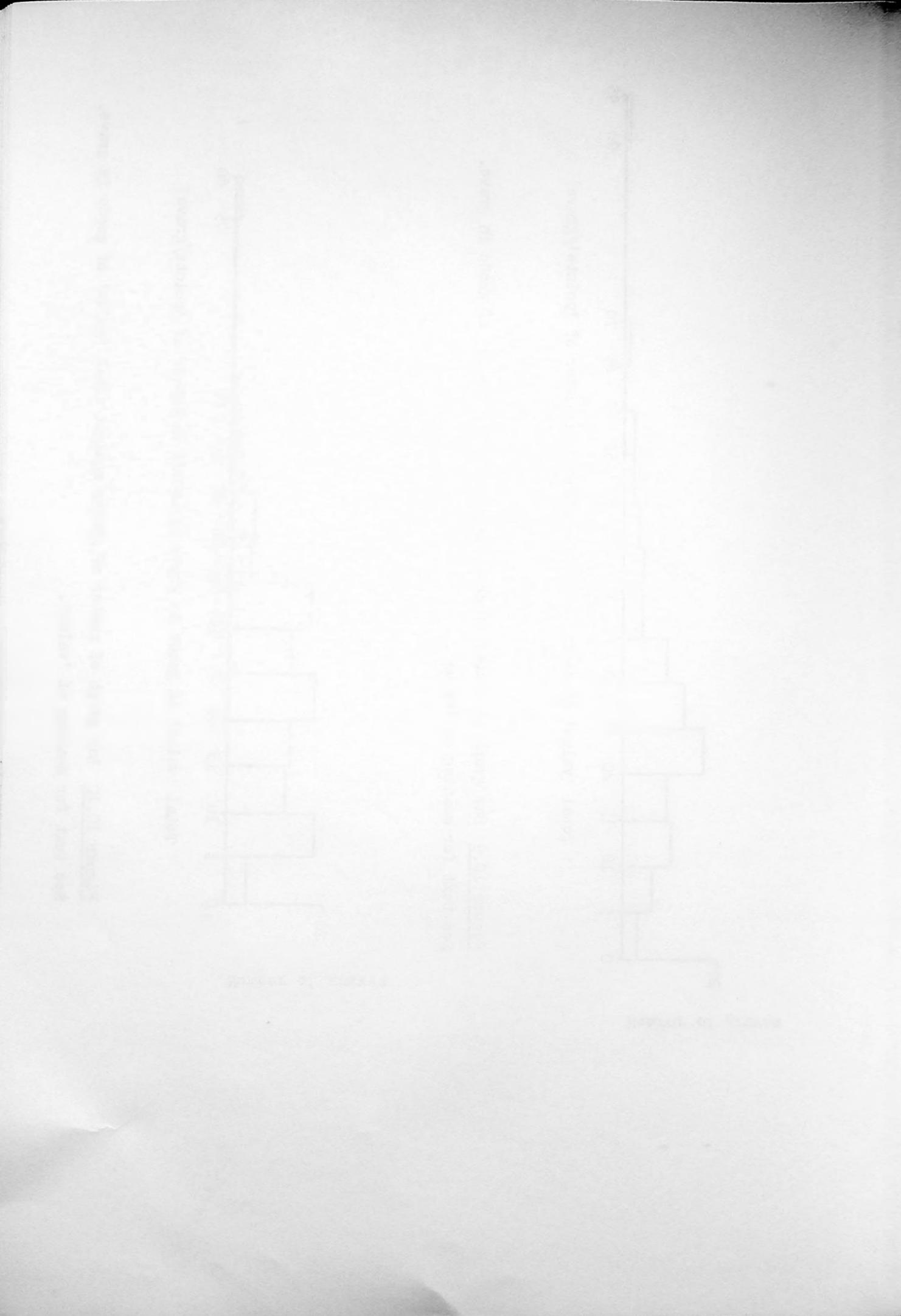


Figure 10.10 Bar graph of number of graves against total 'value' of goods in grave.
See text for meaning of 'value'.



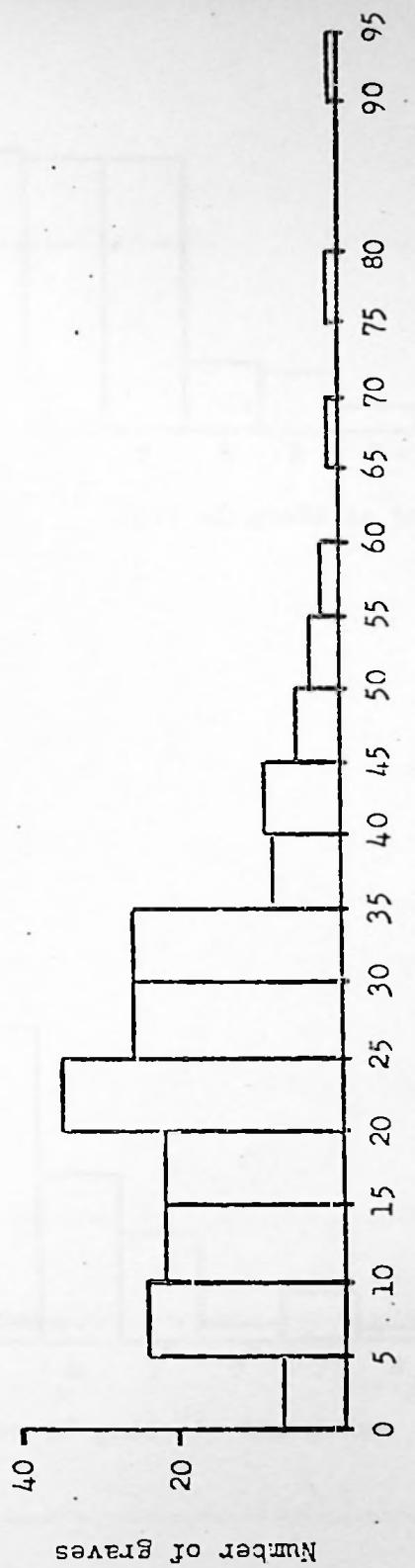


Figure 10.11 Bar graph of number of graves against total 'value' of goods in grave.
Combination of figures 10.9 and 10.10. See text for meaning of 'value'.



