

Contents

List of Tables	v
List of Figures	vii
Acknowledgments	ix
INTRODUCTION	1
HISTORICAL PERSPECTIVES ON NEOLITHIC ECONOMY	
Interpretive Frameworks in European Prehistory	3
Syntheses of Neolithic Subsistence	5
The Impact of Radiocarbon Dating	6
A Current View of the Neolithic	6
RECONSTRUCTIONS OF NEOLITHIC FARMING SYSTEMS	
The Early Neolithic Expansion	10
The Nature of the Late Neolithic Transition	14
Cultural Classification in the Fourth and Third Millennia BC	14
Environmental Change in the Fourth and Third Millennia BC	15
Economic Evidence in the Late Neolithic	15
Early Fourth Millennium Groups	15
Late Fourth/Early Third Millennium Groups	19
The End of the Neolithic in Central Europe	21
Reconstructing Diet at Neolithic Sites	21
Evaluating Evidence for Animal Management in the Neolithic	22
PARAMETERS OF ANIMAL PRODUCTION IN NEOLITHIC EUROPE	
Systems of Animal Production	26
Land Use	26
Labor	26
The Animals	28
Increasing Animal Production	31
Energy	31
Herd Security	31
Scheduling of Labor	32
Specialization	32
Diversification	32
NEOLITHIC FAUNAL ASSEMBLAGES	
Interpreting Economic Strategies From Faunal Remains	36
TAXONOMIC DIVERSITY IN NEOLITHIC FAUNAL ASSEMBLAGES	
Measuring Diversity	39
Richness	40
Evenness	40
Heterogeneity	40
Analysis of Neolithic Faunal Diversity	40
The Problem of Sample Size	41
Simulations of Neolithic Faunal Richness and Heterogeneity	41
The Meaning of Taxonomic Diversity	45
Sample Size Differences	46
Sources of Variability in Diversity	46
Summary	47

TAXONOMIC ABUNDANCE IN NEOLITHIC FAUNAL ASSEMBLAGES	49
Units Of Analysis	49
NISP.....	49
MNI	50
Bone Weight.....	51
Dominance of Taxa/Evenness.....	52
Species Abundance.....	52
Variance and Covariance Among Taxa	53
Early Neolithic.....	55
Late Neolithic	56
Variance and Covariance of Assemblages.....	58
Early Neolithic.....	60
Late Neolithic	62
Summary	63
CATTLE EXPLOITATION IN THE LATE NEOLITHIC.....	65
Cattle Domestication in Neolithic Europe.....	65
Co-occurrence of Aurochs and Cattle	66
Ratios of Sex and Age of Aurochs.....	66
Presence of Transitional Forms	66
Cattle and Aurochs in Neolithic Sites	68
Economic Functions of Cattle in the Neolithic	69
Age Data.....	69
Sex Data	69
Assumptions About Representation of Age and Sex Classes	70
Cattle and Assemblage Diversity.....	72
Comparison with Early Neolithic Data	73
Cattle Management in Neolithic Central Europe.....	74
ANIMAL USE AND ECONOMIC CHANGE IN THE NEOLITHIC.....	75
Problems in Faunal Interpretation	75
Early Neolithic Animal Production	75
Late Neolithic Animal Production.....	76
Assemblage Diversity and Taxonomic Dominance in the Late Neolithic.....	76
Cattle Management in the Late Neolithic	76
Comparison of Early and Late Neolithic Production Strategies	76
Animals and Economic Intensification.....	77
References Cited	79
Appendix 1.....	93

List of Tables

Table 1. Major domestic animals in descending rank order according to different types of energy yields.	32
Table 2. List of assemblages used in analyses with cultural affiliation and major bibliographic references.....	36
Table 3. Sample size, richness and heterogeneity values for Neolithic faunal assemblages.	42
Table 4. NISP for nine taxa in Neolithic assemblages.	50
Table 5. Loadings of major taxa on first three components for early Neolithic assemblages.	53
Table 6. Loadings of major taxa on first three components for late Neolithic assemblages.	54
Table 7. Three-cluster solution for early Neolithic assemblages.	59
Table 8. Four-cluster solution for late Neolithic assemblages.	61
Table 9. Distribution of cluster assignments among late Neolithic archaeological cultures.	63
Table 10. Numbers of age determinations made on mandibles from late Neolithic assemblages.	70
Table 11. Numbers of bones identified to sex in late Neolithic assemblages.	71
Table 12. Average values of cattle age and sex characteristics in late Neolithic clusters.	73
Table 13. Cattle abundance, age and sex data for early Neolithic assemblages.	74