

Contents

1	An Introduction to Maize Cobs and Cultures	1
2	Ethnohistory: Impressions and Perceptions of Maize	7
2.1	Ethnohistoric and Ethnographic Perceptions of Maize	7
2.1.1	Consequences of Conquest and Empire	9
2.1.2	Western Perceptions of New World Cultures	12
2.2	Using Sixteenth Century Accounts	14
2.2.1	Early Pre-Linnaean Botanicals	18
2.2.2	Earliest Sixteenth Century Accounts	20
2.3	Central America and Mexico	32
2.3.1	Sixteenth Century Agriculture and Plant Cultivation in Mesoamerica	36
2.3.2	Maize and the Chontal Maya	41
2.3.3	Storage and Redistribution: Mesoamerican Accounts	43
2.4	First Impressions of Andean Civilization	45
2.4.1	Storage, Tribute, and Redistribution in the Andes	51
2.4.2	Maize and Andean Political Economy	55
2.5	Maize and Ancient Religion	58
2.5.1	Maize and Religious Uses and Rites	62
2.5.2	Maize: Religious Significance to Mesoamerican Civilization	66
2.5.3	Early Accounts on Maize Alcohol Consumption	70
2.5.4	Maize Beer and Pulque in Mesoamerica	71
2.5.5	Maize Beer in Ritual and Religion in the Andes	74
2.6	Maize Ethnohistory: Summary and Conclusions	80
3	Scientific, Botanical, and Biological Research on Maize	85
3.1	Introduction on a History of Science on Maize	85
3.1.1	Comparing and Contrasting Old and New World Approaches	86
3.1.2	Research on the Rise of Early Agriculture	90

3.2 Archaeological, Botanical, and Biological Research on Maize Origins	93
3.2.1 Early Botanical and Biological Research on the Origins of Maize	94
3.2.2 Historical Interface of Biological and Archaeological Maize Research	100
3.2.3 Teosinte and the Search for the Origin of Maize	105
3.2.4 Approaches to Finding Wild Maize	113
3.2.5 Pod Corn as Wild Maize	114
3.2.6 Teosinte as a Progenitor of Maize	117
3.3 Maize: Morphological, Biological, Genetic, and Taxonomic Approaches	119
3.3.1 Perennial Teosinte and a Reconsideration of the Tripartite Hypothesis	122
3.3.2 Maize Antiquity and ¹⁴ C and AMS Chronologies	123
3.3.3 Phylogenetic Considerations	128
3.3.4 Early Research on Maize Landraces and their Classification	131
3.3.5 Maize Landraces in the Americas	134
3.3.6 Maize Landraces and Colonial Bioprospecting	137
3.3.7 Morphological versus Genetic Maize Landraces	140
3.3.8 Genetic Research and Paradigm Shifts	143
4 Ethnobotanic, Interdisciplinary, and Multidisciplinary Methodologies	149
4.1 Methodological and Technological Breakthroughs	149
4.1.1 Comparing Research on Old and New World Ancient Economies	149
4.1.2 Paleoethnobotany: Methodological Approaches to Domestication	155
4.2 Interdisciplinary Approaches to Domestication, Agriculture, and Adaptation	159
4.2.1 Plant Domestication and Cultivation	167
4.2.2 Approaches to Domestication and Cultivation in the Tehuacán Valley	173
4.2.3 Approaches to Domestication and Cultivation in Oaxaca	179
4.3 Ethnobotanical Approaches to Early Agriculture and Biogeography	184
4.3.1 Classes of Ethnobotanical Evidence	187
4.3.2 Pollen Analysis and the Spread of Early Cultigens	188
4.3.3 Phytolith Analysis and Maize Biogeography	192
4.3.4 Interdisciplinary Approaches to the Analysis of Phytolith Assemblages	197

4.3.5 Ethnobotanic Approaches to the Origins of Maize:	
Central Balsas	198
4.3.6 Isotope Analysis, Paleodiet, and Geochemical Approaches	202
4.4 Multidisciplinary Approaches to Maize Biogeography	205
4.4.1 Ethnobotanic and Isotopic Research at La Emerenciana	211
4.4.2 Advantages to Multidisciplinary Approaches	219
References	225
Index	257