Unpublished Spanish manuscripts in the Archivo General de Indias (Seville, Spain) and the Archivo General de Centro América (Guatemala City, Guatemala) contain eyewitness Spanish descriptions of sizeable native Maya populations in parts of lowland Chiapas, El Petén, Verapaz, and Izabal. Observers describe in vivid detail the population density, settlement pattern, agriculture, hunting, fishing, gathering, artifacts, clothing, architecture of residential and religious buildings, political organization, social structure, trade, and other ethnographically interesting aspects of sixteenth-seventeenth century southern lowland Maya life.

France Scholes discovered several thousand pages of these documents in Spain; Agustín Estrada, Lawrence Feldman, and the author have found still more unpublished ethnohistorical information in Guatemalan archives. These manuscripts show that the Cholti-Lacandon, Chiapas Chol¹, Yucateco-Lacandon, Petén Ytzá, Quejache, Mopán, Topuequa, Verapaz Chol, and other thriving sixteenth-seventeenth century native lowland Maya peoples had complex social, political and religious systems which will provide a variety of new and different models to replace the overused and misused traditional models which simplistically transfer Landa’s or
Social Process in Maya Prehistory

Studies in honour of Sir Eric Thompson

Edited by NORMAN HAMMOND

1977

ACADEMIC PRESS

London · New York · San Francisco

A Subsidiary of Harcourt Brace Jovanovich, Publishers
Contributors

JORGE R. ACOSTA.†
R. E. W. ADAMS, Department of Humanities and Social Sciences, University of Texas at San Antonio, TX 78285, U.S.A.
E. WYLLYS ANDREWS V, Middle American Research Institute, Tulane University, New Orleans, LA 70118, U.S.A.
JOSEPH W. BALL, San Diego State University, San Diego, CA 92115, U.S.A.
IGNACIO BERNAL, Museo Nacional de Antropología, Gandhi y Reforma, México City, México 5, D.F., México.
MICHAEL D. COE, Department of Anthropology, Yale University, New Haven, Conn. 06520, U.S.A.
T. PATRICK CULBERT, Department of Anthropology, University of Arizona, Tucson, AZ 85721, U.S.A.
IAN GRAHAM, Peabody Museum, Harvard University, Cambridge, Mass. 02138, U.S.A.
MERLE GREENE ROBERTSON, Pre-Columbian Art Research Project, A.P. 22, Palenque, Chiapas, Mexico.
GEORGE F. GUILEMIN, Santa Catarina Palopó, Panajachel, Guatemala, Central América.
PETER D. HARRISON, Middle American Research Institute, Tulane University, New Orleans, LA 70118, U.S.A.
N. HELLMUTH, Foundation for Latin American Anthropological Research, A.P. 1838, Guatemala City, Guatemala.
DAVID H. KELLEY, Department of Archaeology, University of Calgary, Calgary 44, Alberta, Canada.
ARTHUR G. MILLER, Dumbarton Oaks, Center for Pre-Columbian Studies, Washington, D.C. 20007, U.S.A.
DAVID A. PHILLIPS, Department of Anthropology, University of Arizona, Tucson, AZ 85721, U.S.A.

† Deceased.
DENNIS E. PULESTON, Department of Anthropology, University of Minnesota, Minneapolis, Minn. 55455, U.S.A.
WILLIAM L. RATHJE, Department of Anthropology, University of Arizona, Tucson, AZ 85721, U.S.A.
DALE RUNGE, Massachusetts Institute of Technology, Cambridge, Mass. 02139, U.S.A.
DOROTHY HOSLER, Department of Anthropology, University of California, Santa Barbara, CA 93106, U.S.A.
ALBERTO RUIZ LHUILLIER, Centro de Estudios Mayas, Torre de Humanidades, Ciudad Universitaria, México 20, D.F., México.
JEREMY A. SABLOFF, Department of Anthropology, University of Utah, Salt Lake City, UT 84112, U.S.A.
ROBERT J. SHARER, University Museum of Pennsylvania, Philadelphia, PA 19174, U.S.A.
A. LEDYARD SMITH, Peabody Museum, Harvard University, Cambridge, Mass. 02138, U.S.A.
GORDON R. WILLEY, Peabody Museum, Harvard University, Cambridge, Mass. 02138, U.S.A.
# Contents

**Contributors**  .................................................................  v

**Preface**  .............................................................................. vii

**1. Sir Eric Thompson, 1898-1975: a Biographical Sketch and Bibliography**
NORMAN HAMMOND
Text ................................................................. 1
Select bibliography ........................................... 10

**2. Maya Antiquaries**
IGNACIO BERNAL
Text ................................................................. 19
References ......................................................... 40

IAN GRAHAM
Text ................................................................. 45
Notes ................................................................. 53
References ......................................................... 55

**4. External Influences on the Lowland Maya: 1940 and 1975 Perspectives**
GORDON R. WILLEY
The 1940 perspective ......................................... 58
The 1975 perspective ......................................... 62
Summary comment ........................................... 70
Notes ................................................................. 71
References ......................................................... 72

**5. The Early Formative in the Maya Lowlands**
NORMAN HAMMOND
Structures ......................................................... 82
Ceramics ........................................................... 86
Lithics ................................................................. 89
Human remains .................................................. 94
Subsistence ......................................................... 96
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Concluding statements</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>Notes</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>7</td>
<td>The Southeastern Periphery of Mesoamerica: A View from</td>
<td>E. Wyllys Andrews V</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>Eastern El Salvador</td>
<td></td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>The ruins of Quelepa</td>
<td></td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>The Uapala phase</td>
<td></td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>The Shila phase</td>
<td></td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>The Lepa phase</td>
<td></td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>Concluding remarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>References</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Influence or Intrusion? The &quot;Protoclassic&quot; in the Maya Lowlands</td>
<td>D. C. Pring</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Notes</td>
<td></td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td></td>
<td>155</td>
</tr>
<tr>
<td>9</td>
<td>An Hypothetical Outline of Coastal Maya Prehistory: 300 B.C.-A.D. 1200</td>
<td>Joseph W. Ball</td>
<td>167</td>
</tr>
<tr>
<td></td>
<td>Preface</td>
<td></td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
<td></td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>The Cienaga phase</td>
<td></td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>The Nizuc phase</td>
<td></td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>The Salitre 1 and 2 phases</td>
<td></td>
<td>177</td>
</tr>
<tr>
<td></td>
<td>Relevant data synopsis</td>
<td></td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>The Vacio phase</td>
<td></td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>The Recogida phase</td>
<td></td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>The Guarnición phase</td>
<td></td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>Notes</td>
<td></td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td></td>
<td>194</td>
</tr>
</tbody>
</table>
10. "Captains of the ltzá": Unpublished Mural Evidence from Chichén ltzá
ARTHUR G. MILLER
Introduction . . . . . . . . . 197
The protagonist and the antagonist.. . . . . . . . . 199
Maya warfare I: the North Group. . . . . . . . . 211
Maya warfare II: the South Group..  . . . . . . 214
Summary of the narrative content of the North and South Groups. . . 218
The archaeological and ethnohistorical implications of the mural
evidence from Temple A: tentative hypotheses . . . . . 219
Notes . . . . . . . . . . 224
References  . . . . . . . . . 224

11. Urbanism and Hierarchy at Iximch
GEORGE F. GUILLEMIN
Early exploration . . . . . . . . 227
Recent exploration . . . . . . . . 234
Great Palace II. . . . . . . . . 236
Structure 39. . . . . . . . . . 241
Palace III. . . . . . . . . . 244
Complex E/F. . . . . . . . . . 245
Discussion. . . . . . . . . . 246
Hierarchy. . . . . . . . . . 247
Gods. . . . . . . . . . 251
Iconography. . . . . . . . . . 256
“Applied religion". . . . . . . . . 258
References. . . . . . . . . . 262

JORGE R. ACOSTA
Prologue. . . . . . . . . . 265
Introduction. . . . . . . . . . 265
The Palace. . . . . . . . . . 266
The Temple of the Inscriptions. . . . . . . . . 282
Temple XIV.. . . . . . . . . . 282
Cylinders. . . . . . . . . . 284
Notes. . . . . . . . . . 285

13. Gerontocracy at Palenque?
ALBERTO, RUZ LHUILLIER
Text. . . . . . . . . . 287
Note . . . . . . . . . . 294
Reference. . . . . . . . . . 294
## Contents

14. **Painting Practices and their Change through Time of the Palenque Stucco Sculptors**  
**MERLE GREENE ROBERTSON**  
- Text ........................................... 297  
- Notes ........................................... 323  
- References .................................... 325

15. **Supernatural Patrons of Maya Scribes and Artists**  
**MICHAEL D. COE**  
- Scribes and artists among the Aztec ............ 327  
- The Popul Vuh .................................. 328  
- Artists and scribes in late pre-Conquest Yucatan . 330  
- Artists and scribes during the Classic Period ... 331  
- Conclusions ..................................... 345  
- References ...................................... 346

16. **Patolli at the Ruins of Seibal, Petén, Guatemala**  
**A. LEDYARD SMITH**  
- Text ........................................... 349  
- References ...................................... 362

17. **Maya Metalwork and its External Connections**  
**WARWICK BRAY**  
- List of metal finds ............................... 365  
- Classification and distribution of metal finds ... 370  
- The Isthmian connection ....................... 390  
  - Costa Rica and Panama ....................... 390  
  - Honduras ..................................... 393  
- The Mexican connection ....................... 394  
- Native Maya metalwork ......................... 396  
- Addendum ....................................... 399  
- References ...................................... 400

18. **A Possible Maya Eclipse Record**  
**DAVID H. KELLEY**  
- Text ........................................... 405  
- References ...................................... 408

