INTRODUCTION

In many colonial societies there exists a close relationship between population size and economic well-being. Spanish Central America illustrates this relationship clearly. The economic prospects of the colony were intimately linked to its historical demography. Thus with a large population from which to draw labor, the initial economic outlook seemed promising. As population declined during the sixteenth and seventeenth centuries, a severe economic depression set in. When population began to increase towards the end of the seventeenth and throughout the eighteenth century, the economy revived.¹

The operation of this crude, causal connection between population size and economic well-being permeates a number of developments in Spanish Central America. Indian depopulation was a major factor behind the demise of the encomienda system. It also contributed towards the formation of the great estate, or hacienda, and the emergence of debt peonage.² Such important developments can therefore be fully understood only when viewed in relation to population trends and fluctuations. It is to the establishment of a demographic profile for the Cuchumatán highlands of Guatemala during the three centuries of Spanish domination in Central America that this paper is directed.¹

THE REGIONAL SETTING

The Cuchumatán highlands of Guatemala are the most...
massive and spectacular non-volcanic region of all Central America. Lying to the north of the Río Cui lco, and to the north and west of the Río Negro or Chixoy, the Cuchumatanes form a fairly well-defined physical unit bordered on the north by the sparsely settled tropical lowlands of the Usumacinta basin and to the west by the Mexican state of Chiapas. The Cuchumatanes, with elevations ranging from 500 to more than 3600 meters, are contained within the Guatemalan departments of Huehuetenango and Quiché, and comprise some 15 percent (approximately 16,350 square kilometers) of the national territory of the Central American republic (Figure 8.1).

During the first two centuries of Spanish rule in Guatemala the Cuchumatán country was part of the administrative division known as the corregimiento or alcaldía mayor of Totonicapán and Huehuetenango. This unit included all of the present day department of Totonicapán, most of Huehuetenango, the northern half of Quiché, the easternmost portion of Quezaltenango, and the Motozintla area of the Mexican state of Chiapas. Towards the end of the colonial period the corregimiento or alcaldía mayor of Totonicapán and Huehuetenango was made a provincia composed of two jurisdictions: the partido of Totonicapán and the partido of Huehuetenango. The jurisdiction referred to as the partido of Huehuetenango corresponds in approximate territorial extent to the area here designated the Cuchumatán highlands. Today about one-half million people inhabit the region, of whom roughly three out of four are Indian. The native peoples of the Cuchumatanes are of Mayan descent and speak several closely related languages belonging to Mayan stock, the most important of which are Aguacateca, Chuj, Ixil, Jacalteca, Kanjobal, Mam, Quiché, and Uspanteca.

DEMOGRAPHIC PROFILE OF THE CUCHUMATAN HIGHLANDS (1520-1821)

Any attempt to reconstruct the population history of the Cuchumatán highlands is beset by a lack of consistent, representative data. The paucity of source materials containing demographic information is particularly notable for the sixteenth and early seventeenth centuries. The late seventeenth and eighteenth centuries, by comparison, are reasonably well-documented. Perhaps the safest procedure is to regard early estimates of population size as necessarily tentative and to scrutinize with caution later calculations before reaching any final conclusions.

The earliest surviving record known to contain population data for every significant settlement in the Cuchumatán highlands is a list of tributarios (Indian tribute payers) for the years 1664 to 1678.
tion of allCentro Cuculco, and
Chixoy, the
physical unit
talled tropical
the west by the
meters, are con-
Huehuetenango
approximately
tery of
ish rule in
of the adminis-
ico or alcaldía
This unit in-
of Totonicapán,
of Quiché, the
the Motosintla
wards the end of
alcalde mayor
a provincia
of Totonicapán
isdiiction re-
corresponds in
here design-
roughly three
of the Cuchu-
closely
, the most im-
1, Jacalteca,
LANDS

Source mate-
perticularly
eth century,
Perhaps the
es of popula-
scrutinize with
any final con-
tain popu-
in the Cu-
(Indian trib-
rior to this
late seventeenth century tribute count few reliable figures exist. The data upon which estimates of the magnitude of the sixteenth century population can be made are appallingly scarce. Among these data are reports of the size of Indian armies encountered during the battles of conquest, as recorded by the seventeenth-century chronicler Francisco Antonio de Fuentes y Gúzman in his monumental Recaudación Florida; the number of tributaries in certain Cuchumatán towns assessed by the President of the Audiencia of Guatemala, Alonso López de Gurrato, between 1548 and 1551; and the number of tributaries in the town of Huehuetenango, assessed by President García de Valverde between 1578 and 1582.

Employing as a demographic source estimates of the size of the Indian armies which confronted the Spaniards in the course of conquest is obviously not undertaken without considerable risk. It has been alleged, for example, that Spanish conquistadores, in order to glorify their military feats, were guilty of grossly exaggerating the size of the Indian forces defeated in battle. This argument, however, fails to take into account the fact that successful conquerors often later became influential administrators and would therefore frequently be charged with tribute assessment for both the Spanish Crown and Spanish colonists. Since population size directly determined the levy of tribute, any conquistador with prospects of one day being responsible for assessing Indian tribute capacity would tend to count with at least some measure of discretion.