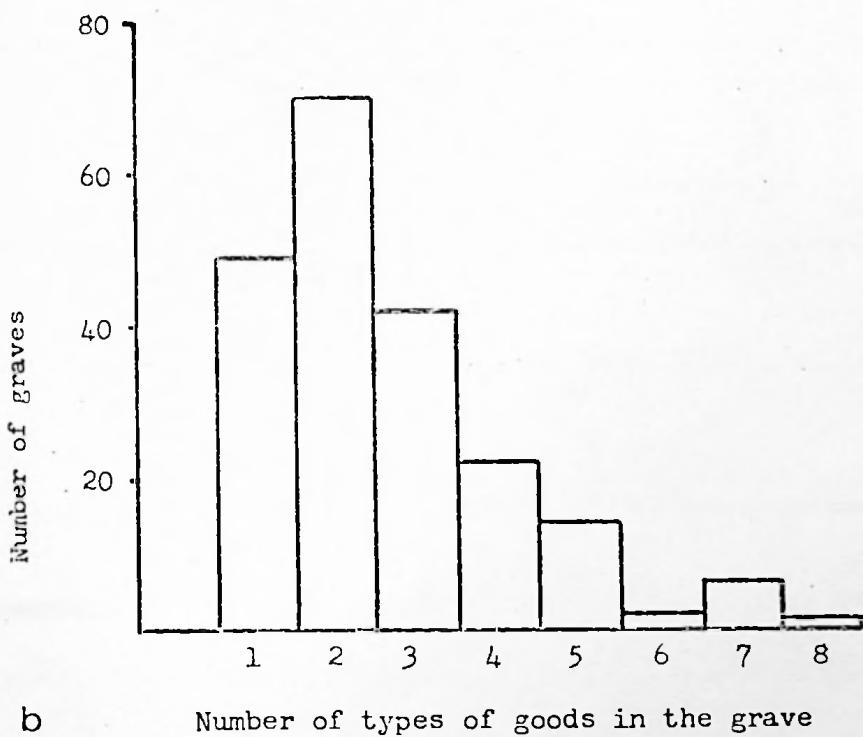
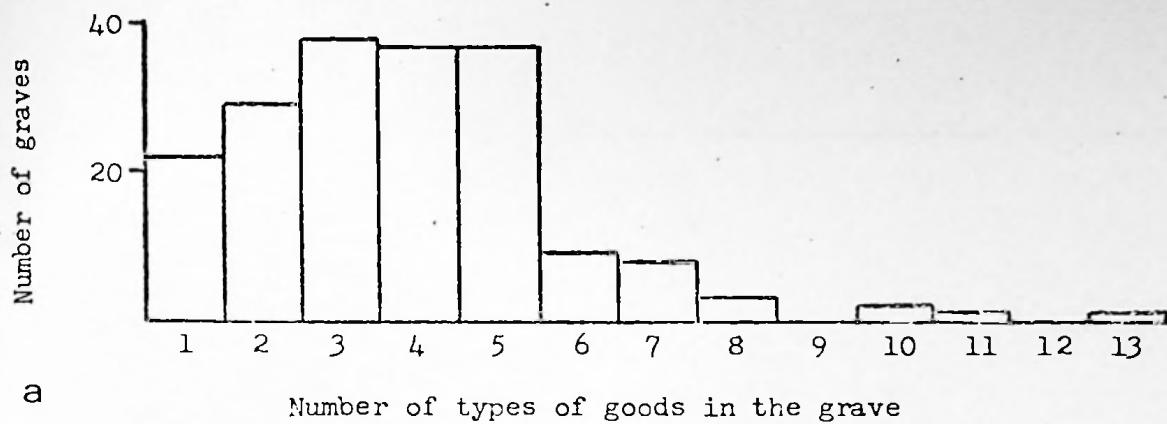


Figure 10.12 Bar graph of number of graves against the number of types of goods in the grave.

Comparison of Bohemian Corded Ware and Bohemian Bell Beakers.