19. **Comments on the Glyphic Texts of the "Altar Vase"**  
**R. E. W. ADAMS**  
- Context ......................................... 412  
- Presentation and analysis ....................... 413  
- Discussion ..................................... 418  
- References ...................................... 419
## 20. Cholti-Lacandon (Chiapas) and Petén Ytzá Agriculture, Settlement Pattern and Population

**N. HELLMUTH**  
Introduction . . . . . . . . . 421  
The Cholti-Lacandon of lowland Chiapas . . . . . . . 422  
Sixteenth-seventeenth century Cholti-Lacandon Maya subsistence . . . . 423  
Subsistence of the central Petén: seventeenth century . . . . 433  
Petén Ytzá demography and settlement pattern . . . . . . . 438  
Cholti-Lacandon settlement pattern . . . . . . . 439  
Summary of ethnohistorical records for the Maya lowlands. . . . . 441  
Notes . . . . . . . . . . 445  
References . . . . . . . . . . 446

## 21. The Art and Archaeology of Hydraulic Agriculture in the Maya Lowlands

**DENNIS E. PULESTON**  
Text . . . . . . . . . . 449  
References . . . . . . . . . 465

## 22. The Rise of the bajos and the Fall of the Maya

**PETER D. HARRISON**  
Part I . . . . . . . . . . 470  
Primary evidence . . . . . . . . . 473  
Secondary evidence  
Summary discussion of bajos as lakes. . . . . . . . 491  
Discussion of agricultural intensification . . . . . . . 492  
Part II  
A model for correlation of population and agricultural production with certain events in Maya prehistory . . . . . . . . . 497  
Explanation of the model . . . . . . . . . 497  
The correlations . . . . . . . . . 499  
Alternatives for solution to crises . . . . . . . . . 499  
Interpretation and relation to existing data . . . . . . . 500  
Notes . . . . . . . . . . 505  
References . . . . . . . . . . 506

## 23. Maya Development and Collapse: An Economic Perspective

**T. PATRICK CLUBERT**  
Maya culture as a growth system . . . . . . . . . 510  
Settlement hierarchies . . . . . . . . . 513  
The economic model . . . . . . . . . 515  
Subsistence labor loop . . . . . . . . . 516  
Craft production labor loop . . . . . . . . . 519  
Additional labor loops . . . . . . . . . 521
24. The Maya Collapse Revisited: Internal and External Perspectives
ROBERT J. SHARER
- Internal and external systems of the Classic lowland Maya
- Early Classic lowland society
- Late Classic lowland society
- The élite response to stress: the prevailing view
- Stress and response: a systems model
- Sources of stress among the lowland Maya
- Responses by the Maya élite
- Summary

25. Situation Model Development: A Case Study of the Classic Maya Collapse
DOROTHY HOSLER, JEREMY A. SABLOFF AND DALE RUNGE
- Introduction
- The approach
- The collapse
- The verbal model
- The mathematical model
- Discussion
- Notes
- References

Index
Unpublished Spanish manuscripts in the Archivo General de Indias (Seville, Spain) and the Archivo General de Centro América (Guatemala City, Guatemala) contain eyewitness Spanish descriptions of sizeable native Maya populations in parts of lowland Chiapas, El Petén, Verapaz, and Izabal. Observers describe in vivid detail the population density, settlement pattern, agriculture, hunting, fishing, gathering, artifacts, clothing, architecture of residential and religious buildings, political organization, social structure, trade, and other ethnographically interesting aspects of sixteenth-seventeenth century southern lowland Maya life.

France Scholes discovered several thousand pages of these documents in Spain; Agustin Estrada, Lawrence Feldman, and the author have found still more unpublished ethnohistorical information in Guatemalan archives. These manuscripts show that the Cholti-Lacandon, Chiapas Chol¹, Yucateco-Lacandon, Petén Ytzá, Quejache, Mopán, Topuequa, Verapaz Chol, and other thriving sixteenth-seventeenth century native lowland Maya peoples had complex social, political and religious systems which will provide a variety of new and different models to replace the overused and misused traditional models which simplistically transfer Landa’s or
modern highland ethnographers’ descriptions back on the hapless eighth
century Classic Maya in forced ethnographic analogies.

J. Eric S. Thompson recognized long ago the utility of working with
ethnohistorical material: “At present, Maya studies suffer from imbalance.
On the one hand many archaeologists seldom lift their eyes from their
excavations to see how colonial sources can supplement their findings, or
are content to satisfy their curiosity with Landa’s account of the Maya”
(1970: xvi). One of Thompson's contributions to knowledge of the ancient
Maya was his ethnohistorical description of the numerous Maya populations
of the lowlands prior to the arrival of the Spaniards (1938, 1970).

THE CHOLTI-LACANDON OF LOWLAND CHIAPAS

The native inhabitants of sixteenth-seventeenth century lowland Chiapas,
Mexico were Lacandon Maya who spoke a Cholti Mayan dialect (Thompson;
Moran, 1929; Hellmuth, 1970a, b, 1972). Mostly unpublished, ethno-
graphic information on these Cholti-Lacandon includes: lists of deities, sacred
places, eyewitness descriptions of religious sacrifices, dances, ceremonies, and
architectural accounts of cult buildings (including details of the number of
incense burners, their size, shape, color, and their placement in the ceremonial
building). The Spaniards provide remarkably detailed demographic data and
census records (including a house by house census of an entire village listing the
Maya name of the head of each household, and the kin relationship of every
member of the household to the head of the house). The Spaniards list the
personal Maya name of every adult in the entire region; Nahua, Chol, Cholti,
possibly Chontal and Yucatec names appear (Feldman, personal communication,
1973; Hellmuth, 1970b, 1972). Spanish chroniclers list all animals and birds
raised or hunted, plants raised or gathered wild, fish and shellfish gathered, and
some idea of relative abundance location, seasonability, and preference for these
food items. A vocabulary provides the native Mayan terms for most known
subsistence items.

Spanish descriptions of civic and residential structures are so detailed
that we learn of how curtains were made, where bed platforms are hung
and two ways in which infants were cradled within the house. The Spanish
friars, soldiers and administrators give all kinds of ethnographic references, lists
of household artifacts, and manners of food storage, even recipes. One
observer wrote down the hour at which each day the semi-domesticated
macaws flew up to perch on the house ridge poles; someone else wrote down
complete descriptions of the clothing and jewelry of both sexes. There are
enough comments on political and social organization in the manuscripts
to enable anthropologists to propose new models of Maya political and
social organization based on actual southern lowland situations.

For archaeologists and anthropologists, the most fascinating information is on lowland Chiapas agriculture, hunting and gathering. Coupled with records of native Maya *milpa* agriculture is accounts of population distribution and relations between the main settlements and agricultural lands. These facts for lowland Chiapas subsistence can suggest how the Classic Maya of the same region would have sustained themselves.

These Cholti-Lacandon should not be confused with the twentieth century “Lacandon” who are Yucatec Maya speakers who moved into lowland Chiapas from adjacent Yucatan and Campeche between about 1630 and 1730 onto land originally occupied by the native Cholti-Lacandon. Thompson deserves the credit for reminding us that the modern “Lacandon” are not the original inhabitants of the Palenque-Yaxchilan-Bonampak region (1938). Earlier Sapper had expressed the same caution, that two quite distinct, unrelated groups of Indians had received the lay person's term "Lacandon". Unpublished sixteenth and seventeenth century Spanish documents substantiate Sapper's and Thompson's findings that the sixteenth century inhabitants of lowland Chiapas, Mexico, were Cholti speakers colloquially termed “Lacandones” (Sapper, 1907; Thompson, 1938; Hellmuth, 1970a,b, 1972). These Cholti-Lacandon were to one degree or another the genetic and cultural descendants of the survivors of the collapse of Classic Maya centers such as Palenque, Yaxchilan, and Bonampak.²

These Cholti-Lacandon were exterminated by Spanish warfare, disease and forced labor; the few survivors were rounded up during the years 1695-1712 and moved to the Guatemalan highlands where they died. The extermination of the native lowland Chiapas Maya is amply documented in Spanish records and has been abstracted in several recent publications (Hellmuth, 1970a, b, 1972). The Yucatec-speaking Indians moved into lowland Chiapas from adjacent southern Yucatan and Campeche to escape Spanish oppression during the seventeenth and early eighteenth century.

**SIXTEENTH-SEVENTEENTH CENTURY CHOLTI-LACANDON MAYA SUBSISTENCE**

Cortes learned about the Cholti-Lacandon during his march through the lowlands in 1525, and a variety of early Spanish reports exist in the archives, but somewhat more complete ethnographic descriptions of lowland agriculture come from the year 1586. The Spaniards were fanatical writers and field commanders sent back to their headquarters long eyewitness reports
“... we went ahead and below some large hills where these Lacandones have their milpas. . . . We went through all those hills where we cut down and burned more than 40 milpas, large and small, of the Lacandones, of which the maize was ready to harvest (14th of April) in the same sugar cane and others were in flower. 'We burned 6 or 7 storage bins of maize with lots of other kinds of vegetables and we uprooted and burned the camotes and other root crops which grew there, and we also chopped down cacao trees and some fruit trees which they had in those milpas (AGCA, 1937: 141, author's translation)

"... on the 21st of April . . . we silently entered the milpas in which we did not find anybody at all, although there were signs in them that the Lacandones were around in them, because we found the cleared areas burned ready to plant, and we found some very fresh signs of the Lacandones. In these milpas Your Lordship found a great quantity of maize closed in storage bins with nice houses, perhaps . . . and a great quantity of root crops for eating such as camotes and other similar things, and beans and peppers and pineapples and platanos and other fruits. Your Lordship had us chop down and destroy all of these (1937: 144)

“... we found 47 little huts and we chopped down 13 green milpas and plantations of cacao (1947: 146)