Consistent with a view which favors taking contemporary testimony and subjecting it to scholarly scrutiny, a study by Thomas Veblen has shown that Spanish estimates of Indian army sizes recorded for the Totonicapán area correspond reasonably well with data derived from other historical sources. Perhaps most significantly, Veblen claims that the work of Fuentes y Gúzman, long considered an unreliable source for pre-Hispanic population data, in fact contains highly plausible figures for Indian army sizes. Veblen explicitly states that "the data available on the size of the pre-Hispanic population of Totonicapán provide no basis for rejecting the demographic information contained in Fuentes y Gúzman." This appraisal is of crucial importance because reports of Indian army sizes are among the few extant historical data which can be used to derive an estimate of the population of the Cuchumatán highlands on the eve of Spanish conquest.

Spanish estimates of the size of Indian armies encountered during the conquest of the Cuchumatanes have been recorded by Fuentes y Gúzman in the Recaudación Florida. Fuentes y Gúzman's source for the conquest of the Mam was a document, now unfortunately lost, written by the conquistador Gonzalo de Alvarado after the successful subjugation of the Mam in 1525. In his account the chis did not do so with the populace conquest included the principal entitle the Indians the end of town.

The faces were record, the army size central on population which Veblen estimation of 170, rough estimate. In quest, for the area entered the devastate Old World's mili to describe Cakchiquel.

It plans co blan one ever white te place great figh the wh
the chronicler gives no indication of the size of the Indian army which defended Mazatenango (San Lorenzo), but does state that the town "in those days was well-populated." Fuentes y Gúzman's chief sources for the conquest of the Ixil and the Quichéan people of Uspantán included the first Libro de Cabildo, records of the municipal council of Guatemala, and a collection of documents entitled the Manuscrito Quiché. Estimates of the size of the Indian armies which confronted the Spaniards during the entrada and also in the town of Maza tenango, are shown in Table 8.1.

The total number of Indian warriors the Spaniards faced in battle in the Cuchumatanes between 1525 and 1530 was recorded by Fuentes y Gúzman as 34,000. For Totonicapán, Veblen uses a one to four ratio in correlating army size to total population; for the Tlaxcala region of central Mexico, Gibson uses a warriors to total population ratio of one to five.19 A ratio of one to four, which Veblen considers "conservative," indicates a population of 136,000; a ratio of one to five gives a total of 170,000. An average of these two figures produces a rough estimate of the population of the Cuchumatán highlands between 1525 and 1530 of around 150,000.

In the years immediately prior to the Spanish conquest, however, it is likely that Cuchumatán communities were struck by the same lethal epidemic which, in 1520, swept over much of highland Guatemala. This epidemic, possibly a combination of smallpox and pulmonary plague, entered the highlands of Guatemala from Mexico and had a devastating impact on the Indian peoples of the region. Old World in origin and consequently unknown in the Americas until the arrival of the Spaniards, the epidemic decimated the immunologically defenseless native population and thus reduced both Indian numbers and resistance to military conquest.11 The ravage of the disease is described in a poignant passage from the Annals of the Cakchiquels:

It happened that during the twenty-fifth year [1520] the plague began, oh, my sons! First they became ill of a cough, they suffered from nosebleeds and illness of the bladder. It was truly terrible, the number of dead there were in that period.... Little by little heavy shadows and black night enveloped our fathers and grandfathers and us also, oh, my sons! When the plague raged.... when the plague began to spread.... It was in truth terrible, the number of dead among the people. The people could not in any way control the sickness.... Great was the stench of the dead. After our fathers and grandfathers succumbed, half of the people fled to the fields. The dogs and the vultures devoured the bodies. The mortality was terrible. Your grandfathers died, and with them died the son of the king and his brothers and...
TABLE 8.1
Indian army sizes recorded during the battles of conquest

<table>
<thead>
<tr>
<th>Date and Place of Battle</th>
<th>Estimated Indian Army Size</th>
<th>Towns Supplying Warriors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1525: Mazatenango (San Lorenzo)</td>
<td>5,000</td>
<td>Malacatán, Huehuetenango, Zaculeu, Ixtahuacán, and Cuilco</td>
</tr>
<tr>
<td>1525: near Mazatenango</td>
<td>6,000</td>
<td>Zaculeu</td>
</tr>
<tr>
<td>1525: Zaculeu</td>
<td>8,000</td>
<td>Various Chuchumatán communities affiliated with the Mam of Zaculeu</td>
</tr>
<tr>
<td>1530: Nebaj</td>
<td>5,000</td>
<td>Nebaj and other towns</td>
</tr>
<tr>
<td>1530: Uspantán</td>
<td>10,000</td>
<td>Uspantán, Verapaz towns, Cunén, Cotzal, Sacapulas</td>
</tr>
</tbody>
</table>

Source: F. A. Fuentes y Gózaman, Recordación Florida.
kinsmen. So it was that we became orphans, oh, my sons! So we became when we were young. All of us were thus. We were born to die! 12