a) Corded Ware

b) Bell Beakers



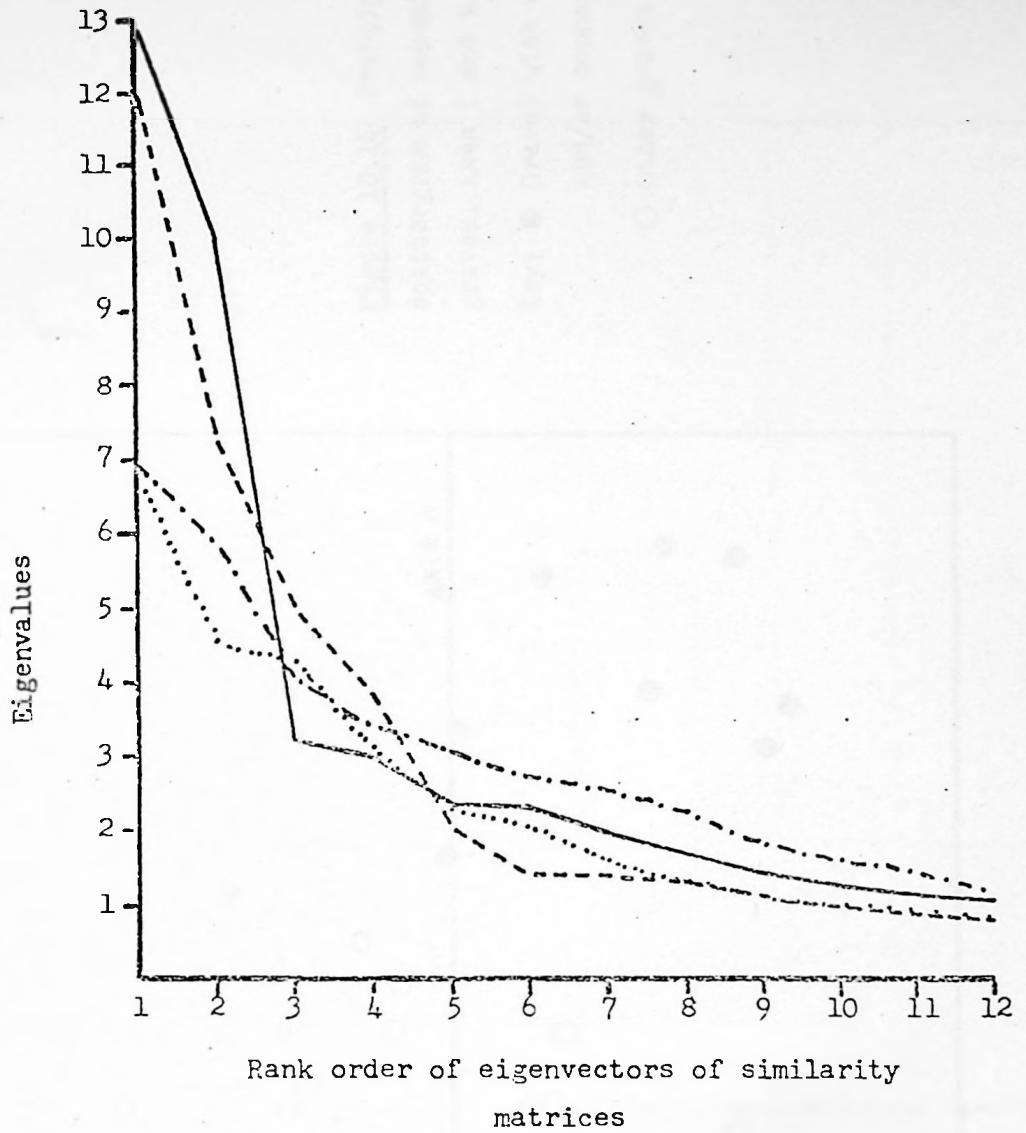


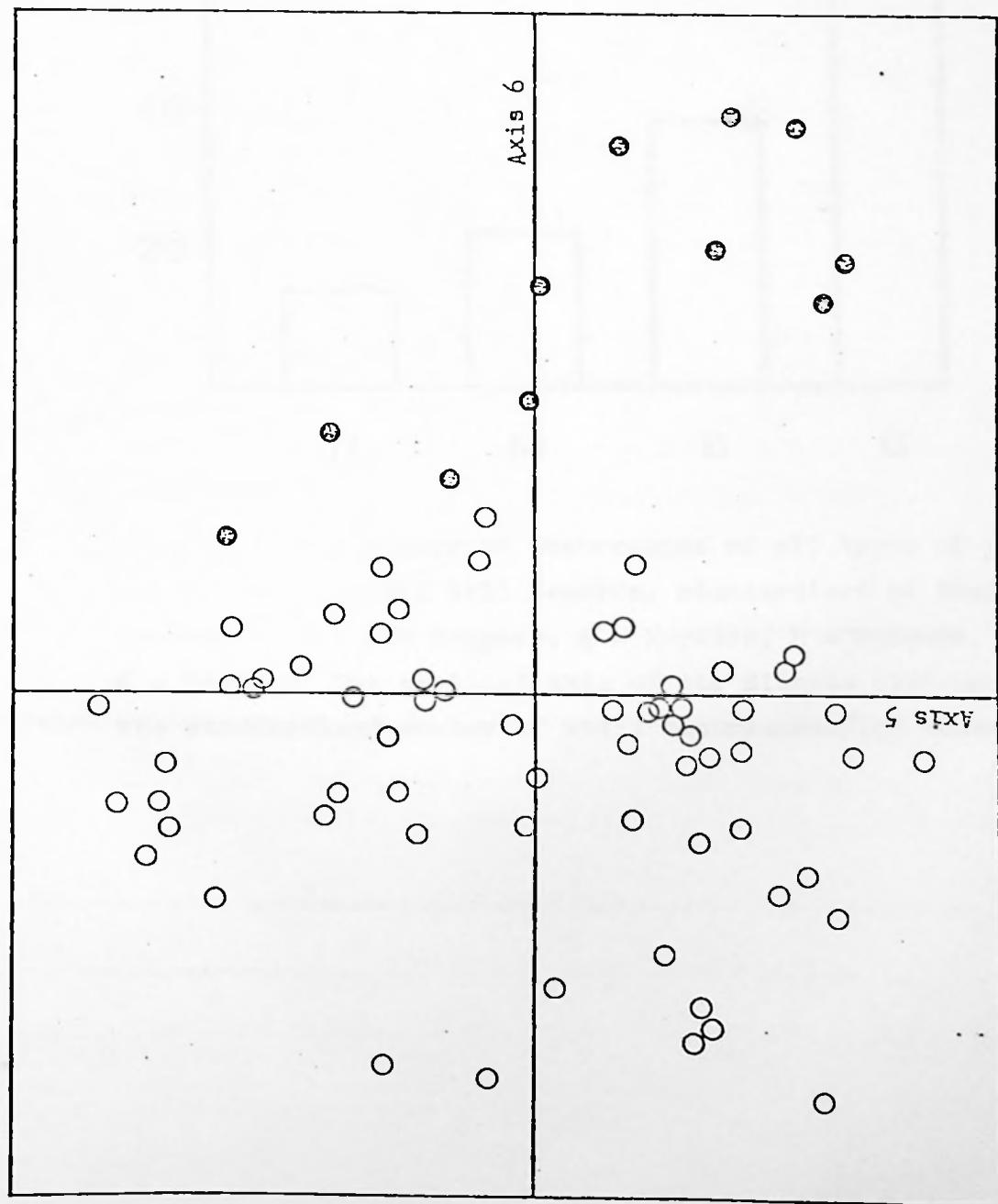
Figure 10.13 Graph of eigenvectors against their corresponding eigenvalues, from principal coordinates analyses of the Vikletice, Bohemian Corded Ware, Bohemian Bell Beaker and Moravian Bell Beaker similarity matrices.