“... we found that the Lacandones had seeded the cleared areas of a few milpas outside of those throughout the whole hill area, and that many of the plantings were of the height of one and a half vara, some higher, others less. We could see that the Lacandon Indians maintained the milpas cleared... Many of the fields were not seeded, it seemed because of lack of seed... (1937)

"His Lordship had us for his part cut down and destroy 19 milpas and from every one we yanked up the camotes and other root crops that they had planted for eating and we chopped down many cacao trees... In the little huts we did not find any remains nor sign that these Lacandones were eating maize bread and we found in (the huts) the dishes and where they seem to eat, We found only signs of palmitos and colored zapotes and some monkey bones and also it seemed that they had eaten the mountains of snailshells that they had gathered together to eat (1937)

“... and said rocky island is presently totally destroyed and burned under orders of the Lord Captain in such a manner that not a wooden pole remained ...and all the foundations of the houses were ruined and everything else that could be destroyed was so. We cut down all the fruit trees and other trees which the Lacandones seem to raise for shade and to... the canoes in such a manner that the island is presently nothing but barren rock” (1937:156)

Over the next 100 years the Spanish armies systematically destroyed the aboriginal lowland Maya subsistence economy. Especially during the intensive campaigns of 1694-97 and round-ups of 1697-1712, the Spanish eventually obliterated the original Maya form of agriculture. Fortunately
abundant records of these years remain in the archives, and we can recon-
struct the traditional lowland Maya agriculture—a form of intensive
agriculture nowhere practised today by current inhabitants of Chiapas or
adjacent El Petén.
Villagutierre’s 1701 history has previously been the standard source of
information on the Conquest of the Lacandon and Petén Ytzá, with
Ximenez providing similar bits of ethnohistorical information. Recently, though,
Estrada located in the church archives a series of interesting documents on the
principal Lacandon settlement of Nuestra Señora de los Dolores de Lacandon.
Estrada discovered manuscripts, which show the town's original Mayan name
was Sac Balam (1970a,b). In 1971, the author found the lost 500-page
relación of Nicolás de Valenzuela—the original, handwritten, eyewitness
account of the Spanish Conquest of the Cholti-Lacandon. This relación turns out
to have been the major source for Villagutierre’s history, except that
Villagutierre eliminated most of the ethnographic facts, which would have been
of interest to anthropologists. A typed transcript of this important unpublished
history is now in the research library of the Foundation for Latin American
Anthropological Research.

“…from nine o’clock of that day Your Lordship received notices of finding
many milpas that there were in that region… (we found) bowls, cantaros,
frying dishes, chile, maize, beans, and little barrels fabricated of tree bark
wrapped up with leaves of "vijao" secured with vine. In the little barrels we
found very black powder which later we discovered the Indians like for blacken-
ing themselves, and other things and household utensils of their use that they
had kept in the little houses or huts of said milpas (Valenzuela, 1965: f.158r)
“… the town is situated in exposed country stirred by all winds with pleasing
plains with abundant good pasture land, and closed in by a ridge of hills…
“… and there are one hundred and three houses, including the three of
community use
“… In the center of this town of Sac Balam you find three community houses,
one from east to west, another from north to south, and the other from east to
west, each one looking out on the other, leaving in the center a spacious atrium
(Estrada)
“And all (the houses) are spacious and of good fabrication, with strong and
thick wood which prop up and support the roofs. The roofs are of much straw
recently tied down and rising regularly in height, to let the water run off
the abundance of straw. The height of the roofs is for resisting the strength of
the rains in the winter.
And all the houses have their fronts open, and the sides and rear built up of
stakes covered with clay. And inside those houses of private people there are
rooms in which the Indian women cook and have the implements of eating and
drinking. And with these excellent and curious stones, more polished and clean
... And in each room there is a bed platform of wood secured in posts strongly driven into the ground, spacious enough for a minimum of 4 persons.

And in some rooms can be seen fabricated at the sides little shelves of thin, worked, and flush little cradles in which their infants are accommodated so that they will not defecate on the main bed platform, nor put themselves in danger of being smothered. And in some halls there were 4 stakes about 3 quarters of a vara high driven into the ground and on them wrapped around tree bark so soft, like cotton, and so interwoven like cloth, and something like chamois. And one comes to understand that inside said stakes they put the children, securing them with the cords of said bark, which they have everywhere.

Cradles for babies were little crates of reed, very clean and well put together, and tied with such care, hung on the hanging (bed) platforms at such a height so as to allow the mother, seated in her bed, to nurse the infant.

And in two of said houses two large nets were found... with their floats, and for weights clay (balls) well sewn on...

In the house of Ixquin there was a curtain of cane of reed grass linked together with such art that he gathered it all up, letting it fall until a very perfect lattice was formed, because all the cane pieces were sewn from within with some very thin little string of the century plant.

They found all the houses had been left full of provisions of maize, beans, many turkeys, enough chickens, some cotton, pots, flat bowls, well made co-males, very curious weaving instruments of the women, many blow guns with the little net bags of pellets and their sockets for molding them made of turkey long bone, axes of stone, chisels and mallets of stone, and other things of rational people.

Their little dogs were found to be very skinny. And there were many tame macaws. At 5 o'clock in the afternoon, after having flown around, they came to roost on the ridge poles of all the houses, forming a delightfully beautiful landscape of various deep red colored clusters of flowers.

There are in the same town fruit trees, of platano, zapotes, jocotes, anonas of hot lands, guanabanas, trees of round gourds, some achiote trees, very sweet pineapples; and of all this they also have in their milpas and in them much camote, ayote, chayote, Yuca, beans, and sweet sugar cane, and in some parts lemons.

The huts of the milpas, although smaller (than the houses of the town) are as well built. And in the milpas they have mud-daubed granaries of maize.

And having occupied their houses those Spaniards that resided in the town (of Sac Balam) considered (that the Lacandones in fact) lived rationally like human beings because they do not have more than one wife, who each assists and applies herself with care to the work of the milpas and sown places of maize, chile, and beans, in which they plant pineapples, plantanos, potatoes, jicamas, jocotes, zapote trees, and other fruit trees. Being of the hot country they are more industrious than our pacified Indians because for the most part they have very large milpas, and because they are the more industrious because of all the large and small logs they must chop up with a hatchet of dark green colored stone,
nicely worked, of which one finds some few... The land is humid and spacious and has two harvests. And they change sites for the seeding places with which fruits they maintain themselves... And all raise chickens, and those that are the most abundant are turkeys... of which we found in the village many troops... They kill them by twisting their heads and putting a foot over them pulled (the heads) off the turkey. And later they threw them into a fire to burn off the feathers. Deplumed, they washed them and put (them) to cook. ... said trail serves for going to the milpa places of said (cacique) Cabnal and of the Indians of his calpul, who make milpa in that territory, especially in summer time, for being humid land, and because of this good for milpas of said summer, and around the whole circuit of the lake... there are... only milpa places of the Indians of this town of the calpul... (Valenzuela, 1695, Estrada, 1970a, AGI various, Tozzer, 1913, and Villagutierre, 1933)

"And all the men and women are very liberal and agreeable and give and distribute with liberality what they have, leaving their houses to contribute as a gift, posol, and a drink which they made of raw cacao which they gather in abundance in the forests without seeding nor cultivating it...

And also the Indian women are very industrious, and raise hens and turkeys which they call "chickens of the land" and work and have cotton and weave with embroidery their cloths with ability and application, giving them perfect colors. The red color is abundant, for they have the palo de Brasil, and the black color comes from powder that you find in all the houses in little barrels. We found such quantity of this black powder that we presume that they sell it in other towns.” (Villagutierre, 1933: 244)

In addition to these records, the so-called Moran vocabulary provides Cholti Maya terms for dozens of crops, game, fish, and other subsistence items. This vocabulary is the work of several hands, was based on an earlier version of the Verapaz Chol dialect region, but is listed as being of the Cholti dialect, signed, and dated at Nuestra Señora de los Dolores de Lacandon (Sac Balam), Chiapas. Most of the following plant names were taken from this1695 dictionary, with additions from Villagutierre, Ximenez (Vol. III), and occasionally Tozzer’s transcript of an interesting Spanish description of the Cholti-Lacandon. To facilitate comparison with Cyrus Lundell’s list of “plants probably utilized by the Maya of Petén and adjacent lowlands” (1938), Table 1 is arranged roughly in the same order as Lundell’s. The botanical names are educated guesses provided for general reference only; it is often difficult to equate correct botanical identification with Spanish or native Maya terms without having the actual fruit for reference.

