

# The Geography of Smallpox in Western Honduras, 1781.

William V. Davidson  
June 2023

***“Variola virus [smallpox, viruelas] is most frequently transmitted from an infectious person via direct deposition of large, infective airborne droplets of saliva onto the nasal, oral or pharyngeal mucosal membranes, during close, face-to-face contact with a susceptible individual.”***

Sound familiar? In this prolonged era of the Corona Virus 2019, we often forget that in Honduras, and elsewhere in the World, when viral diseases break out they have played overwhelming roles in altering normal human activities, especially causing widespread demographic and economic disasters. The role of disease in The New World is a major theme in the culture history of the Americas. (See Cook and Borah 1971-74; Crosby 1997; Denevan 1976; Lovell 1985)

Because of the highly visible nature of smallpox, with prominent red skin blisters and scars, this Old World curse became well known in the Americas after 1520, as can be seen in the Florentine Codex.

Figure 1. Illustration of smallpox infections among the Aztecs. (Bernardino: Florentine Codex, book XII, folio 54)



What follows is something of the story of a little-known viral outbreak that occurred in 18<sup>th</sup> century Honduras -- the untold southern component of what Fenn (2001) calls "The Great Smallpox Epidemic of 1775-82."

\*\*\* \*\*

During the spring and summer of 1781, throughout much of western Honduras, *viruelas* raged. Governor Francisco Aguirre, from Guatemala, ordered a census to determine the number of deaths caused by the pestilence. He was **especially** interested to know the number of tribute-paying Indians (*tributarios*) who had perished. On occasion, the priests in charge of obtaining information in each village took the time to make a more complete census of the deaths that occurred in a settlement, often including ages of the deceased. Females were often ignored.

By December 6, 1781, Francisco Aybar, a priest from Comayagua, had compiled data from 59 places, within 18 curatos in western Honduras, a region occupied primarily by the Lenca people (AGCA 1781c, A3.16/516-5422). Another manuscript, found in Sevilla (AGI Guatemala 568), adds 17 more settlements. A final document (see Rápalo F. 2003, AGCA 1782b, A1.47/118-1402), adds seventeen settlements, only from the Alcaldía Mayor de Tegucigalpa. From these 93 known locales, in 20 curatos, we can reconstruct something of the spatial impact the viruelas epidemic that swept through the country. (See Table 1, Map 1)

This was not the first smallpox invasion. Linda Newson (1986: 314) lists smallpox epidemics in different areas of Honduras from at least 1690, 1720, 1750, and 1777. Apparently, smallpox was less deadly for the Europeans, hitting hardest the indigenous people. We know little of their immunities but perhaps the presence of previous diseases may be seen in the devastation of the younger folks. We do know that native people in Yoro suffered greatly from a smallpox invasion in 1751 (Davidson 1985: 82-82).

Apparently, the impetus of the disease entering Honduras came from the north and west, probably originating in Mexico City, and passing through Guatemala and El Salvador before reaching western Honduras. George Lovell (1985: 154-60) documents the smallpox outbreak in the Cuchumatanes of Guatemala where over 4,300 died. In all likelihood, this *peste* was a southern outbreak of the great North America smallpox epidemic described by Elizabeth Fenn in *Pox Americana* (2001: 146, 269-70). She writes of the spread of the disease from the northeastern US to New Orleans and then into Mexico City (where 44,000 were sick and perhaps 18,000 died) and into Guatemala by February 1780. Viruelas was reported in Sololá in 1780 (AGCA 1780a) and in Totonicapán and Huehuetenango in August 1780 (AGCA 1780b). In Guatemala City a committee was formed to fight the plague (AGCA 1780c) with a medico priest (1780d) and inoculations (1780e). As reported by Juarros (1818 [1981]:131), this epidemic provoked the first inoculation against a disease performed in Guatemala.

Unfortunately, data reported for each settlement were not standardized. Of the ninety-three places mentioned in the documents concerning Honduras, eighty-five reported deaths.

Fifty-seven places recorded all deaths (2,841), although three places reported only male deaths (196). Seventy-six villages listed *tributario* deaths (1,008). Only 33 places reported total deaths **and** *tributario* deaths. Linda Newson (1992: 461), without presenting detailed evidence, estimated 6,100 deaths during the epidemic. She noted that smallpox vaccinations in Honduras began in 1815 (Newson 1986: 318).