In terms of numerical decline, MacLeod claims that one-third to one-half of the Indian population of highland Guatemala must have perished as a consequence of the epidemic:

Given present day knowledge of the impact of smallpox or plague on people without previous immunities, it is safe, indeed conservative, to say that a third of the Guatemalan highland populations died during this holocaust. 13

A Cuchumatán population which between 1525 and 1530 numbered around 150,000 could, therefore, some five to ten years earlier have numbered as much as 225,000 to 300,000. An average of these two figures produces a population estimate for 1520 of around 260,000. In order to place this estimate into some kind of perspective, it is worth noting that the population of the Cuchumatanes in 1950 was around 265,000. 14 This means that the population of the Cuchumatán highlands on the eve of Spanish conquest may have been approximately the same size as the mid-twentieth century population of the region. Although this calculation is no more than a tentative estimate based on meager historical documentation, its credibility is supported by Veblen's estimate of the contact population of Totonicapán as being of roughly the same magnitude as that region's mid-twentieth century population. 15

Of the two other sources which contain demographic information relating to Cuchumatán towns in the sixteenth century, the tribute count made by President Valverde between 1578 and 1582 is somewhat more reliable than the one compiled 30 years earlier by President Cerrato because the latter relied partly on reports submitted by local Indian leaders (caciques) rather than on personal town inspections conducted by officials of the Crown. In order to reduce the amount of tribute demanded by the Spaniards, and thus perhaps secure more for themselves, it is possible that caciques under-reported the number of eligible tributarios each town supported. 16 The Valverde count, undertaken personally by the President and his designated officials, is particularly useful because it contains two figures; the first is apparently a revised version of the Cerrato assessment dating back to the mid-sixteenth century while the second is the new Valverde assessment. 17

The town of Huehuetenango, formerly assessed at 570 tributarios, was adjusted downwards by Valverde to 367 tributarios. 18 A tributario at this time was a married male Indian between the ages of 18 and 50; roughly one out of every five persons would have fallen into this
category. The Valverde statistics therefore suggest a total population for Huehuetenango in the middle years of the sixteenth century of around 2800, a figure which by 1580 had fallen to around 1800. In the tribute list for 1664-1678, the earliest extant document with comprehensive tributary data for every significant Indian community in the Cuchumatán highlands, Huehuetenango accounts for 3.9 percent of the total number of tributaries. Assuming that Huehuetenango represented this same proportion in the sixteenth century, then the total number of Cuchumatán tributaries in 1550 was around 14,600 and in 1580 was around 9400. Using a population to tributary ratio of five to one, these figures indicate that the population of the Cuchumatán highlands in 1550 may have numbered about 73,000 and in 1580 may have numbered about 47,000.

These estimates alone are highly tentative, but it is possible to provide some independent frame of reference by which they can assume greater credibility. According to both MacLeod and Veblen, the mid-sixteenth century population of highland Guatemala probably numbered approximately half the size of the contact population owing to the devastating impact of the guatemán plague of 1545-1548. Similarly, the number of Indians alive in the year 1580 was about half that of the mid-sixteenth century because of the equally devastating impact of the matlazahiltl pandemic of 1576-1581. Acceptance of this thesis means that a contact population of 150,000, the estimate for the Cuchumatanes obtained from the size of Indian armies confronting the Spaniards during the battles of conquest, would by 1550 have fallen to about 75,000. This figure compares exceptionally well with the estimate of 73,000 derived from the Valverde count. A mid-sixteenth century population of 73,000 would by 1580 have numbered around 37,000. This figure compares reasonably well with the estimate of 47,000 also derived from the Valverde assessment.

For close to 100 years after the Valverde count there is almost no documentation which contains demographic information relating to Cuchumatán communities. The one exception is an ecclesiastical census for the year 1604 which lists the number of towns and vecinos (householders) under the charge of the Dominican monastery at Sacapulas. Unfortunately, this census includes only those settlements under the jurisdiction of the Dominican and Franciscan orders. Since the majority of Indian towns in the Cuchumatanes were under the administration of the Mercedarian order, and consequently were not recorded, the utility of this otherwise important source is minimal.

The tribute count of 1664-1678 is the next document after the Valverde assessment which contains detailed demographic data on the Cuchumatán highlands. This extreme war.
There suggest a middle years of which by tribute list for comprehensive Indian commun-

No. 29 of the same propor-

were 600 and in that the 50 may have numbered about 380, but it in the first reference. A sixteenth num-

have fallen on the mid-

Spaniards have been well Vaiverde 73,000 this figure 47,000 also count in demographic.22

for the vecinos an monas-

includes of the majority of admis-

this document detailed

extremely valuable document gives a complete breakdown, by town and occasionally by small social components (parcialidades) comprising certain towns, of the entire tribute paying population of the region. The total number of tributarios at this time was 4040.24 Fuentes y Gúzman, during the second half of the seventeenth century, reckoned on a population to tributario ratio of four to one.25 Using this same ratio, 4040 tribute payers would be indicative of a total Cuchumatán population of 16,162 between the years 1664 and 1678.