Rather than just maize, beans, and squash of the “model Maya”, real Maya ate: *camote* (sweet potato), *jicama* (rootcrop), probably *macal* (yautia, Xanthosoma yucatense ), and definitely *yuca* (manioc), hearts of palm,
<table>
<thead>
<tr>
<th>SPANISH TERM</th>
<th>CHOLTI-LACANDON</th>
<th>PROBABLE BOTANICAL TERM</th>
<th>PUBLISHED REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>maiz</td>
<td>IXIM</td>
<td><em>Zea Mays</em> L.</td>
<td>(Moran; Villagutierre: 206; Ximenez: 32, 44, 46-47)</td>
</tr>
<tr>
<td>frisol</td>
<td>BUL</td>
<td><em>Phaseolus vulgaris</em></td>
<td>(Moran; Villagutierre: 206; Ximenez: 32, 44, 47)</td>
</tr>
<tr>
<td>Frijoles rojas</td>
<td></td>
<td></td>
<td>(Tozzer, 1913: 505)</td>
</tr>
<tr>
<td>ayote</td>
<td>CHUM</td>
<td><em>Cucurbita</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Pepita de ayote</td>
<td>CACIL</td>
<td><em>Cucurbita</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>chayote</td>
<td>CHUM</td>
<td><em>Cucurbita</em></td>
<td>(Moran; Ximenez: 44)</td>
</tr>
<tr>
<td>Calabaza</td>
<td></td>
<td></td>
<td>(Moran; Villagutierre: 242; Ximenez: 44)</td>
</tr>
<tr>
<td>Batata</td>
<td>IZ IZ</td>
<td><em>Ipomoea Batatas</em></td>
<td>entry in Moran is: “batata, camote IZ IZ; turma de tierra, papa ALION</td>
</tr>
<tr>
<td>camote</td>
<td>IZ IZ</td>
<td></td>
<td>(Villagutierre: 242)</td>
</tr>
<tr>
<td>papa</td>
<td>ALION</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>xicama</td>
<td>Tzin</td>
<td><em>Pachyrhizus erosus</em></td>
<td>(Moran; Ximenez: 49)</td>
</tr>
<tr>
<td>Yucca</td>
<td></td>
<td><em>Manihot</em></td>
<td>(Villagutierre: 242)</td>
</tr>
<tr>
<td>Raices (non specific)</td>
<td></td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>xacote</td>
<td>PIX</td>
<td><em>Lycopersicum</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>tomate</td>
<td>PAAC</td>
<td><em>Lycopersicum or (?)</em></td>
<td>(Moran; Lundell, 1939: 42)</td>
</tr>
<tr>
<td>Hongo, yerba de palos</td>
<td>OCOX</td>
<td></td>
<td>(Moran, in Thompson, 1954; 20)</td>
</tr>
<tr>
<td>comestible, bueno</td>
<td></td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>corozo</td>
<td>TUCH</td>
<td><em>Orbignya cohune</em> (Mart.) Dahlgren</td>
<td>(Moran)</td>
</tr>
<tr>
<td>palma</td>
<td>YU</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Fruta del coyol</td>
<td>MAP</td>
<td><em>Acrocomia Mexicana Karv.</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>zapote</td>
<td>HAAZ</td>
<td><em>Achars Zapota</em> L.</td>
<td>(Moran; Villagutierre: 242; Lundell, 1939: 42 lists “mamey apple” for HAAZ and “zapote” for YA)</td>
</tr>
<tr>
<td>Bebida de zapoyol</td>
<td>AMUCHIT</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Pepitas de zapote</td>
<td>UAI</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>aguacate</td>
<td>HUN, UN</td>
<td><em>Persea Americana Mill.</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>circuela</td>
<td>LUM</td>
<td><em>Spondias purpurea</em> L.</td>
<td>(Moran; Lundell gives ABIL, 1939:44)</td>
</tr>
<tr>
<td>SPANISH TERM</td>
<td>CHOLTI-LACANDON</td>
<td>PROBABLE BOTANICAL TERM</td>
<td>PUBLISHED REFERENCES</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Guayaba “other fruit trees”</td>
<td>PATA</td>
<td><em>Psidium Guajava</em> L.</td>
<td>(Moran)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Villagutierre: 242; Ximenez: 47, 139)</td>
</tr>
<tr>
<td>sonzapote</td>
<td>TZOCOTZ</td>
<td><em>Licania platypus</em> (Hemsl.) Fritsch.</td>
<td>(Moran)</td>
</tr>
<tr>
<td>uvas</td>
<td>TTZUTZUB</td>
<td><em>Cocolaba</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Cacao grande</td>
<td>UAALCAB</td>
<td><em>Theobroma</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>cacao</td>
<td></td>
<td></td>
<td>(Tozzer, 1913: 504, 507; Ximenez: 46)</td>
</tr>
<tr>
<td>Todo dulce</td>
<td>OCHAB, OCOX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frutilla que beben, redondita pequeña</td>
<td>AHX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chile</td>
<td>ICH</td>
<td><em>Capsicum</em></td>
<td>(Moran; Villagutierre: 242)</td>
</tr>
<tr>
<td>chile</td>
<td>PACHICH</td>
<td><em>Capsicum</em></td>
<td>(Moran)</td>
</tr>
<tr>
<td>albajaca</td>
<td>BOLONCOU</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Caña dulce</td>
<td>TO</td>
<td></td>
<td>(Moran; Ximenez: 44)</td>
</tr>
<tr>
<td>zarsaparilla</td>
<td>CHAHON TIZ</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Frutilla para labar redondita, el árbol grande</td>
<td>ZIONTE</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Fruta verde</td>
<td>YAX, CUXUL, MACAN</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>Jabon, hay una frutilla que sirve de lavar sabana, yerba de la sabana, paja para cubrir case</td>
<td>BITZ</td>
<td><em>Inga edulis</em> Mart.</td>
<td>(Moran)</td>
</tr>
<tr>
<td></td>
<td>AC</td>
<td><em>Imperata contracta</em> HBK. Hitche.</td>
<td>(Moran)</td>
</tr>
<tr>
<td>algodón</td>
<td>TINAM</td>
<td><em>Gossypium</em> spp.</td>
<td>(Moran; Villagutierre: 206; Ximenez: 32)</td>
</tr>
</tbody>
</table>
Table 1 –contd.

<table>
<thead>
<tr>
<th>SPANISH TERM</th>
<th>CHOLTI-LACADON</th>
<th>PROBABLE BOTANICAL TERM</th>
<th>PUBLISHED REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palo de Santa Maria</td>
<td>BOHBO</td>
<td>Calophyllum brasiliense</td>
<td>(Moran: Tozzer, 1913: 508)</td>
</tr>
<tr>
<td>flor tabaco</td>
<td>NIXTE</td>
<td>Plumeria rubra L.</td>
<td>(Moran)</td>
</tr>
<tr>
<td>ocote tree for red dye</td>
<td>TAH, TAHTÉ</td>
<td>Pitch pine</td>
<td>(Moran; Tozzer, 1913: 505)</td>
</tr>
<tr>
<td>ocote tree for black dye</td>
<td></td>
<td>Bixa Orellana L.</td>
<td>(Tozzer, 1913: 508)</td>
</tr>
<tr>
<td>balsam</td>
<td></td>
<td>Haemotoxylum Campechianum L.</td>
<td>(Tozzer, 1913: 508)</td>
</tr>
</tbody>
</table>

Table 2

*Animals, birds, fish, etc. used for food by the Cholti-Lacandon Maya*

<table>
<thead>
<tr>
<th>SPANISH TERM</th>
<th>CHOLTI-LACANDON</th>
<th>ENGLISH</th>
<th>PUBLISHED REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>gamo</td>
<td></td>
<td>Buck of fallow deer</td>
<td>(Moran: 33)</td>
</tr>
<tr>
<td>Cabra montes</td>
<td>YUC</td>
<td>Mule deer</td>
<td>(Moran: 14)</td>
</tr>
<tr>
<td>Cabra castilán</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venado, ciervo</td>
<td>CHIJC</td>
<td>deer</td>
<td>(Moran; 11: Tozzer: 505)</td>
</tr>
<tr>
<td>Venado, es el propio ardilla</td>
<td>QUEHEI</td>
<td>squirrel</td>
<td>(Moran: 11)</td>
</tr>
<tr>
<td>jabali</td>
<td>CHUCH</td>
<td>Peccary (wild pig)</td>
<td>(Moran: 39; Ximenez: 46)</td>
</tr>
<tr>
<td>cotusa</td>
<td>AH CINZU, CINZU</td>
<td></td>
<td>(Moran)</td>
</tr>
<tr>
<td>danta</td>
<td>TIIL</td>
<td>tapir</td>
<td>(Moran: 24)</td>
</tr>
<tr>
<td>Rabbit conejo</td>
<td>TUUL</td>
<td>rabbit</td>
<td>(Moran: 17)</td>
</tr>
<tr>
<td>Mono barbudo</td>
<td>BATZ</td>
<td>Howler monkey</td>
<td>(Moran: 43, 44)</td>
</tr>
<tr>
<td>Mono de gueguecho mico</td>
<td>MAX</td>
<td>Spider monkey</td>
<td>(Moran: 45)</td>
</tr>
<tr>
<td>Animal como mico, amarillo en las palmas</td>
<td>ACAMAX</td>
<td>Unidentified tree dwelling animal, possibly “mico de noche”</td>
<td>(Moran: 10)</td>
</tr>
</tbody>
</table>
Table 2 –contd.

