

CONTENTS

<i>List of figures</i>	page xi
<i>List of tables</i>	xvii
<i>Preface</i>	xxi
1. Tallying and Counting: Fundamentals	1
Paleozoological Concepts	4
Mathematical and Statistical Concepts	8
Scales of Measurement	8
Measured and Target Variables: Reliability and Validity	11
Absolute and Relative Frequencies and Closed Arrays	13
Discussion	16
Background of Some Faunal Samples	17
2. Estimating Taxonomic Abundances: NISP and MNI	21
The Number of Identified Specimens (NISP)	27
Advantages of NISP	28
Problems with NISP	29
Problems, Schmoblems	30
A Problem We <i>Should</i> Worry About	36
The Minimum Number of Individuals (MNI)	38
Strengths(?) of MNI	43
Problems with MNI	45
Aggregation	57
Defining Aggregates	67
Discussion	69
Which Scale of Measurement?	71
Resolution	78
Conclusion	81

3. Estimating Taxonomic Abundances: Other Methods	83
Biomass and Meat Weight	84
Measuring Biomass	85
Problems with Measuring Biomass (based on MNI)	86
Solving Some Problems in Biomass Measurement	88
Measuring Meat Weight	89
The Weight Method (Skeletal Mass Allometry)	93
Bone Weight	102
Bone Size and Animal Size Allometry	108
Ubiquity	114
Matching and Pairing	119
More Pairs Means Fewer Individuals	121
The Lincoln–Petersen Index	123
Identifying Bilateral Pairs	129
Correcting for Various Things	134
Size	137
Discussion	139
4. Sampling, Recovery, and Sample Size	141
Sampling to Redundancy	143
Excavation Amount	144
NISP as a Measure of Sample Redundancy	146
Volume Excavated or NISP	149
The Influences of Recovery Techniques	152
Hand Picking Specimens by Eye	152
Screen Mesh Size	154
To Correct or Not to Correct for Differential Loss	156
Summary	158
The Species–Area Relationship	159
Species–Area Curves Are Not All the Same	164
Nestedness	167
Conclusion	171
5. Measuring the Taxonomic Structure and Composition (“Diversity”) of Faunas	172
Basic Variables of Structure and Composition	174
Indices of Structure and Similarity	178
Taxonomic Richness	179
Taxonomic Composition	185

Taxonomic Heterogeneity	192
Taxonomic Evenness	194
Discussion	198
Trends in Taxonomic Abundances	203
Conclusion	209
6. Skeletal Completeness, Frequencies of Skeletal Parts, and Fragmentation	214
History of the MNE Quantitative Unit	215
Determination of MNE Values	218
MNE Is Ordinal Scale at Best	222
A Digression on Frequencies of Left and Right Elements	229
Using MNE Values to Measure Skeletal-Part Frequencies	232
Modeling and Adjusting Skeletal-Part Frequencies	233
Measuring Skeletal Completeness	241
A Suggestion	244
Measuring Fragmentation	250
Fragmentation Intensity and Extent	250
The NISP:MNE Ratio	251
Discussion	254
Conclusion	261
7. Tallying for Taphonomy: Weathering, Burning, Corrosion, and Butchering	264
Yet Another Quantitative Unit	266
Weathering	267
Chemical Corrosion and Mechanical Abrasion	273
Burning and Charring	274
A Digression	276
Gnawing Damage	277
Butchering Marks	279
Types of Butchering Damage	280
Tallying Butchering Evidence: General Comments	281
Tallying Percussion Damage	283
Tallying Cut Marks and Cut Marked Specimens	284
The Surface Area Solution	286
Discussion	291
Conclusion	296

x CONTENTS

8. Final Thoughts	299
Counting as Exploration	302
<i>Glossary</i>	309
<i>References</i>	313
<i>Index</i>	345