For the remainder of the colonial period there is no shortage of reliable and comprehensive sources, chiefly in the form of unpublished documents in the Archivo General de Centroamérica, upon which to reconstruct the population of the Cuchumatán highlands. The abundant eighteenth- and early nineteenth-century documents from which demographic data can be gleaned include tribute lists, reports of officials of the Crown, ecclesiastical records, and meticulous censuses which enumerate the Cuchumatán population in great detail by age, sex, class, and race. This information is synthesized in Table 8.2 and is represented graphically in Figure 8.2.

The overwhelming feature of the historical demography of the Cuchumatán highlands is the catastrophic decline in population following the Spanish conquest. Massive demographic collapse probably began in the years immediately preceding the battles of conquest and continued throughout the sixteenth and for most of the seventeenth century. Reaching its nadir about 1670, population began to recover and grow throughout the eighteenth century, although there were still occasional fluctuations. By the end of the colonial period population was on a steady, if slight, upward trend. Some explanations of this overall pattern of decline, recovery, and growth may be offered.

CAUSES OF DEMOGRAPHIC COLLAPSE AND READJUSTMENT

Amidst an almost perennial controversy, recent research by a number of scholars has convincingly demonstrated that several parts of the New World were densely populated on the eve of its "discovery" by the Old World and that native American populations declined drastically in size following contact with the European invaders.26 The traditional interpretation of the catastrophic decline of the indigenous population in Spanish America, between 80 and 90 percent in some regions, is the infamous Leyenda Negra. The Black Legend attributes the post-contact decrease in Indian numbers to the unmitigated slaughter, ruthless enslavement, and harsh exploitation of the native population by Spanish conquerors and colonists.27 It is not difficult to find references in
TABLE 8.2
The population of the Cuchumatán highlands, 1520-1825

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1520</td>
<td>260,000</td>
<td>Extrapolation of size of Indian armies recorded by Fuentes y Gúzman</td>
</tr>
<tr>
<td>1525-1530</td>
<td>150,000</td>
<td>Estimate based on size of Indian armies recorded by Fuentes y Gúzman</td>
</tr>
<tr>
<td>1550</td>
<td>73,000</td>
<td>AGI:AG 966, P/T ratio of 5:1. Huehuetenango as 3.9% of Cuchumatán tributarios</td>
</tr>
<tr>
<td>1580</td>
<td>47,000</td>
<td>AGI:AG 966. P/T ratio of 5:1. Huehuetenango as 3.9% of Cuchumatán tributarios</td>
</tr>
<tr>
<td>1664-1678</td>
<td>16,162</td>
<td>AGCA:A3.16, leg. 1601, exp. 26391. P/T ratio of 4:1</td>
</tr>
<tr>
<td>1690</td>
<td>19,824</td>
<td>Fuentes y Gúzman, Recordación Florida. P/T ratio 4:1</td>
</tr>
<tr>
<td>1760</td>
<td>21,176</td>
<td>AGCA:A3.16, leg. 950, exp. 17715. P/T ratio of 4:1</td>
</tr>
<tr>
<td>1768-1770</td>
<td>23,418</td>
<td>Cortés y Larraz, Descripción Geográfico-Moral de la Diocesis de Guatemala</td>
</tr>
<tr>
<td>1778</td>
<td>27,505</td>
<td>AGCA:A1.44, leg. 6097, exp. 55507</td>
</tr>
<tr>
<td>1779</td>
<td>28,047</td>
<td>AGCA:A1.44, leg. 6097, exp. 55507</td>
</tr>
<tr>
<td>1782</td>
<td>25,021</td>
<td>AGCA:A1.44, leg. 6097, exp. 55507</td>
</tr>
<tr>
<td>1783</td>
<td>25,027</td>
<td>AGCA:A1.44, leg. 6097, exp. 55507</td>
</tr>
<tr>
<td>1784</td>
<td>24,828</td>
<td>AGCA:A1.44, leg. 6097, exp. 55507</td>
</tr>
<tr>
<td>1788</td>
<td>24,678</td>
<td>AGCA:A3.16, leg. 246, exp. 4912. P/T ratio of 4.82:1</td>
</tr>
<tr>
<td>1790</td>
<td>23,623</td>
<td>AGCA:A3.16, leg. 237, exp. 4706. P/T ratio of 4.82:1</td>
</tr>
<tr>
<td>1797-1798</td>
<td>24,129</td>
<td>Yidalgo, Gaceta de Guatemala</td>
</tr>
<tr>
<td>1801</td>
<td>27,477</td>
<td>AGCA:A3.16, leg. 243, exp. 4853. P/T ratio of 4.82:1</td>
</tr>
<tr>
<td>1811</td>
<td>29,571</td>
<td>AGCA:A3.16, leg. 953, exp. 17773. P/T ratio of 4.82:1</td>
</tr>
<tr>
<td>1825</td>
<td>34,691</td>
<td>AGCA:B.84.3, leg. 1135, exp. 26030-26034</td>
</tr>
</tbody>
</table>