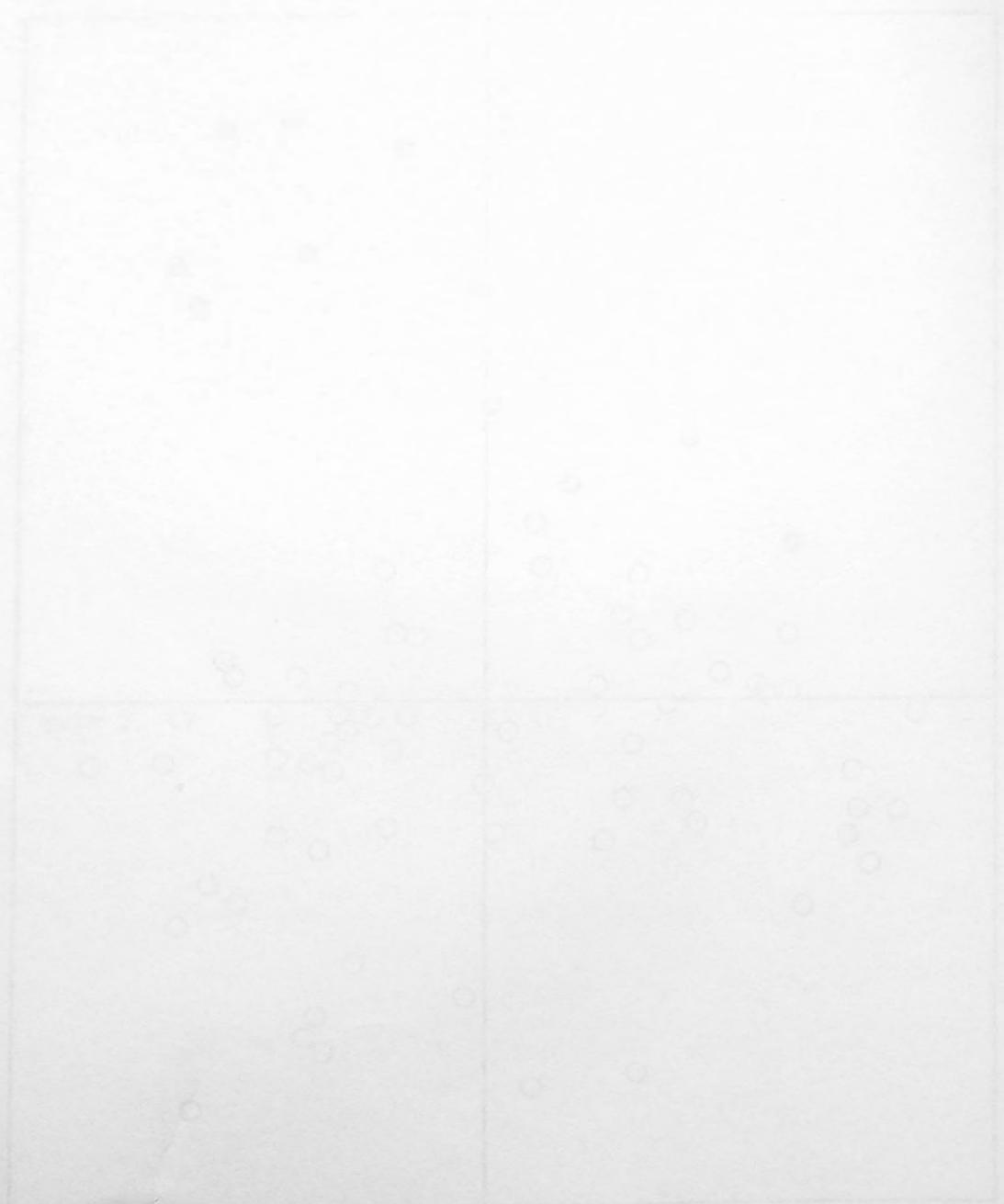
Key: —— Bohemian Bell Beakers
 ----- Moravian Bell Beakers
 - - - - Bohemian Corded Ware
 Vikletice Corded Ware



Figure 10.14 Principal Coordinates
scattergram of Bohemian Bell Beaker
graves. Axes 5 and 6.