Of the 22 settlements that paid tribute in 1752-54 and do not appear in the lists of 1781, 2 are from the Tegucigalpa curato, 6 from Gracias, 5 from San Pedro Sula/Petosa, 4 from Olancho, 2 from Comayagua, and 1 from Yoro. The two from Tencoa were abandoned before the 1781 epidemic. See Table 1. The documents present no notions on why uncounted settlements were omitted.

Curatos [20]	Settlements [93]	Deaths in 1781	Tributary deaths	Tributary Towns 1752-4	Tributarios 1783	Tributarios 1801
Cururu	Cururu	12	3	yes	18	12
Cururu	Tambla	29	3	yes	18	36
Cururu	Guajiquiro	130	5	Guaxiquiro	99	82
Cururu	Opatoro	64	5	yes	38	54
Cururu	Cacaoterique	43	3	Cacaoterique	41	48
Cururu	Lamani	2	0	no	3	4
Cururu	Similaton	33	?	yes	50	39
Siguatepeque	Ciguatepeque	39	12	Siguatepeque	35	36
Siguatepeque	Jaitique	7	4	yes	8	12
Siguatepeque	Miambar	4	1	yes	6	7
Chinacla	Chinacla	?	2	yes	97	41
Chinacla	Marcala	?	1	yes	26	41
Chinacla	Jocoara	?	8	yes	26	29
Chinacla	Tenambla	?	9	yes	30	36
Chinacla	Yarula	?	0	yes	32	40
Chinacla	Puringla	?	0	yes	30	43
Chinacla	Jurla	?	0	yes	8	8
Chinacla	Masagua[ra]	?	0	no	15	38
Tencoa	Gualala	?	7	yes	44	41
Tencoa	Ylamatepeque	?	5	yes	64	103
Tencoa	Chuchitepeque	?	2	yes	11	19
Tencoa	Ofuera	?	3	yes	13	14
Tencoa	Macholoa	?	26	yes	53	63
Tencoa	Jalapa	?	11	yes	35	36

Tencoa	Celico	?	11	Selilaca	87	97
Tencoa	Yamala	?	7	yes	38	55
Tencoa	Chinda	27	0	yes	24	46
Tencoa	Petoa	10	0	yes	24	25
Espolocon	Tiuma	9	3	yes	20	8
Espolocon	Santiago	4	2	Santhiago	8	3
Yoro	Jocon	22	1	yes	27	60
Sulaco	Yorito	?	1	yes	20	47
Sulaco	Sulaco	0	0	Sulaco/Tapale	6	12
Olanchito	Agalteca	?	25	yes	157	70
Olancho	Zapota	?	1	Sapota	6	10
Olancho	Catacamas	?	7	yes	112	215
Silca	[L]aguata	?	2	Laguata	13	47
Silca	Yocon	?	2	yes	6	8
Silca	Jano	0	0	yes	19	49
Gracias a Dios	Lepaera	55	5	yes	51	142
Gracias a Dios	Laiguala	93	18	La Yguala	142	243
Gracias a Dios	Talgua	71	6	yes	116	123
Gracias a Dios	Mexicapa	15	?	yes	11	28
Yntibuca	Yntibuca	91	26	yes	164	219
Yntibuca	Xicaramani	33	10	Gicaramani	46	23
Yntibuca	Llolula	48	18	Yolula	46	79
Yntibuca	Guancapla	40	17	yes	38	57
Yntibuca	Yamalanguira	78	26	Yambaxabguire	172	222
Yntibuca	San Juan	67	12	San Juan Maluten	89	129
Gualzinse	Gualsinse	175	49	yes	227	254
Gualzinse	Majatique	35	12	yes	41	49
Gualzinse	Piraera	72	20	Piraira	258	294
Gualzinse	Joconguera	17	2	yes	30	19
Cucuyagua	Cucuiagua	?	4	Cucuyagua	20	18
Cucuyagua	Corquin	?	6	yes	17	15
Cucuyagua	Chuchuyaco	?	13	Chucuyuco	59	35
Cucuyagua	Guarita	33	16	yes	161	101
Cucuyagua	Tambla	?	3	Tampla	23	20