P/T = population to Tributario ratio.
Figure 8.2 The population of the Cuchumatán highlands, 1520-1821
the literature which support the thesis of the Black Legend. According to Bartolomé de las Casas, for example, five million Indian lives were lost in Guatemala alone because of the excesses of the conquistador Pedro de Alvarado and his henchmen. In las Casas' own words:

And this I dare affirm, that the enormities committed by . . . him especially that was sent to Guatemala . . . are enough to fill a particular volume, so many were the slaughters, violences, injuries, butcheries, and beastly desolations [committed by that abominable] tyrant [Pedro de Alvarado]; how many tears, how many sighs did he provoke, upon how many did he bring desolation in his worldly pilgrimage and endanger their damnation in the world to come? 28

It is now quite certain, however, that the principal cause of aboriginal depopulation was not massacre and mistreatment at the hands of the conquering Spaniards but the introduction by the invaders of Old World diseases to which the Indians of the New World had no natural, physiological immunity. 29

Until the arrival of the Europeans, the inhabitants of the New World lived in virtual isolation from those of the Old World. This long period of isolation weakened considerably the resistance of American Indians to most of the major diseases of mankind. Possibly because of the harsh climate characteristic of the Bering region, many diseases were never carried over from the Old World to the New World by the first migrants; the Arctic cold simply killed off both the disease organisms and those humans suffering from chronic sickness or contamination. 30

Alternative explanations may be that the migrations across the Bering Strait occurred so long ago that many diseases had not yet evolved in the Old World before the departure of the Amerindian ancestors; or the original group of migrants was so small that the loss of immunity factors was due to genetic drift. 31 Whatever the reason, the inhabitants of the New World developed tolerances only for a limited number of indigenous American diseases. During pre-Columbian times, the Indians of America appear to have been subjected primarily to gastro-intestinal disturbances and respiratory disorders. 32 Prior to the arrival of the Spaniards, therefore, the Indians enjoyed an existence relatively free of infectious diseases. Maladies such as smallpox, measles, mumps, typhus, influenza, and diptheria—all of which were endemic to the Old World—were completely unknown. When these diseases were inadvertently brought to America by Spanish conquistadors and colonists, their devastating impact on hitherto isolated human communities may well have caused, in the words of one scholar, "the greatest destruction of lives in history." 33
The first Old World disease to arrive in America was smallpox.\textsuperscript{34} The impact of smallpox on the native population of the New World was at least as cataclysmic as the impact of the Black Death of 1346 to 1350 on European society; that is, one-third to one-half of the Indians who came in contact with the disease must have perished.\textsuperscript{35} Soon after sweeping through Central Mexico, smallpox spread southwards to the highlands of Guatemala, accompanied perhaps by pulmonary plague or typhus.\textsuperscript{36} By the end of 1520, four years before the entrada of Pedro de Alvarado, the Indians of highland Guatemala were reeling from their initial encounter with what MacLeod has appropriately called "the shock troops of the conquest."\textsuperscript{37} The chroniclers of the Cakchiquel lament that it "was in truth terrible, the number of dead among the people . . . in that period . . . when the plague raged."\textsuperscript{38} This first bout of pestilence was followed about 12 years later by a pandemic of measles. Thereafter, major outbreaks of Old World diseases were a common feature of Indian life in colonial Guatemala and consistently resulted in high mortality among the immunologically defenseless native population.

It is unlikely that the Indian peoples of the Cuchumatán highlands escaped these deadly visitations. The testimony of Thomas Gage, in connection with an outbreak of typhus in 1631, indicates that the impact of disease tended to be widespread:

The year following [1631], all that country [highland Guatemala] was generally infected with a kind of contagious sickness, almost as infectious as the plague, which they call tabaydillo [typhus]. This fever in the very inward parts and bowels scarce continued to the seventh day but commonly took its victims away from the world to a grave the third or fifth day. The filthy smell and stench which came from those who lay sick of this disease was enough to infect the rest of the house, and all that came to see them. It rotted their very mouths and tongues, and made them as black as coal before they died. Very few Spaniards were infected with this contagion, but the Indians generally were taken with it.\textsuperscript{39}