<table>
<thead>
<tr>
<th>SPANISH TERM</th>
<th>CHOLTI-LACANDON</th>
<th>ENGLISH</th>
<th>PUBLISHED REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>perro</td>
<td>TZI</td>
<td>Domestic dog</td>
<td>(Moran; Villagutierre: 206; Ximenez: 32, 47). Dogs were kept around the village, but no evidence suggests that they were eaten.</td>
</tr>
<tr>
<td>faisán</td>
<td>CAMBUL</td>
<td>(Moran: 31)</td>
<td></td>
</tr>
<tr>
<td>paugil</td>
<td>CAMBUL, PUPUM,</td>
<td>(Moran: 50)</td>
<td></td>
</tr>
<tr>
<td>paloma</td>
<td>CACPUPUM</td>
<td>dove</td>
<td>(Moran: 49)</td>
</tr>
<tr>
<td>codornis</td>
<td>TUT</td>
<td>(Moran: 17)</td>
<td></td>
</tr>
<tr>
<td>Pajaros que se come</td>
<td>COBAN</td>
<td>(Moran: 50)</td>
<td></td>
</tr>
<tr>
<td>Pajaros como perdiz</td>
<td>MACXUL PUPUM</td>
<td>(Moran: 50)</td>
<td></td>
</tr>
<tr>
<td>Ave nocturno</td>
<td>PUHUI</td>
<td>(Moran: )</td>
<td></td>
</tr>
<tr>
<td>guacamaya</td>
<td>AHLO</td>
<td>(Moran: )</td>
<td></td>
</tr>
<tr>
<td>guacamaya</td>
<td>MO</td>
<td>(Moran: Ximenez: 32)</td>
<td></td>
</tr>
<tr>
<td>Gallo de la tierra</td>
<td>ABCO</td>
<td>turkey</td>
<td>(Moran: Ximenez. 31, 32)</td>
</tr>
<tr>
<td>Pájaro como perdiz, se come mejor que gallinas</td>
<td>COLOL</td>
<td>(Moran: 50)</td>
<td></td>
</tr>
<tr>
<td>pava</td>
<td>AH COX</td>
<td>Turkey ben</td>
<td>(Moran: 49)</td>
</tr>
<tr>
<td>tórtola</td>
<td>UT</td>
<td>(Moran)</td>
<td></td>
</tr>
<tr>
<td>Papagayo perico</td>
<td>XCUCH</td>
<td>(Moran)</td>
<td></td>
</tr>
<tr>
<td>Papagayo grandes</td>
<td>XECOM</td>
<td>(Moran)</td>
<td></td>
</tr>
<tr>
<td>Gallina de castilla</td>
<td>YACIB</td>
<td>Spanish chicken</td>
<td>(Moran: 82; Ximenez: 32)</td>
</tr>
<tr>
<td>Gallo de castillo</td>
<td>AHTZO YAQUI</td>
<td>Spanish rooster</td>
<td>(Moran)</td>
</tr>
<tr>
<td>Gallo de castillo</td>
<td>UTEHLON YAQUIB</td>
<td>Spanish rooster</td>
<td>(Moran)</td>
</tr>
<tr>
<td>Zabalo, un pescado</td>
<td>TZATZPAT</td>
<td>fish</td>
<td>(Moran)</td>
</tr>
<tr>
<td>Pescado sábalos</td>
<td>TZATZPAT</td>
<td>fish</td>
<td>(Moran)</td>
</tr>
<tr>
<td>Un genero de pescado</td>
<td>TEVAI</td>
<td>fish</td>
<td>(Moran: 66)</td>
</tr>
<tr>
<td>bagre</td>
<td>LU, AHWU</td>
<td>fish</td>
<td>(Moran: 10)</td>
</tr>
<tr>
<td>mojarra</td>
<td>IXCHE</td>
<td>fish</td>
<td>(Moran: 46)</td>
</tr>
<tr>
<td>Pescado pargo</td>
<td>LOC</td>
<td>fish</td>
<td>(Moran)</td>
</tr>
<tr>
<td>pescado</td>
<td>CHAI</td>
<td>fish</td>
<td>(Moran: 49)</td>
</tr>
<tr>
<td>Pescaditos pequeños</td>
<td>PULUM</td>
<td>fish</td>
<td>(Moran: 50)</td>
</tr>
<tr>
<td>Pescado bobo</td>
<td>CHITAM CHAI</td>
<td>fish</td>
<td>(Moran: 49)</td>
</tr>
<tr>
<td>Pescaditos pequeños</td>
<td>CHILAM</td>
<td>small fish</td>
<td>(Moran: 50)</td>
</tr>
<tr>
<td>Un genero de pescado</td>
<td>TEUAI</td>
<td>fish</td>
<td>(Moran)</td>
</tr>
</tbody>
</table>
Table 2—contd.

<table>
<thead>
<tr>
<th>SPANISH TERM</th>
<th>CHOLTI-LACANDON</th>
<th>ENGLISH</th>
<th>PUBLISHED REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>camarones</td>
<td>XEX</td>
<td>shrimp, freshwater</td>
<td>(Moran: 17)</td>
</tr>
<tr>
<td>cangrejo</td>
<td>YUX</td>
<td>crayfish</td>
<td>(Moran: 14)</td>
</tr>
<tr>
<td>cacacol</td>
<td>TUTU</td>
<td>shellfish</td>
<td>(Moran: 14)</td>
</tr>
<tr>
<td>Caracol grande de rio</td>
<td>TOT</td>
<td>Shellfish, river</td>
<td>(Moran: 19)</td>
</tr>
<tr>
<td>Caracol, unos grandes del mar</td>
<td>TULIX</td>
<td>Marine shellfish</td>
<td>(Moran: 14)</td>
</tr>
<tr>
<td>Peje morado</td>
<td>YAXCHUC, CUM VAI, MANATI</td>
<td>fish</td>
<td>(Moran: 50, 50)</td>
</tr>
<tr>
<td>Peje mulier</td>
<td>MANATI</td>
<td>Manatee (?)</td>
<td>(Moran: 50)</td>
</tr>
<tr>
<td>Peje espada</td>
<td>CHULUZ</td>
<td></td>
<td>(Moran: 57)</td>
</tr>
<tr>
<td>Raya, un pez,</td>
<td>TON</td>
<td></td>
<td>(Tozzer (1913:505) mentions fish, but no particular species.)</td>
</tr>
</tbody>
</table>

Sources are Moran’s 1695 vocabulary of Cholti language, Tozzer’s 1913 translation of a letter in the Archivo General de Indias, Villagutierre’s 1701 history, and Vol. III of Ximenez’s history.

various zapote fruits, plums, guayaba, grapes, cacao, and a variety of other fruits and nuts (ramon was not eaten though, except rarely), chiles of several varieties, tomatoes, and other vegetables. Bananas, and citrus fruits, as well as chickens, were introduced by the Spaniards into Yucatan and quickly spread inland.

In addition to maize, beans, squash, root crops, tree fruits and nuts, the Cholti-Lacandon ate: two species of deer, two species of monkey, at least one species of peccary, aguti, rabbit, tapir, iguana, faisan, turkey, and more than six kinds of smaller birds, lake fish, river fish of several species, crayfish, freshwater shrimp, several species of freshwater shellfishes, land snail, and most likely river turtles an eels (Villagutierre, 1933: 206, 242; Ximenez, 1929-31. III: 32, 44, 46-47, 139; Moran, 1695; Estrada, 1970; Valenzuela, 1695; Tozzer, 1913; and various AGI manuscripts).

It would be fair to conclude that the lowland Chiapas Maya had a well balanced diet and did not rely exclusively on maize as do their twentieth century counterparts. Maize was certainly a major crop, but so were root crops, other vegetables, tree fruits and nuts, hunting, fishing and gathering. Sixteenth-seventeenth century manuscripts document quite
clearly that the Chiapas Chol (both lowland and highland), Verapaz Chol Mopán, Petén Ytzá, and other lowland Maya had similar subsistence practices. For example, Ximenez notes that the Mopán Maya (southern El Petén and adjacent Belize) raised "manioc and very large sweet potatoes and other edible root crops, and we found some domesticated turkeys…" (III: 19). As more early Spanish manuscripts are transcribed archaeologists will at last have a complete record of the original, native diet of the lowland Maya. Knowing the actual diet, it will be easier to estimate the maximum population for these lands during the Late Classic Period. Previous estimates are based largely on a maize base; we now recognize that such estimates are not applicable.

SUBSISTENCE OF THE CENTRAL PETEN:
SEVENTEENTH CENTURY

Spanish descriptions of Cholti-Lacandon agriculture provide data for new models for Classic Maya subsistence at such sites as Piedras Negras, Yaxchilan, and Bonampak. Palenque would have had an even more varied subsistence economy due to its proximity to rolling plain-like terrain and flooded regions suitable for more sustained agriculture. To get information on ancient Maya subsistence of the central Petén we can turn to Spanish records for this region. The Tikal-Uaxactun region was practically totally depopulated, although the Quejache lived in sections of the northern Petén. The Lake Petén Itzá region was quite heavily populated though, perhaps duplicating former Classic Period population intensity. The general settlement pattern of this lake region has been introduced in another publication (Hellmuth, 1971). Spaniards list more than 109 settlements. Some of the people living around the lakes were survivors of the collapse of the inland cities of the Classic Period, who had migrated down from Tikal and other cities as their dry season water storage reservoirs ceased to function due to lack of maintenance. These remnant populations were ruled by a small élite group of Petén Itzá who had moved south from Chichén Itzá during the twelfth-thirteenth centuries. The original Spanish spelling with a “Y”tzá will distinguish these southern Ytzá from their Yucatec forefathers.

Several thousand pages of unpublished documents describe the central Petén land and its people. Villagutierre’s 1701 history is the best-known published source, but he presents only a fraction of the ethnographic information available in the Archivo General de Indias. Notes of France Scholes and Edward Calnek introduced me to these marvelous documents
in Seville. The Spanish records for Lake Petén are the best data, which will ever be available from ethnohistorical sources, since this region offers the topography, soil, climate, and population density closest to that of the Classic period of further north at Tikal, Uaxactun, Yaxha, or Nakum. Spanish chronicles for the Lake Petén region are certainly more appropriate models for Tikal and Uaxactun than Landa’s Yucatan, Steggerda’s Yucatan, or twentieth century Petén agriculture of a population of recent arrivals from the adjacent highlands (Adams, 1965).

Cortes and early seventeenth century Spanish writers record useful facts about the central Petén: “Canec took out of the canoe birds, fish, tortas, honey, fruit, and gold, though little, and sartales of red colored shells which the Indians valued greatly” (Herrera, 1934-47, VII: 263). Canec told the Spaniards that his vassals took care of his plantations of cacao trees (Cortes, 1868: 57). Later Cortes speaks of crossing through fields well planted with chocolate trees and maize (1868: 59-60). When Cortes got near the coast approaching Nito, he found:

“... much cotton ready for weaving cloth, and other clothes, lots of dry maize on the cob, much salt, a quantity of cacao, chile, beans, fruit, and other things to eat, turkeys, faisanes, birds in cages, and dogs penned up. And all the shore was full of orchards of cacao and other fruits.” (Herrera, 1934-47, VII: 280-281)

Villagutierre adds that Cortez saw maize, eggs, lake fish, wax, cotton, achiote, vanilla, and many other vegetables. Cortes and later Spaniards noted the abundance of domestic turkey, wild faisans, lots of other birds, game of several species, even rabbits, (1933: 44, 82, 87, 97, 99, 274, 382).
Andres de Avendaño has left extensive chronicles on his trips throughout the Petén region:

“I asked them what products they had for their food and clothing, and they told me that they had a great deal of maize, beans, seeds, peppers, and that they sowed all this two or three times in the year; also many plantains and chunes, which are like the chayotes, though without thorns; some cacao (though but little), vanilla, and in some orchards enclosed with stakes in their homes some wild cabbage; I did not see these nor the onions which however the singers who accompanied me told me that they had seen; there is a great deal of cotton, cochineal, indigo, which accounts for the abundance of clothing which they have and give to the Quehache Indians and those from Tipu in barter for hachets and machetes…” (1696b, f. 36v.)