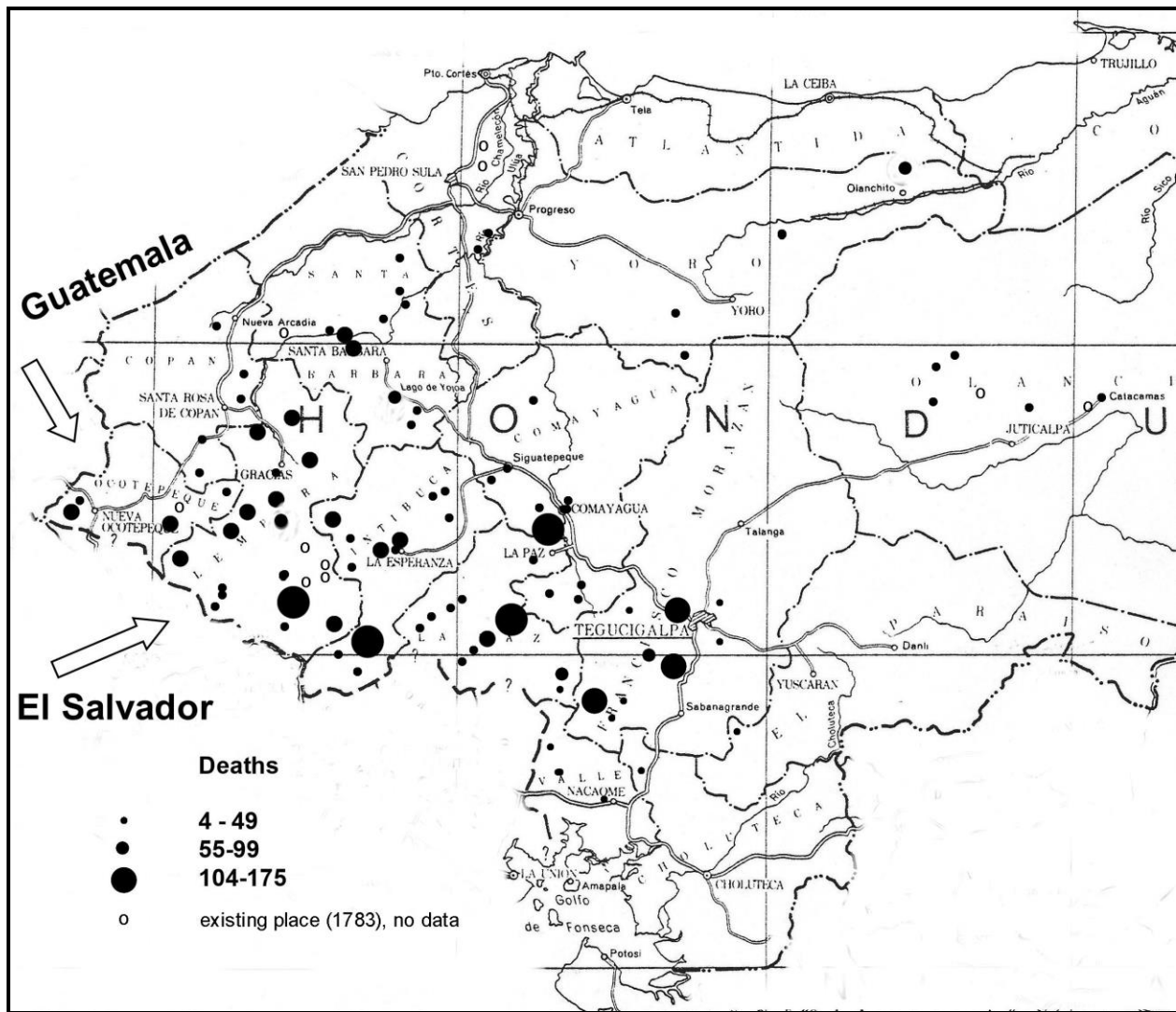
Cucuyagua	Tomala	14	5	Tonala	17	21
Ocotepeque	Ocotepeque	99	4	yes	119	110
Ocotepeque	San Sebastian	15	?	S Juan Ocotepeque	27	16
Quezailica	Quezailica	9	1	Quesailica	59	76
Quezailica	Lajigua	?	2	Lagigua	0	30
Quezailica	Opoa	17	1	yes	41	23
Gualcha	Gualcha	?	8	Guarcha	156	142
Gualcha	Colosuca	?	10	yes	90	81
Gualcha	Coloete	?	13	Coluete	104	142
Gualcha	Caiquin	?	19	yes	76	74
Gualcha	La Campa	?	18	yes	89	105
Camasca	Camasca	46**	5	yes	139	120
Camasca	Colomoncagua	31**	11	yes	154	202
Camasca	Guaranjanbala	119**	?	Guarajambala	70	53
Comayagua	Lavorios	?	0	no	12	Caridad 31
Comayagua	Jeto	?	0	yes	6	7
Comayagua	[A]futerique	26	0	Axuterique	35	31
Comayagua	Lejamani	121	0	Lexamani	142	95
Tegucigalpa	Comayaguela	212	78	yes	no	264
Tegucigalpa	Santa Ana	163	84	yes	no	95
Tegucigalpa	Curaren	162	115	yes	no	167
Tegucigalpa	Ojojona	76	32	yes	no	77
Tegucigalpa	Aguanqueterique	76	6	yes	no	48
Tegucigalpa	Langue	46	11	no	no	97
Tegucigalpa	Tesiguat	45	45	no	no	393
Tegucigalpa	Alubaren	40	22	no	no	39
Tegucigalpa	Reitoca	37	32	yes	no	20
Tegucigalpa	Lepaterique	35	18	yes	no	49
Tegucigalpa	Lacterique	22	10	Locterique	no	29
Tegucigalpa	Goascoran	15	3	no	no	9
Tegucigalpa	Tegucigalpa	14	9	yes	no	15
Tegucigalpa	Nacaome	14	0	no	no	Esp/Lad only
Tegucigalpa	Tatumbala	11	5	no	no	11
Tegucigalpa	Pespire	11	4	no	no	8
Tegucigalpa	Aramecina	7	2	no	no	13
		[2,841+]	[1,008 +]			
<b>TOWNS NOT IN 1781 LIST</b>						
Petoa				Ticamaya	4	5
Petoa				Masca	0	8