Key: ● Graves with wrist-guards
and/or copper daggers.
○ Other graves





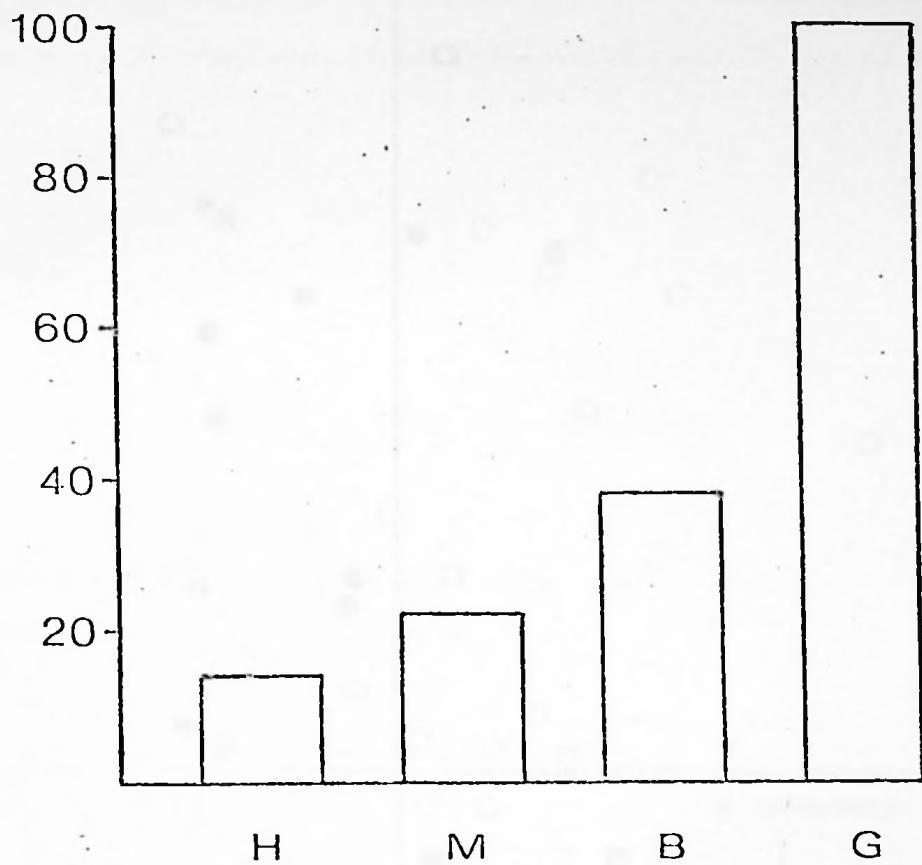


Figure 11.1 The number of occurrences of all types of panel motif/100 decorated Bell Beakers, standardised so that Germany = 100. H = Hungary, M = Moravia, B = Bohemia, G = Germany. The vertical axis of the diagram represents the standardised number of motif occurrences/100 vessels.