Villagutierre makes special mention of a tree, which is certainly ramon:

“one finds innumerable trees whose branches and leaves are much more sus-
tenance for the horses and other beasts, than if it was pasture…” (p. 384)

The current fad among writers who list *ramon* fruit as a major subsistence items shows how theoretical models can quickly create a “model Maya” which bears no relationship to the actual Maya who lived in the lowlands.

One of the non-Ytzá groups near Lake Petén, the Tulunqui, made extensive use of the maguey plant. The Tulunqui made “water, wine, oil, vinegar, honey, ‘jarabes’, string or thread, needles, beams, and roofing for their houses and other things” from this useful plant. The Tulunqui also used maguey plants for protective, thorny fences (Villagutierre, 1933: 378-379). Although this plant is well known in Yucatan, it is not usually stressed in descriptions of the lowland Maya. A botanical survey of the natural geographical distribution of this plant and its relatives would tell archaeologists which Classic Maya populations could have utilized it.

During the conquest of Tayasal in Lake Petén Ytzá, and during the years of consolidating their military control (1697-1703) the Spaniards completed an economic survey of the central Petén from the Río de la Pasión – Río Usumacinta to east of Lake Petén. Enough descriptions of the land and its products are preserved in the AGI to provide a remarkably complete picture of the agriculture of the lowland Maya. Aside from a few abstracts in Villagutierre’s history, virtually none of this information has previously been available to archaeologists. The citations below are taken from typed transcripts in the files of the Foundation for Latin American Research gathered in the Archivo General de Indias (AGI). The Spaniards noted:

“maize, camotes, and calabazas… “maize, camotes, and calabazas… (f. 33v)
“maize and all kinds of vegetables… (f. 53v)
“hills are full of deer, wild pigs, turkeys, faisanes, pauxies and tejones…the Indians raise) tobacco, cacao, grana (cochinilla) achiote, ańil, and many other things, since the Indians have everything in their milpas (f. 80r,v) and the land is so fertile, that as can be seen, and as the Indians have told us, one milpa keeps on producing fruit until the grandchildren of that which (originally) cut it down, giving constantly two harvests a year…
“lots of fish, icoteas or turtles…(f.82r)
“from the Lacandon region (of Chiapas) up to this Ytzá region are many woods of wild cacao, vanilla, balsamo, palo de Maria that they call Baria, very medicinal for wounds, pita, palo de Brasil, allspice, an abundance of beehives, and something they call palo de Campeche. In the milpas through which we passed they get two harvests of maize and in them cotton, tobacco, sweet cane, yucas, platanos, camotes, pineapples, and many other fruits…we have seen lots of grana cochinilla…” (f.82v)

Fray Gabriel de Artiga testified that:
“... when they clear a new field they make a little hut in it and the milpa produces fruit for more than 20 years giving, without rest, two harvests in each year, and I have seen them raise in them maize, calabazas, beans, chile, pineapples, tobacco, sweet cane, platanos, batatas, chayotes, grana (cochinilla), cotton ... and in the savannas there are many deer and wild turkey... ” (f. 85r).

The good friar had not been around this area long enough to see a *milpa* lasting 20 years without fallow, so we can accept this statement as a general statement attempting to stress the long productivity of a *milpa*. A conservative estimate would be between five and eight years. We must recognize that seventeenth century agriculture was demonstrably quite different than Petén agriculture today, and all recent ethnographic attempts to gauge decline in maize productivity with modern milpa plots are not necessarily applicable to seventeenth century nor eighth century Classic conditions. The native Maya seem to have mixed all kinds of crops together in the field, not planting any plot exhaustively in maize, a modern practice, which definitely does exhaust the soil.

The Spaniards were particularly eager to understand local Petén agricultural practices and potential because during the conquest, especially in the years 1697-99, the retreating natives had burnt down all the orchards and fields. Then the Spaniards went throughout the same hinterland and razed fields in order to force the natives to resettle around locations selected by Spanish administrators and clergy. Then the Spaniards found they were stuck with no new food coming in just at the time when natives were dragged back to the new Spanish settlements. In desperation the Spaniards had to force the Indians to start their *milpas* in selected locations. Spanish agricultural edicts fostered the raising of maize and beans, since these two seeds could be easily weighed, controlled, stored and transported. In the meantime, to feed their garrisons Spanish units went far afield to find hidden native milpas of unconquered Maya. Scouts noted when fields would next bear so that army units could come back to harvest the crop before the Maya. Such Spanish notes would allow any interested scholar to reconstruct an approximate yearly cycle of planting and harvesting of various food crops. This sequence could then be compared with that of today's farmers. The Spaniards comment that in certain situations, the natives can harvest maize every four months, which means three crops a year. At least two crops a year was normal. The overall productivity of the land certainly allowed for a sizeable population:

“... we found abundant storage bins of maize, beans, ayotes, and various
other vegetables… (f. 89v)
“there is much abundance of cacao, pataste, vanilla, turkeys, chachas, pauxies, perdices, and in this particular the land is so abundant that in all parts, and with more abundance around the shores of this lake and places in the nearby savannas there are many deer, rabbits, turkeys. The turkeys are in such abundance that I have seen in one day a (Spanish) hunter get 22 turkeys, each one weighing more than 12 pounds…” (AGI Guatemala 344, No. 7, folio 92r)

Unpublished documents in the AGI provide additional information on the southern Petén and adjacent Verapaz and Izabal. Lawrence Feldman has located numerous manuscripts describing highland Maya subsistence. Scattered information is available for southern Belize, especially around Golfo Dulce and the coast. This land was frequently visited by friars and chroniclers during the establishment of Spanish shipping ports.

For the central Petén we can conclude that the lowland Maya had a form of agriculture more intensive than simply slash and burn. Milpa location was certainly shifted when fertility fell off, but milpa location was not as frequently shifted as today – today there is more than enough land, and no population pressure to force intensive use of the land. Studies of modern Petén agriculture are just that – studies of a modern, twentieth century situation, mostly of recent Kekchi immigrants from the highlands, a quantity of Blacks from Belize, well mixed with people from Chiapas and southern Campeche. Since there are no “borders” in the rain forest, people have been moving into the Petén from adjacent lands since the eighteenth century (Adams, 1965).

The lowland central Petén Maya had intensive agriculture with maize, beans, several species of squash, manioc, sweet potatoes and other root crops, several species of chile, other vegetables, cacao, tree fruits and nuts (but definitely no ramon). The Indians also raised lots of cotton and tobacco. They raised turkeys and other birds, probably bees, and possibly rabbits. Maya dependence on hunting and gathering has not been stressed, as though somehow this form of subsistence is too primitive for a civilized people to have practiced. Villagutierre notes:

“The lands around the edges of the lake, for some parts are hills, in which are raised many wild animals, deer, wild pigs with a ridge on their spine, rabbits with large ears (liebres), regular rabbits, in nurseries, turkey cocks and turkey hens, and many other other birds such as faisanes, pajuies, and tejones, and many other birds from Spain and also those native to the land (1933: 382)

“... a great quantity of fish, large ones, medium sized ones, and small ones, very flavorful and good to eat. They have icoteas, turtles, and other things of this kind”. (1933: 381)

Honey was gathered, probably from the local Petén stingless bee. Alto-
gether the picture is one of fertile land, a considerable variety of crops, and potential for a sizeable population. There was no terracing on hills or ridged fields in the bajos. Avendaño indicates that the bajo land was completely unoccupied in 1695. This fact does not disprove earlier Classic period utilization of terraces on hills or ridged fields in the swamps.

**PETEN YTZÁ DEMOGRAPHY AND SETTLEMENT PATTERN**

The Ytzá were only one of several different peoples in the lake region. The diversity of peoples has been discussed in a recent mimeographed report on work completed in the Seville archives (Hellmuth, 1971). Avendaño estimated a population of between 22,000 and 24,000 Indians “of all ages” just in the five islands and among the mainland Chatan Ytzaes and Tulanquies (AGI Guatemala 151-bis, No. 1, f. 95v; Thompson, 1951: 390). The Spanish list about 109 settlements in the central region. This population probably approaches the maximum for this region in the Classic Period, so observations of this region are particularly appropriate for understanding the earlier situation in the eight-century.

Chroniclers consistently report that several families resided together in each house—not just the nuclear family as traditionally claimed in house counts of anthropological writers today. “Que en muchas de ellas” (casas) reconocimos a ver a tres y cuatro familias y entre esas muchas criaturas” (AGI Escrib. 339-A, Pza. 2, f. l43v) (that in many of the houses we found to contain three or four families and among them many young children). Another comment by the Spaniards worth reproducing is:

“The (Verapaz) Chol Indians never have had a formal settlement and organization like those of the Ytzá; since the first time that we came in there were 18 formally organized towns on the lake shore... in some of the well made houses more than 100 people could be housed, although by no means were all of this size and quality.” (Ibid: f.203r-203v)

Elsewhere the Spaniards again comment that the Ytzá region natives live in formal settlements “formed like villages” (AGI Guatemala 151, f. 89r).