In addition to being affected by diseases of pandemic proportion, such as the one described above, the Indian people of the Cuchumatán highlands were also exposed throughout the colonial period to more localized outbreaks of disease (Table 8.3). The recurrent outbreak of diseases to which the native population was immunologically defenseless is the chief factor behind the demographic collapse of the Indian peoples of the Cuchumatanes following the Spanish conquest. From 1520 until the end of Spanish colonial
<table>
<thead>
<tr>
<th>Year</th>
<th>Disease</th>
<th>Towns Affected</th>
<th>Source</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1666-1670</td>
<td>Tabardillo (typhus)</td>
<td>Huehuetenango</td>
<td>A3.16, leg. 1600, exp. 26390</td>
<td>Indian tribute lowered after epidemic carried off 45 adults.</td>
</tr>
<tr>
<td>1774</td>
<td>&quot;Peste&quot; (unspecified)</td>
<td>Various towns</td>
<td>A3.16, leg. 943, exp. 17608</td>
<td>Alcalde mayor informs treasury that certain towns will not be able to pay tribute.</td>
</tr>
<tr>
<td>1780-1781</td>
<td>Viruela (smallpox)</td>
<td>All forty towns of the Partido of Huehuetenango</td>
<td>A1.44, leg. 6097, exp. 55507</td>
<td>Over 4000 deaths. Alcalde mayor authorized to use community funds to help fight the disease.</td>
</tr>
<tr>
<td>1786</td>
<td>Tabardillo</td>
<td>Concepción and Petatán</td>
<td>A1.4, leg. 6101, exp. 55666</td>
<td></td>
</tr>
<tr>
<td>1795-1799</td>
<td>Tabardillo and viruela, tabardillo was particularly widespread</td>
<td>Cuchumatán, Jacaltenango, Concepción</td>
<td>A1.49, leg. 192, exp. 3011; A3.1, leg. 2894, exp. 42846</td>
<td>Over 500 deaths in Jacaltenango alone and an equal number in Concepción; visit to stricken towns by the alcalde mayor and a doctor, the former to adjust tribute payment, the latter to fight the spread of disease.</td>
</tr>
</tbody>
</table>
1799-1799 Tabardillo and viruela, tabardillo was particularly widespread in numerous towns, including Nebaj, Chajul, Todos Santos and San Martín.

1802-1807 Tabardillo, viruela, and sarampion (measles) was widespread in numerous towns including San Juan Ixcoy, Santa Eulalia, Nebaj, San Pedro Soloma, San Mateo Ixtatan, Cuchumatán, Jacaltenango, and Concepción.

1809-1812 Tabardillo, viruela, and fiebre putrida (type of fever) affected San Miguel Acatán, San Mateo Ixtatan, and San Juan Cotzal.

1814-1819 Tabardillo affected Chiantla and Jacaltenango.

Over 500 deaths in Jacaltenango alone and an equal number in Concepción, visit to stricken towns by the alcaldé mayor and a doctor, the former to adjust tribute payment, the latter to fight the spread of disease.

Alcalde mayor requests that tribute should not be collected from certain towns. Locust invasion exacerbates situation. Food shortages and much human suffering.

Indians in stricken communities given a reprieve in the payment of tribute.

Measures taken to halt spread of disease.

All archival citations refer to unpublished documents housed in the Archivo General de Centroamérica, Guatemala City.
rule in 1821, the Indians were subjected to unrelenting waves of pestilence. Mortality was high. Between 1520 and 1670 population declined by more than 90 percent, falling from perhaps 260,000 to a little over 16,000. By the end of the seventeenth century the collapse had abated and there were signs of a slight but significant demographic recovery. Several fluctuations towards the end of the eighteenth century, however, suggest that the Indians had still not built up effective immunities to diseases such as smallpox and typhus. Only at the very end of the colonial period are there positive indications of a general increase in Indian numbers (see Table 8.2 and Figure 8.2).

The impact of disease on Indian life in the Cuchumatán highlands was profound. Guatemalan archives contain hundreds of documents, in lucid detail, the disruptions wrought by outbreaks of disease on scores of Indian communities. These dislocations included: substantial loss of life; the inability of certain towns to meet the semi-annual tribute requirement demanded by the Crown; the abandonment of disease-ridden towns for the safety of uninfected or less infected rural areas; and the failure on the part of Indians to work their land, resulting in widespread hardship and deprivations. The plight of the Indians under such desperate circumstances is nowhere more tragically conveyed than in a letter addressed to the alcalde mayor of Huehuetenango by the ladino comisionado of the parish of Soloma, Marcos Casteñeda. His observations may be considered representative of a substantive body of archival documentation and have an applicability far beyond the time and place of which he writes:

For four years now [1803-1807] in the towns of [the parish of] Soloma there has been great distress owing to the high mortality caused by the epidemic of typhus which kills [the Indians] without relief or remedy, leaving them only in dire hardship. Through fear of death we [the ladino residents Marcos and Santiago Casteñeda] fled with our families to the solitude of the mountains and barren wastes of Chemal, suffering there the extremity of its climate, abandoning our houses and possessions in Soloma. But God having saw fit to end this terrible affliction, we are returning once again to our homes. To our horror we find that the majority of the Indians of Santa Eulalia have perished, and are lying unburied all over the place, their decaying corpses eaten by the animals which roam the countryside . . . . It is even more painful, however, to see the great number of orphaned children crying for the laps of their parents, asking for bread without having anyone to receive it from . . . . After so much hard work, these unfortunate Indians have been
unrelenting between 1520 percent, for 16,000. By significant towards the 1520 the very indications Table 8.2 for the Cuchu- archives contain lugubrious of disease locations in- lity of cer- sease-ridden affected rural g to work -and depriva- very and than in sehuetenango soloma, Marcos ed represent- e and place written to for the Cuchu- archives contain lugubrious of disease locations in- lity of cer- sease-ridden affected rural g to work -and depriva- very and than in sehuetenango soloma, Marcos ed represent- e and place written to

reduced to a life of misery. Having returned to their town [the Indians who survived] are without homes, without resources to pay their expenses and tribute, and without corn to feed themselves and their families. If no measures are taken to assist these wretched people, they will without doubt starve to death, because they did not plant corn in the places where they sought refuge [from the epidemic], and so they have nothing to live on, both for this year and for the next, since it is now too late to plant their crops. It is very common in this parish to find large numbers of Indians, old and young alike, walking from town to town, from house to house, begging and searching for food . . . .

