

# Contents

<b>List of Figures</b> .....	<b>xi</b>
<b>List of Tables</b> .....	<b>xxi</b>
<b>Abstract</b> .....	<b>xxiii</b>
<b>Introduction</b> .....	<b>1</b>
The study area and research aims.....	1
The Maya Research Program.....	1
Chapter outline.....	2
<b>1. The Eastern Alacranes Bajo Area: Background to Research</b> .....	<b>3</b>
The Maya Lowlands Context.....	3
The Eastern Alacranes Bajo Area.....	6
Eastern Alacranes Bajo area settlements: Nojol Nah and Tulix Mul.....	8
<b>2. A Theoretical Framework for Investigating the Ancient Maya Settlements and Landscape on the Eastern Edge of the Alacranes Bajo</b> .....	<b>9</b>
Introduction.....	9
Sites and Settlement Patterns.....	9
The Sites of Nojol Nah and Tulix Mul.....	9
The Eastern Alacranes Bajo Settlement Zone.....	9
Landscape Archaeology.....	9
The Alacranes Bajo as Part of an Ancient Landscape.....	10
Landscape and Archaeology.....	10
Why People Live Where They Do.....	11
Landscapes as Built or Marked Environments.....	11
Landscapes Reflecting Cosmologies and World-Views.....	11
Landscapes and Subsistence.....	12
Social Status and Community Organisation.....	12
The Nature of Settlement in the Eastern Alacranes Bajo area.....	12
Rural Populations.....	13
Hinterlands in an Archaeological Context.....	13
Communities and Households.....	11
Social Organisation of Communities.....	15
Domestic Landscapes and Communities.....	15
Households.....	15
Social Status.....	16
Elites and Non-Elites/Commoners.....	16
Elites/Commoners in the Eastern Alacranes Bajo Area.....	16
<b>3. The Environmental setting of the Eastern Alacranes Bajo area</b> .....	<b>17</b>
Physical Location.....	17
Climate.....	17
Physiography and Natural Resources of the Three Rivers Region.....	19
Geology.....	19
The Geology of the Three Rivers Region.....	20
Soils and Climate.....	20
Soils in the Three Rivers Region.....	21
Topography.....	21
Topography of the Three Rivers Region.....	22
Water Resources.....	22
Water Resources of the Three Rivers Region.....	22
Bajos.....	23

Bajos and the Ancient Maya.....	24
Bajos in the Three Rivers Region.....	24
Flora and Fauna.....	25
Lithic and Clay Resources.....	26
Agriculture & Land Management.....	26
Water Management.....	27
Concluding Remarks.....	28
<b>4. Previous Research in the Three Rivers Region.....</b>	<b>29</b>
Introduction.....	29
Cultural History of the Three Rivers Region.....	29
Archaeological Investigations in the Three Rivers Region.....	30
La Milpa.....	30
Dos Hombres.....	31
Blue Creek.....	32
Settlements Associated with Blue Creek.....	33
U Xulil Beh.....	33
Chum-Balaam-Nal.....	34
Kin Tan.....	35
Chan Cahal.....	35
Gran Cacao.....	36
Chan Chich.....	37
Medicinal Trail.....	38
Akab Muclil.....	38
Bedrock/Aak Witz.....	39
Xnoha.....	40
Grey Fox.....	41
Studies of Bajos and Landscape Management in the Three Rivers Region.....	42
Environmental Research in the Three Rivers Region.....	45
Summary.....	47
<b>5. Methods.....</b>	<b>49</b>
Introduction.....	49
Methods.....	49
Mapping Techniques.....	49
Excavation methods.....	50
Artefact and Human Remains analysis.....	51
Soil Sampling.....	52
<b>6. Mapping and Surface Collection.....</b>	<b>53</b>
Introduction.....	53
Mapping and Surface Collection Data.....	55
Summary and Interpretation of the Mapping and Surface Collection Data.....	60
<b>7. The Nojol Nah Settlement Zone.....</b>	<b>61</b>
Introduction.....	61
The NOS 34-36 Ridge.....	61
Overview.....	61
Test Unit 1 – NOS34-M1.....	61
Test Unit 2 – NOS34-F1.....	62
Test Unit 3 – NOS 35-M1.....	63
Test units 4 and 5 – NOS36-F1.....	64
The NOS 15 area.....	66
Overview.....	66
Test Unit 6 – NOS15-M1.....	66
Test Unit 7 – NOS15-T1.....	67
The NOS 1 area.....	68
Overview.....	68
Test Unit 8 – NOS1-M1.....	69