Spaniards who were sent out to report on the land use returned to camp stating that “yesterday afternoon we left to reconnoiter all the houses that exist in this place, that number fifteen, and in them innumerable souls, even in just one house we counted 25 souls, children and grownups...” (AGI Guatemala 151, f. 66r). Later the Spanish chroniclers record: “in this town of Chinoha... we found 12 families, each composed of 10
souls…” (f. 98v).

Eyewitness descriptions of the central Petén lowland Maya show permanently settled villages, intensive agriculture specializing in root crops, tree fruits, as well as maize, beans, and squash, considerable consumption of wild game, fowl, and fish, and raising of domestic turkeys, other birds, and perhaps rabbits. Ethnographers and archaeologists who have produced all the traditionally accepted statements about Petén settlement pattern and subsistence agriculture have never sought out this archival material, but rather have based their theoretical models upon facile repetitions of Landa’s comments, or on twentieth century ethnographic observation of people who are not really appropriate.

**CHOLTI-LACANDON SETTLEMENT PATTERN**

Sac Balam consisted of 103 houses, three central ones of community use, and 100 residences. The thatch-roofed houses were sufficiently close together so that if one caught fire virtually the entire town burnt down. This fact implies fairly dense occupation, with only nominal kitchen gardens surrounding each house with principally fruit trees and a few vegetables. The Spaniards noted quite clearly that the Cholti-Lacandon arranged their houses together like a town (Tozzer, 1913: 503). The residences were large and spacious with several rooms and evidently halls. The Spaniards provide details of the houses. The kitchen was definitely within the actual residence—not a separate hut as is traditional today in the Petén. Sleeping rooms were in the rest of the house. Wooden sleeping platforms were somewhat raised off the floor. Up to four people could sleep on each bed platform. Hammocks were not utilized.

Census records for the period 1694-1712 suggest an average minimum of 6.9 people per house. These counts are quite definitely per single structure, not for house groups, since such house groups or compounds are not mentioned. The Spanish are quite explicit about "en cada casa". This figure though, is after more than 50-90% of the population has been wiped out by Spanish introduced disease. Thompson produces excellent documentation on the degree of native death due to disease and general disruptions of the Conquest (1966). Documents not known to him, in the archives of Seville, further substantiate his conclusions. The Spaniards usually arrived in a town to find most of the inhabitants already dying. Dozens of quotations could be produced. The native Maya had no resistance to European diseases such as smallpox or even the common cold. In a pre-Conquest situation, an average house count would be at least
eight persons per structure. Ten people per house would not be impossible, and would be on the conservative side.

The Verapaz Chol likewise lived crowded together in houses. Ximenez comments that “there are in each house 20 or 30 souls... the house that has fewer people will have 20, 30, or 40 souls...” (II; 394).

The Cholti-Lacandon settlements were semi-permanent; the villages certainly did not shift location every year or so. Furthermore, the Indians lived full time in their villages, except when away on salt gathering expeditions, away on trading expeditions, or during crop harvest in the milpas.

The natives had, in addition to their regular village residence, a hut in the milpa. The milpa huts were just for occasional use, especially during harvest to guard the crop. Diego de Ribas describes the milpa huts as being “although smaller than those of the town, were certainly as finely constructed as those in the village. In them they have their granaries for maize. They are day daubed” (Estrada). En route to Sac Balam in 1695 the Spaniards found several milpas, which they describe as follows:

“... notices of the discovery of many milpas that are in these environs... (we found) cooking pots, large narrow mouthed pitchers, griddles, chile, maize, beans, and little barrels fabricated with tree bark wrapped up by leaves of the bijao plant, secured with vines, and in them very black powder and very cunningly made, that we figured out to be that which the Indians use to blacken themselves... in the little huts of said milpas...” (Valenzuela, 1695)

One day the Spaniards noticed that certain Lacandon males were taking their wives out to the milpas, under the pretense that their women were needed there to make their tortillas. The Spanish observer commented that this was a lie because the milpas had been seeded only recently. The Spaniards knew that traditionally the women were not needed for seeding nor cultivation because the custom was for the men to leave at dawn with provisions of tortillas or tamales and to return home to the village at night. Women were taken to the milpas only when they were needed to guard the plants or fruit. This is a detailed ethnographic observation of the type which will enable us to understand the daily life and subsistence practices of the lowland Maya.

After the Spanish armies had ravaged the land, after Spanish soldiers raped the women, brutalized the men and forced them to act as human beasts of burden, after the Spanish friars took their children and forced them to mission schools to teach them the way of their parents was evil, the Indians gradually adapted a life style which focused around remote milpa huts away from the reach of daily contact with the Spaniards. The Indians very carefully and ostentatiously maintained their village houses, though,
to let the Spaniards know that they still “lived” in the village. Over one generation the settlement pattern changed quite noticeably from nucleated villages of permanent residents to a vacant town occupied by the Indians coming in from their farms only on certain special occasions.

The view of Thompson that Tikal was a vacant ceremonial center inhabited mostly by the priestly class is based on the twentieth century settlement pattern of Chichicastenango. What evidence exists to even suggest that highland settlement patterns are descended from aboriginal ones, let alone from the eighth century Central Petén? The recent fad of proposing social integration by having peasants fill ritual cargos as in modern Zinacantan is another false ethnographic analogy foisted on the ancient Maya by repeated public relations. The Cholti-Lacandon and Petén Ytzá certainly had full time political and religious leaders based on family succession, a faint remnant of ancient dynastic succession. Cholti-Lacandon Maya of the Chiapas lowlands share many cultural attributes with the Petén Ytzá and their neighbors. Especially the similarity in intensive milpa agriculture, root crops, orchard crops, hunting, fishing, and gathering suggests that this pattern is basic to the southern lowlands. The Quejache in northern Petén were sparsely populated but seem to have had similar subsistence economy.

**SUMMARY OF ETHNOHISTORICAL RECORDS FOR THE MAYA LOWLANDS**

1. The word “milpa” is translated in the Royal Academy of Spain dictionary as essentially a “maize field”. When early researchers saw the Spanish referring to the Maya living exclusively from their milpas they assumed it meant the Maya lived exclusively from maize. Indeed driving through the Petén today it is the maize, which stands up and is most noticeable. Today the word “milpa” is taken to mean “cornfield”.

The word “milpa” actually was used by both the Maya and the sixteenth-seventeenth century Spaniards to mean “sown fields where a variety of crops were grown”. The word is actually often presented as “milperia” which means “sown field of a variety of crops with a little hut”. No precise equivalent term exists in English, so I propose reintroducing the correct original Spanish word “milperia”, since the simple term milpa now is regarded to be just a maize field.
2. Maize was indeed an important crop, as were beans (probably red and black varieties), and several species of squash. Beans were evidently not quite as important in the sixteenth-seventeenth century as they are today though.

3. The four root crops proposed by Bronson (1966) to be Maya staples certainly were their staples. His article was roundly criticized, but his conclusions can now be vindicated. In fact, he overlooked all kinds of published references to root crops, such as entries in Moran's Cholti-Lacandon dictionary, “OME, like little camotes and they eat them also” listed under “turma de tierra” (p. 65), either a truffle or more camote-like root crop. Wiskil (güisquil) has edible tuberous roots, as well as the fruit, tender shoots, and flowers (Lundell, 1938: 51). This root crop is widely eaten in the Petén still, although mainly the squash-like fruit. Since the Spaniards frequently say “sweet potatoes, manioc, and other root crops...” then possibly more than four kinds were raised. Root crops were even used in Yucatan:

“The fruit that we find here is batatas, although around here they term these camotes, and they are not as tasty as those of the islands. There are also jicimas that are roots... these are very gentle fruits and very fresh for the road and they last many days and are juicy” (Ximenez, 1929, I: 300)

Ximenez also mentions batatas growing in lands near Cahabon, Verapaz (II: 461).

We can conclude that root crops were indeed important to the native Maya; Ursula Cowgill’s statement that “it appears doubtful that manioc or any of the other root crops indigenous to the New World played an important part in the subsistence of the Ancient Maya in the Petén...” (1971: 61) is based on brief ethnographic glances at modern agriculture in the Petén largely by individuals not native to the land. Fresh information from the archives allows us to revise observations in the light of agricultural reality. Since the Spaniards “pulled out by the roots the camote fields and other roots which grow...” it is not altogether surprising that the Indians ceased to raise them.

4. Tree fruits, especially zapote, were a major subsistence item of lowland Maya diet, as once suggested by Sanders (1962-63). Fruit and nut trees grew around village houses and also in the milpas. It is perhaps time to recognize that the fad of populating Maya settlements with ramon groves is nowhere and at no time documented for any actual Maya group. The Spaniards found the ramon quite useful as feed for their mules.

5. Cacao was raised throughout lowland Chiapas and Petén and adjacent lands, even on the hill flanks of highland Chiapas. This means that the ancient
Classic Maya did not necessarily have to import this valuable product from better-known groves in riverine or coastal Belize or from Escuintla. Valenzuela states that the Cholti-Lacandon got their cacao principally from wild stands, although such stands were probably semi-domesticated. The earlier Spanish reports state that cacao was grown right in the milpas along with other crops. The Ytzá had cacao in regular plantations.

The Cholti had spirits in their cacao groves (Tozzer, 1913: 503) and put cacao drink in the mouths of their idols (1913: 505). On practically every festive occasion cacao drink was consumed: “during the men’s meetings “they are seated all day on their small stools and drink only cacao” (1913: 506).