Señor Alcalde Mayor, inform the president that help should be extended to the towns of this parish of Soloma; at the very least [the Indians] of Santa Eulalia and San Miguel Acatán could be exempted from paying tribute for the years during which they have suffered great misfortunes. 16

Casteñeda, in another communication, reckoned that the outbreak of typhus had killed "three-quarters of the Indian population of San Miguel Acatán and Santa Eulalia" and stated that most of the survivors of the epidemic were rendered "destitute and homeless because their houses were burned to rid them of the contagion."41 In response to a plea by the Indian alcaldes and principales of Santa Eulalia to exempt the town from paying tribute during the disruptive years of the typhus epidemic, the alcalde mayor was able only to obtain a royal order granting a temporary respite from the obligation. 42 The refusal of the Spanish authorities to grant the Indians a total tribute exemption prompted the parish priest of Soloma, Fray Juan José Juarez, to write the following rebuke to the alcalde mayor:

It strikes me that what is most important to you is that the Indians pay their tribute so that you receive your salary, but I think the Indians will be unable to pay, either this year or later, [because] they have lost their crops and consequently have nothing to pay with. 13

The tone of this address imparts some sense of the numbed resignation with which servants of the Crown in outlying rural districts would respond, during times of crisis, to the apathy, ineptitude, and lack of responsibility of men in distant seats of authority. Apparently even during an epidemic involving considerable loss of life and appalling human suffering, an appropriate course of remedial action was beyond the workings of government bureaucracy.
CONCLUSION

By introducing Old World diseases to an immunologically defenseless native population, the Spanish conquest of America precipitated a demographic collapse that was probably the most catastrophic in the history of mankind. The magnitude and rapidity of Indian depopulation in the Cuchumatán highlands following conquest by Spain conforms to a pattern already well-established for a number of other long settled parts of Latin America. A population of perhaps 260,000 on the eve of conquest, roughly the same size as the mid-twentieth century population of the Cuchumatanes, had by 1670 declined to around 16,000, a fall of slightly more than 90 percent over a period of 150 years. The demographic recovery which began in the last quarter of the seventeenth century continued throughout the eighteenth and nineteenth centuries. For most of this time population increase was slow and sporadic because of the persistent outbreak of diseases to which the Indians only gradually acquired immunity. It was not until the third decade of the present century that population began to increase sharply, due chiefly to the impact of modern medical technology in substantially reducing rates of human mortality. By 1950, after a process of decline, recovery, and growth lasting over 400 years, the population of the Cuchumatán highlands reached a level equivalent to that which it may have numbered prior to the arrival of the Spaniards and their pestential allies.

NOTES

2. MacLeod, op. cit., pp. 130 and 224.
5. Archivo General de Indias: Audiencia de Guatemala (hereafter AGI:AG), 128. Although at least 11 Cuchumatán towns may be identified in the Cerrato census, only nine have a record of how many tributarios they contained. The breakdown is as follows:

<table>
<thead>
<tr>
<th>Name of Town</th>
<th>No. of Tributarios</th>
<th>Name of Encomendero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ixtatán</td>
<td>65</td>
<td>Diego Sánchez Santiago</td>
</tr>
<tr>
<td>Jacaltenango</td>
<td>500</td>
<td>&quot;Menor hijo de Gonzalo de</td>
</tr>
</tbody>
</table>


6. AGI:AG, 128. Although at least 11 Cuchumatán towns may be identified in the Cerrato census, only nine have a record of how many tributarios they contained. The breakdown is as follows:

<table>
<thead>
<tr>
<th>Name of Town</th>
<th>No. of Tributarios</th>
<th>Name of Encomendero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ixtatán</td>
<td>65</td>
<td>Diego Sánchez Santiago</td>
</tr>
<tr>
<td>Jacaltenango</td>
<td>500</td>
<td>&quot;Menor hijo de Gonzalo de</td>
</tr>
</tbody>
</table>

A partial version of the Cerrato census may be found in published form in F. de Solano, Los Mayas del Siglo XVIII: Perdición y Transformación de la Sociedad Indígena Guatemalteca durante la Administración Borbónica, (Madrid: Ediciones Cultura Hispánica, 1974), pp. 80-82.


8. Ibid., p. 497.


13. MacLeod, op. cit., p. 41.


16. Carmack, op. cit., pp. 138-140; and Veblen, op. cit., p. 495. Cerrato was strongly criticized by Bishop Marroquin for relying on tribute counts provided by caciques. This practice, together with the freeing of Indian slaves and the lowering of the amount of tribute required of each Indian tributario, made Cerrato extremely unpopular among the Spanish residents of Guatemala.