Test Unit 9 – NOS1-P1.....	73
Test Unit 10 – NOS1-M2 .....	73
Test Units 12, 13, 14, and 15 – NOS1-T1, NOS1-T2, and NOS1-T3.....	76
The NOS 9 area.....	77
Test Unit 20 – NOS9-M1 .....	77
The NOS 12 area.....	79
Overview .....	79
Test Units 16, 17, 18, and 19 – NOS12-T1, NOS12-T2, NOS12-B1, NOS12-B2 .....	79
The NOS 11 area.....	80
Overview .....	80
Test Unit 11 – NOS11-M1.....	80
Test Unit 22 – NOS11-M2 .....	87
Test Unit 21 – NOS11-M3 .....	90
The NOS 49 area.....	91
Overview .....	91
Test Unit 23 – NOS49-M1 .....	93
Test Unit 24 – NOS49-M2 .....	93
Test Unit 25 – NOS49-M3 .....	94
Test Unit 28 – NOS49-P1.....	95
Test Unit 26 – NOS49-T1 and Test Unit 27 – NOS49-T2 .....	95
The Nojol Nah Settlement Zone (NOS) Excavations: Summary.....	96
<b>8. Tulix Mul.....</b>	<b>99</b>
Introduction.....	99
Landscape Investigations in the Tulix Mul area .....	99
Excavations at Tulix Mul .....	104
Excavations at Structure TM-4 .....	105
Overview .....	105
Excavation.....	105
The Southern Bench (TM4-B1) .....	106
The Northern Bench (TM4-B2) .....	109
Str. TM-4 Summary .....	113
Excavations at Structure TM-5 .....	114
Overview .....	114
Excavation.....	114
Artefacts .....	115
Str. TM-5 Summary .....	116
Excavations at Structure TM-6 .....	116
Overview .....	116
Excavation.....	116
The Southern Room (TM6-R1).....	117
The Northern Room (TM6-R2).....	118
The Eastern Room (TM6-1 <sup>st</sup> -R3) .....	119
The Northeastern Room (TM-6-3 <sup>rd</sup> -R4) .....	125
Str. TM-6 Summary.....	130
Excavations at Structures TM-3 and TM-8.....	131
Overview .....	131
Structure TM-3 Excavation.....	131
Str. TM-3-R1 – The Eastern Room .....	132
Str. TM3-R2 – The Western Room.....	136
Str. TM-3 Summary.....	141
Structure TM-8 Excavations .....	141
Str. TM-8 Summary.....	143
Excavations at Structure TM-2 .....	143
Overview .....	143
Sub Operation A Excavations & 2012 Test Unit.....	147
Sub Operation A and 2012 Excavation Summary .....	153
Sub Operation B Excavations.....	153
Sub Operation B Summary .....	156

Sub Operation C Excavations.....	158
Sub Operation C Summary .....	161
Sub Operation D Excavations .....	163
2014 Investigations .....	174
Sub Operation D and 2014 excavation Summary .....	176
Sub Operation E Excavations.....	176
2014 Excavations .....	179
Sub Operation E and 2014 excavation Summary.....	180
Structure 2 Summary.....	180
Structure TM-1.....	183
Tulix Mul Courtyard Group Summary.....	184
Construction history and occupation.....	184
Landscape and resource use .....	186
<b>9. The Nojol Nah Site Centre .....</b>	<b>189</b>
Introduction .....	189
Str. NN-3F1 .....	190
The NN-4C1 Group.....	190
Excavations at Structures NN-4C1 and NN-4C2 .....	190
Excavations at Str. NN-4C4 .....	192
Excavations at Str. NN-4C6 .....	193
Str. NN-4C10.....	199
Excavations at Structures NN-4D2, NN-4C11, NN-4C12.....	203
Overview .....	203
Str. NN-4D-2 .....	204
Str. NN-4C12 .....	205
Str. NN-4C11 .....	212
The Chultun.....	214
The NN-5E Architectural Complex .....	218
Overview .....	218
Str. NN-5E1 .....	219
Str. NN-5E2.....	221
Str. NN-5E4.....	222
Str. NN-5E5.....	223
Str. NN-5E6.....	223
The NN-5E Architectural Group Summary.....	224
Isotope analysis on the Nojol Nah Skeletal Population .....	224
Nojol Nah Site Centre Summary.....	225
<b>10. The Eastern Alacranes Bajo Area: Landscape and Archaeology .....</b>	<b>227</b>
Introduction .....	227
The Evidence from Survey, Mapping and Excavation.....	227
Chronology.....	227
Architectural Groups .....	228
Monumental Architecture.....	228
Non-monumental Architecture.....	228
Human Remains: Cranial and Dental Modification .....	229
Human Remains: Diet and Health.....	229
Burials and Social Status.....	230
Domestic Ritual.....	230
Land Modification .....	231
Resources: Soil, Chert, Clay and Water .....	231
Implications.....	231
Settlement Distribution .....	231
Site Planning .....	231
Nojol Nah and Tulix Mul as Centres.....	232
Community Cohesion, Organisation, Layout and Focus .....	233
Resource Specialisation.....	234
Abandonment and the Archaeological Record.....	234
Architecture and Social Status .....	235

Burials, Ancestors and Lineages .....	235
Access to Resources .....	236
Food Production .....	236
Labour Specialisation .....	236
Local, Regional and Interregional interaction .....	237
<b>11. The Eastern Alacranes Bajo Area within the Three Rivers Region .....</b>	<b>239</b>
Introduction .....	239
Natural Resources in the Three Rivers Region .....	239
Land Modification in the Three Rivers Region .....	240
Settlement in the Three Rivers Region .....	240
Site Planning and Settlement Patterns in the Three Rivers Region .....	241
Chronology of Settlement in the Three Rivers Region .....	242
The Preclassic .....	242
The Early Classic .....	243
The Late Classic .....	244
The Terminal Classic and Postclassic .....	244
The Built Environment in the Three Rivers Region .....	244
Cosmology, Cultural Practices and the Architecture of Three Rivers Region .....	244
Social Status in the Three Rivers Region .....	245
Daily Life in the Three Rivers Region .....	246
Labour Specialisation in the Three Rivers Region .....	246
Local, Regional and Interregional Interaction on the Three Rivers Region .....	247
Concluding Remarks .....	247
<b>References .....</b>	<b>249</b>

Appendix A is available as an accompanying download