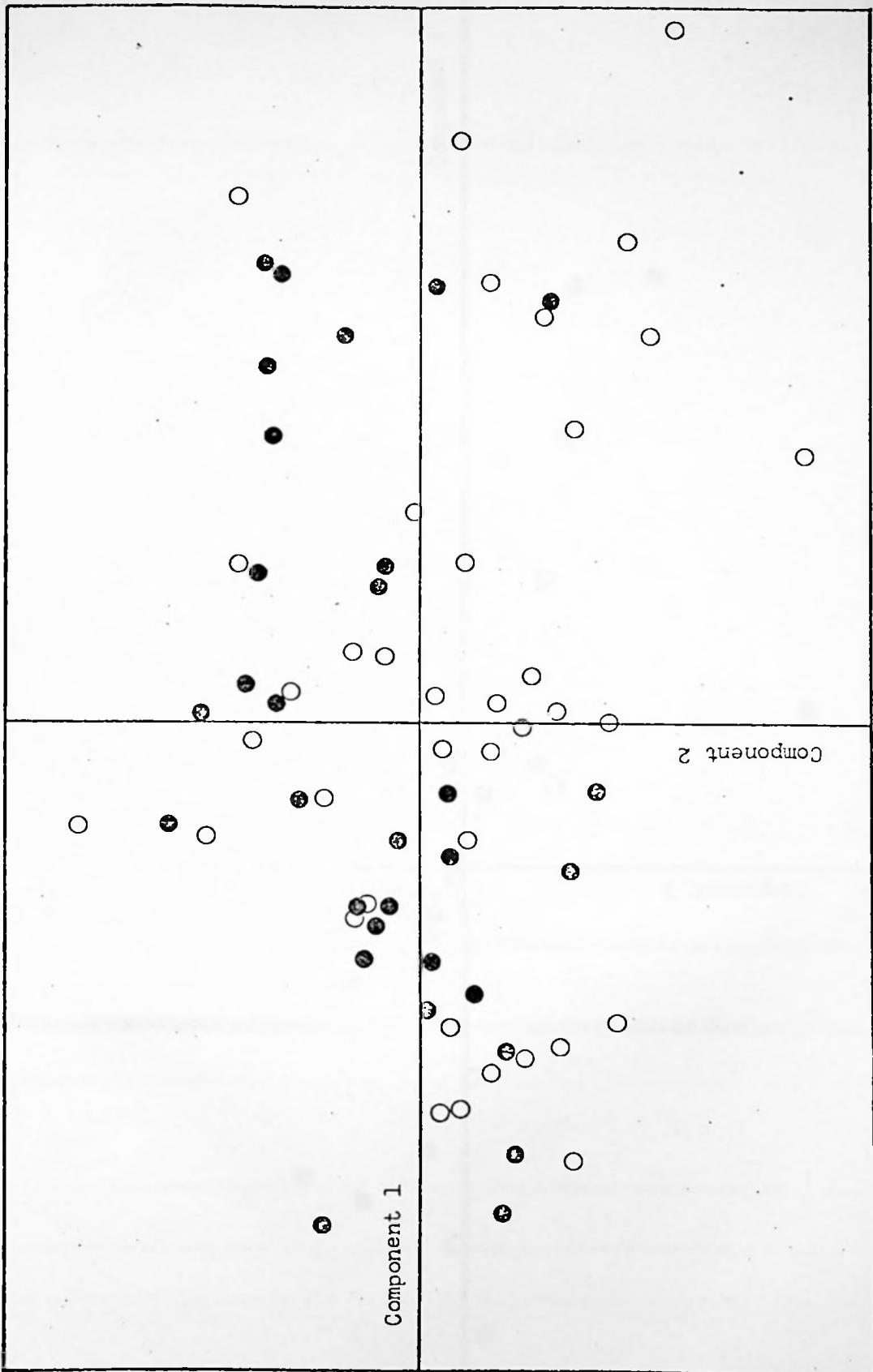


Figure 11.2 Principal components scattergram of Bohemian Corded Ware and Bell Beaker jugs.
Axes are components 1 and 2.

Key: ● Bell Beaker jugs
○ Corded Ware jugs



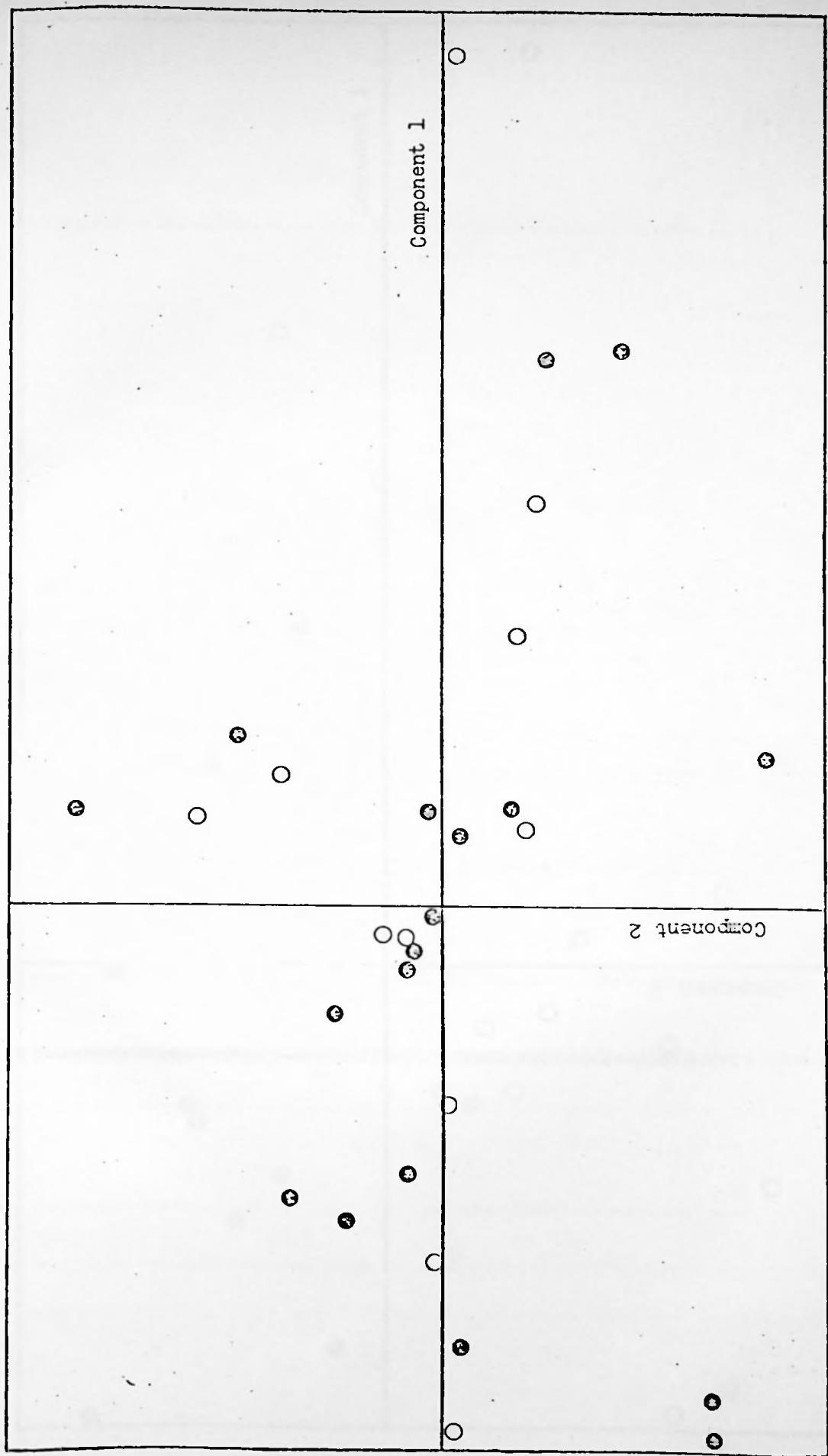


Figure 11.3 Principal components scattergram of Bohemian Corded Ware and Bell Beaker bowls.
Axes are components 1 and 2.