18. AGI:AG 966.

<table>
<thead>
<tr>
<th>Name of Town</th>
<th>No. of Tributarios</th>
<th>Name of Encomendero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aguaacatán</td>
<td>100</td>
<td>Juan de Celada</td>
</tr>
<tr>
<td>Chalchitán</td>
<td>60</td>
<td>Hernán Pérez Penale and Alvaro de Pulgar</td>
</tr>
<tr>
<td>Soloma</td>
<td>40</td>
<td>Diego de Alvarado and Juan de Castroqui</td>
</tr>
<tr>
<td>Usanatán</td>
<td>---</td>
<td>Ignacio de Bobadilla and Santos Figueroa</td>
</tr>
<tr>
<td>Huehuetenango</td>
<td>500</td>
<td>Juan de Espinar</td>
</tr>
<tr>
<td>Sacapulas</td>
<td>160</td>
<td>Juan Paez and Cristobal Salvatierra</td>
</tr>
<tr>
<td>Malacatán</td>
<td>80</td>
<td>Ignacio de Bobadilla</td>
</tr>
<tr>
<td>Motozintla</td>
<td>138</td>
<td>Hernán Güierrez de Cibaja and Hernán Mendez de Sotomayor</td>
</tr>
<tr>
<td>Cuchumatán (Todos Santos)</td>
<td>---</td>
<td>&quot;Menores hijos de Marcos Ruiz&quot; and García de Aguilar</td>
</tr>
</tbody>
</table>

A partial version of the Cerrato census may be found in published form in F. de Solano, Los Mayas del Siglo XVIII: Perdición y Transformación de la Sociedad Indígena Guatemalteca durante la Administración Borbónica, (Madrid: Ediciones Cultura Hispánica, 1974), pp. 80-82.
20. AGCA, A.3.16, leg. 1601, exp. 26391. The total number of tributarios in the Cuchumatanes was 4040. Huetenango was assessed at 156.
21. MacLeod, op. cit., p. 19; and Veblen, op. cit., p. 496.
Guatemala, cocuillo, is an undetermined type of plague; MacLeod believes the descriptions of the disease resemble the symptoms of pulmonary plague. Matlazahuate is a disease of disputed origin which some scholars believe to be typhus; cf. S. S. Cook, "The Incidence and Significance of Disease Among the Aztecs and Related Tribes," Hispanic American Historical Review 26 (1946), p. 321, and V. Gerhard, A Guide to the Historical Geography of New Spain (Cambridge: Cambridge University Press, 1972), p. 23.
22. The fact that almost no documentation exists for the period 1580-1664 may be due to any number of survival hazards, such as flood, fire, earthquake, theft or negligence. The lack of documentation, however, may also be simply a reflection of how relatively neglected were the Indian peoples of the Cuchumatanes during the seventeenth century.
24. AGCA, A.3.16, leg. 1601, exp. 26391.
25. Fuentes y Gúzman, op. cit., pp. 15-18 and 22-44.
26. W. M. Denevan (ed.), The Native Population of the Americas in 1492 (Madison: University of Wisconsin Press, 1976), pp. 1-12. S. F. Cook and W. Borah, Essays in Population History: Mexico and California, Vol. 3 (Berkeley and Los Angeles: University of California Press, 1979), p. 102, summarize their decades of collaborative research on the historical demography of central Mexico in one succinct sentence: "We conclude, then, that the Indian population of central Mexico, under the impact of factors unleashed by the coming of the Europeans, fell by 1620-1625 to a low of approximately 3% of its size at the time that the Europeans first landed on the shore of Vera Cruz."
28. B. de las Casas (trans. J. Phillips), The Tears of the Indians: Being an Historical and True Account of the Cruel Massacres and Slaughters of Above Twenty Millions of Innocent People; Committed by the Spaniards in the Islands of Hispaniola, Cuba, Jamaica, etc. As also in the Continent of Mexico, Peru, and Other Places to the West Indies, to the Total Destruction of These Countries (London, 1654), pp. 43-55.
Memoria de los Spa in (Cambridge: ards, su ch a s lag ue; MacLeod b e­l a gue; MacLeod, op. cit., p. 6, 20.

The I ncidence of Co lumbian E x c h a n ge, op. cit., pp. 122-164.


34. Crosby, Columbian Exchange, op. cit., pp. 42-58, examines the impact that the first pandemic of smallpox had on the native peoples of America.


9

Demography in Sixteenth-Century Central America

Linda A. N.

In the Americas, Central America, and the least-researched region of the Spanish Empire and its colonies, records for the sixteenth century have been documented in several countries. These documents lack contemporary data on the history of native populations, and they have also lacked published tables of populations for the sixteenth century. To resolve this issue, this paper presents estimates of the demographic history of Central America.

ESTIMATES

The demographic history of the native populations of Central America is poorly documented due to the lack of records. Therefore, the following estimates are based on the available documentation and calculations.

This paper was supported by Central Research Grant #123456789. The author thanks Ernest Cass for his support and suggestions.