Cacao was consumed in liquid form, sometimes uncooked (Valenzuela, 1695: f. 198v). The Moran Cholti vocabulary gives the word as “bebida cacao-COYEM” and “bebida buena, chocolate de cacao, maiz, y achiote – ZACA” (p. 12). The term ZACA was also listed elsewhere as the term for “froth of chocolate” (p. 10). When fed to the idols the cacao was sometimes in the form of moist dough (Estrada-Ribas). One has the impression that Mayanists have not considered cacao as a product of the central lowlands and the discovery of the prominence of native cacao in the lowlands is an instance of how archival research can contribute to our archaeological understanding of the Maya heartland.

6. Cotton, tobacco, and cochineal coloring were produced, especially around Lake Petén Ytzá. Achiote, a red coloring, was used for seasoning and was exported from the lowlands to the highlands. Knowledge of the economic base of lowland cities can be aided by scrutiny of archival sources.

7. Domestic fowl, especially turkey, provided meat protein. Immense flocks filled the lowland Maya villages.

8. Rabbits may have been domesticated. This is an animal we usually do not associate with the tropical rain forest, yet the rabbit is frequently shown in Classic Maya art. Since rabbits multiply prolifically, this would be an excellent meat protein source for the peasants.

9. Wild game, especially deer, wild turkey, faisan, and other animals and birds were hunted. Turtles, iguana, fish, and shellfish, including probably the land snail, were eaten.

10. Honey was a good source of sugar. Bees require little maintenance and could be raised easily by the peasants.

11. The Cholti-Lacandon, Petén Ytzá, and immediate neighbors had nucleated villages in at least semi-permanent locations. The natives lived full time in these villages.

12. Between 8 and 20 people per house was common among these people, perhaps a minimum average of 7 for the Chotí and 10 for the Ytzá.
These counts are per individual structure; traditional writers consistently attempt to invalidate Spanish observations by claiming the Spaniards are counting population per house compound of several different structures grouped around a courtyard. Such opinions reflect unfamiliarity with the primary sources of Maya ethnohistory.

13. Lowland Maya natives had huts in the *milperias* as well as in the towns. The farm huts were lived in perhaps one or two months of the year, during the harvest times. The villages were certainly not vacant ceremonial centers.

The Spanish Conquest completely obliterated the native lowland Maya way of life. Orchards were chopped down, root crops were pulled up, and other crops in the *milpas* were burned. Traditional agriculture was thoroughly disrupted during the Conquest and pacification years 1694-1710. Then the Spaniards forced certain agricultural changes, most notably a dependence on maize and beans since these crops were dependable, required no investment of time as did orchard crops, and more important maize and beans could be easily weighed, stored and shipped. Especially where tax payments were demanded in maize, the Indians gradually raised what their new masters demanded. Spanish food preferences may have played some part too. Consequently, agricultural practices of today, especially where imported rice is now a basic staple, cannot be considered as a cultural survival of earlier times.

Furthermore, the inhabitants of the Petén today are mostly admixtures of Blacks escaped from Belize during the eighteenth-nineteenth centuries, highland Kekchi and other highland peoples moving away from their overpopulated highlands to sparsely populated lowlands, and a variety of peoples from adjacent Chiapas and Campeche who have simply drifted in to escape oppression in Mexico, or simply to work chicle in the Petén. These newcomers have thoroughly integrated with those few Ytzá and native Petén people who survived Spanish introduced disease, warfare, and general disruption of the type so well documented by Thompson (1970: 48-79). Ethnographic accounts of this modern population have but dubious relation to the ancient Maya of the same region.

Likewise, reliance on Landa's sixteenth century description of Yucatec subsistence, or worse, on Carnegie studies of *milpa* agriculture and fertility is misleading at best. If our goal is to understand eighth century Classic Maya subsistence we should seek the closest related sources, which are sixteenth-seventeenth century ethnohistorical documents in the archives of Guatemala City and Seville. This work should be backed up by studies by other specialists of flotation of actual Classic kitchen middens. Peter Harrison readily identified many varieties of useful plants from a Tikal
Central Acropolis midden. Archaeological knowledge of the basics of ancient Maya subsistence economy, as well as other aspects of their life, can be improved by a lessening of reliance on faddish models, hypotheses, and theories. Armchair theorizing might profitably be replaced by fieldwork, especially botanical, geological (soil studies), and zoological (carrying capacity of the land for various edible species of animals, birds, reptiles and fish) in conjunction with large-scale sifting and flotation of the kitchen middens which are so abundant in the Classic ruins. Results of such studies could then be compared with ethnohistorical documents. If funding for archival research would reach realistic levels, then this generation of Mayanists can look forward to sufficient information on the native Cholti-Lacandon, Petén Ytzá, and their Chiapas Chol, Verapaz Chol, Mopán, and Toquegua neighbors to provide useful, factual descriptions of the native lowland Maya way of life.

Acknowledgements

Research in the Archivo General de Indias was supported in part by a grant from the American Philosophical Society of Philadelphia in 1971 and by the Foundation for Latin American Anthropological Research. I am indebted to help from Lic. Agustin Estrada M. and Dr. Lawrence Feldman.

Notes

1. The term “Chiapas Chol” covers the Chol who now live in Palenque and Ocosingo. These people may need to be differentiated in the future as we learn more about their sixteenth-seventeenth century origins. Some of these Chol lived in a highland environment, such as around Tula and Timbula, others lived in the lowland lakes and were relatives of the Cholti-Lacandon if not actually a part of the Cholti-Lacandon. The term
“Verapaz Chol” is intended to replace Thompson's term “Manche Chol” since Manche is the name of a specific town. The Verapaz Chol may also have lived in the Dept. of Izabal. These people may need to be differentiated in the future as we learn more about the regional distinctions.

2. Gertrude Duby Blom has created the impression that the modern Yucatec-speaking Lacandon are the direct descendants of the ancient Maya builders of Palenque, Bonampak, and Yaxchilan. She, and many other writers, quotes Lacandon myths about their origins there. Actually, in some cases the anthropologists and tourists have told the Lacandones so often that they have come from these ruins that now the current generation of Lacandones actually believe this and have created myths accordingly. Even the earlier nineteenth century presence of Lacandon worship in the temples of this region is no evidence whatsoever that they are descendants of the eighth century builders of these sites. It is natural that the Lacandones would worship in these temples, which are so conveniently placed in their homeland. More than 4000 pages of Spanish manuscripts document quite clearly that Cholti-speaking Maya were the original inhabitants of the Bonampak region and they were killed off and the survivors rounded up and moved away. The Yucatec speaking Lacandones of today moved in beginning in the seventeenth century evidently from adjacent Campeche or southern Yucatan.

3. Although traditionally called the “Moran” dictionary, Agustin Estrada has pointed out that Moran was dead by the purported 1695 date. Secondly, although signed at Sacbalam (given as the Spanish name, Nuestra Señora de los Dolores de Lacandon) this vocabulary is based on Verapaz Chol evidently of San Lucas, Verapaz? The complete history of this ethnographically useful vocabulary of native words has not yet been published.

References


AGCA (1696). Quinto Ramo de autos fhos. sobre la reducción y conquista de los indios infeles principiado desde la llegada del Sr. Doctor Don Bar(lo)me de Amesquita de la prov(nci) a de la Verapaz. Al, Legajo 94, Expediente 2033, 61 folios. In the AGI, Seville, is a copy of this same document, incomplete, filed under Guatemala 344.

Archivo General de Indias, Seville, Spain (AGI). (1605). Expedientes que tratán del descubrimiento del Puerto de Amataque llamado de Santo Tomas de Castillo..., Guatemala 129.

AGI (1695). Relación... de la reducción y conversión de indios infeles que habitan las montañas inmediatas a Verapaz, Huehuetenango y Chiapas que se procuran este año de 1695...de Jacinto de Barrios Leal... en la entrada que hizo en la entrada desde Ocosingo, Chiapas ...asistido de el Capitán Nicolás de Valenzuela... Escribano de Cámara 339 B, Pieza 5, 243 folios.

AGI (1696). (sobre Nuestra Señora de los Dolores de Lacandón) AGI Guatemala 153, No. 3, 63 folios.
AGI (1699). Testimonio de los autos fiscales en razón de que se junten los dos pueblos... de Choles nombrados San Ramon Mab y San Antonio Pecta sercanos al de Nuestra Señora de los Dolores. AGI Guatemala 344, No. 4.

AGI (1701). Testimonio... Nuestra Señora de los Dolores de Lacandón y sobre la extinción del Presidio del pueblo de Los Dolores... AGI Guatemala 222.

Avendaño, Andrés de (1696a). Relación de las dos entradas que hice a la conversión de los Gentiles Izaz and Cehaches... Mérida. MSS. copy in Ayer Collection, Newberry Library, Chicago. Photographic copy in Peabody Museum Library Harvard University, 66 numbered folios. Parts of this MSS are also in the AGI.


Hellmuth, Nicholas (1970b). Progress report and notes on research on ethnohistory of the 16-19th century southern lowland Maya: Part I, the Cholti-Lacandon of Dolores (Sac Balam), Chiapas, 1695-1712; Part II, the Yucateco Lacandon 01 San Jose de Gracia Real, Chiapas, 1786-1802? Mimeographed, Foundation for Latin American Anthropological Research, Guatemala City.


Hellmuth, Nicholas (1972). Progreso y Notas sobre la investigación etnohistórica de las tierras bajas mayas de los siglos XVI a XIX. *América Indígena* XXXII, No. 1, 179-244. México City.

Herrera y Tordesillas, Antonio de (1934-1947). Historia general de los hechos de los Castillanos en las islas y tierra firma del mar océano (Varios dates from 1601, varios publishers).


Valenzuela, Nicolas de (1695). See under AGI, 1695.

Villagutierre Soto Mayor, Juan (1933). *Historia de la conquista de la Provincia de el Itzá... y la de el Lacandón*. Biblioteca “Goathemala”, Guatemala, Sociedad de Geografía e Historia, Vol. IX.