Key:

- Bell Beaker bowls
- Corded Ware bowls



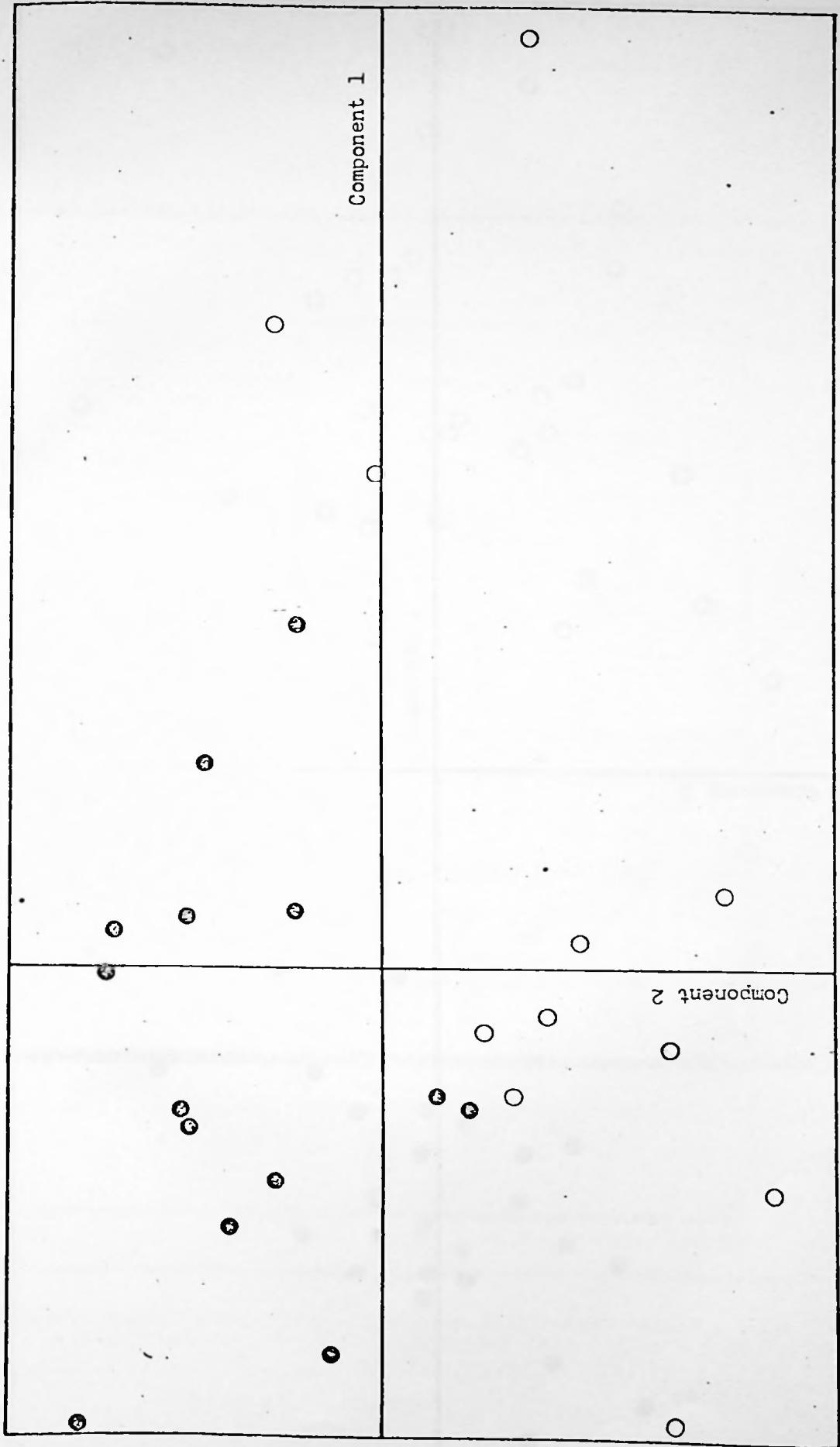


Figure 11.4 Principal components scattergram of Bohemian Corded Ware and Bell Beaker 'T8pf'e'. Axes are components 1 and 2.

Key:
 ● Bell Beaker 'T8pf'e'
 ○ Corded Ware 'T8pf'e'



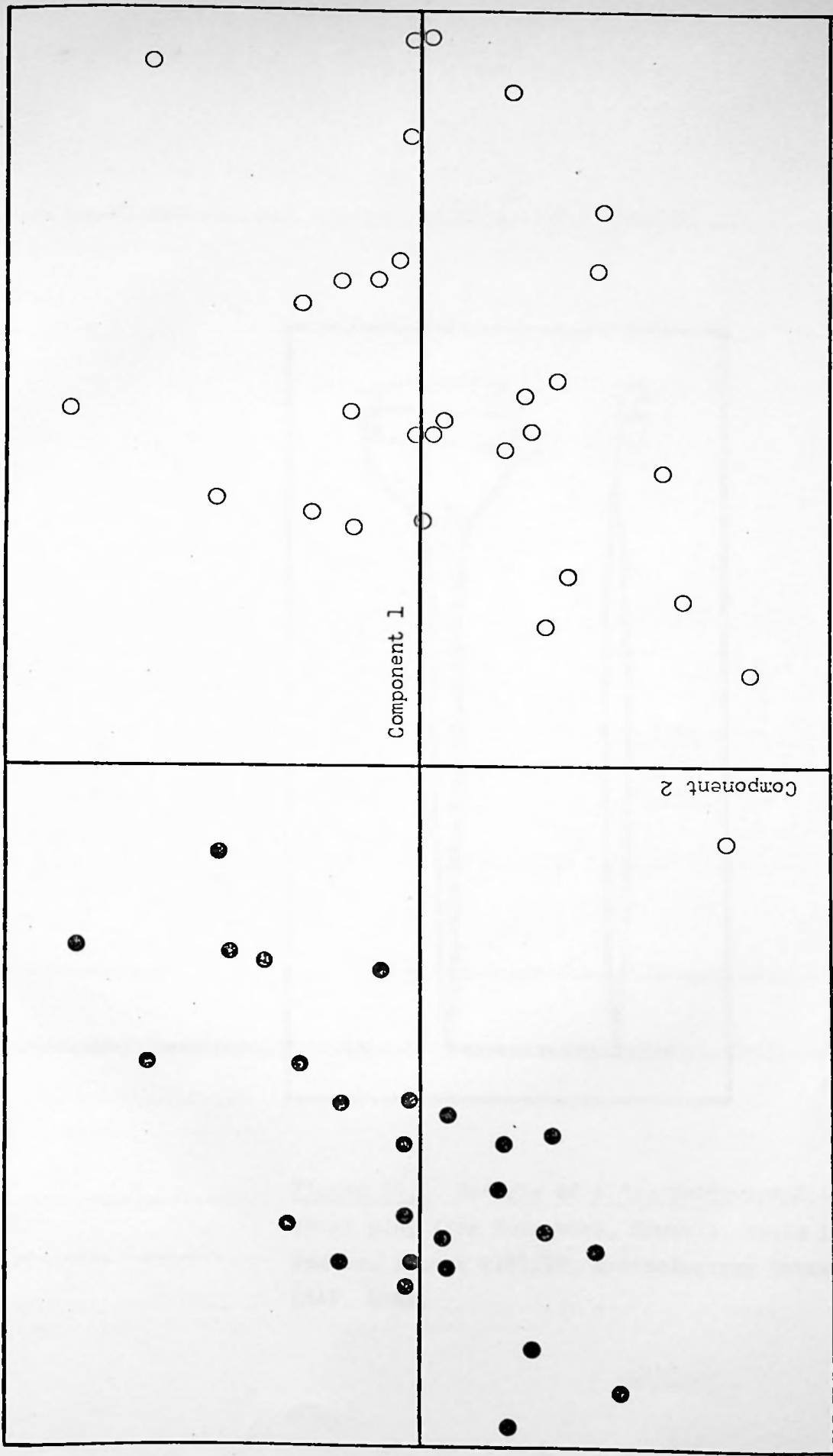


Figure 11.5 Principal components scattergram of Bohemian Corded Ware and Bell Beaker decorated beakers. Axes are components 1 and 2.

Key: ● Decorated Bell Beakers
○ Corded Ware decorated beakers



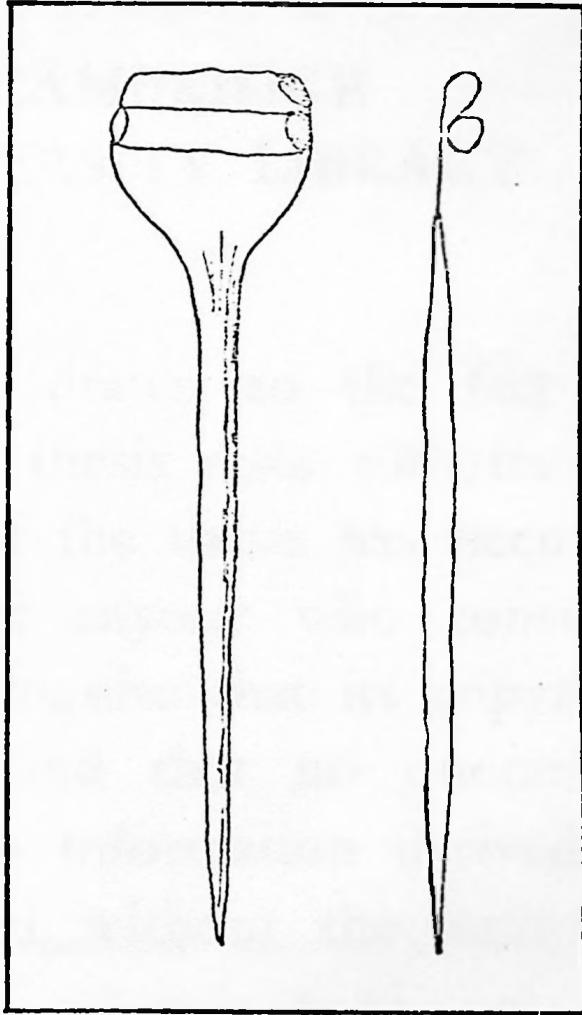


Figure 11.6 Example of a 'doppelgekröpfte' metal pin, from Budkovice, Moravia. Scale 1:1
Source: report 4167/59, Archeologicky Ustav
ČSAV, Brno.