Olancho				El Real/Punuara	23	13
Olancho				Manto	6	15
Olancho				Juticalpa		
Olancho				Gualaco		
Gracias				Guaxinlaca	224	237
Gracias				Guasavasque	145	164
Gracias				Erandique	123	101
Gracias				Posta	73	65
Gracias				Goalmoaca	72	95
Gracias				Sensenti	0	11
San Pedro Sula				Jetegua		
San Pedro Sula				Espoloncal		
San Pedro Sula				Quelequele		
Yoro				Chalmeca		
Tegucigalpa				Orica		
Tegucigalpa				Teopasenti		
Tegucigalpa						Tamara 3
Tegucigalpa						Suyapa 69
Comayagua				Chapuluca		
Comayagua				Santa Lucia		
Comayagua						Calvario 15
Tenoco				Quesaltepeque		
Tenoco				Teconalistagua		
Choluteca						Linaca 6
Choluteca						Tiscagua 21
[** males only]						

Sources: AGCA 1752-4; AGCA 1783; AGCA 1803 (for 1801 figures).

\*\*\* \*\*

**Map 1. Distribution of deaths from smallpox reported for Honduras in 1781. Infections diffused from Guatemala and El Salvador.**



As might be expected, population loss was greatest in the densely populated areas of western Honduras. The curatos of largest death counts, in total and in tributarios, were Tegucigalpa, Intibucá, Cururu, Gualcinse, and Gracias. Eighteen villages lost over 55 persons. (See Tables 2 and 3)

Table 2. Populations losses, by curato, during the 1781 smallpox epidemic in Honduras.

Curato	Number of Settlements	Total Deaths	Tributario Deaths
Tegucigalpa	17	986	476
Intibucá	06	357	109
Cururu	07	313	19 +
Gualcinse	04	299	83
Gracias a Dios	04	234	29 +
Camasca	03	196	16 +

Comayagua	04	147	?
Ocotepeque	02	114	4 +
Siguatepeque	03	50	17
Cucuyagua	06	47 +	47
Tencoa	10	37 +	72
Quesailica	03	26 +	04
Yoro	01	22	01
Espolocon	02	13	05
Gualcha	05	?	68
Chinacla	08	?	20 +
Silca	03	?	04
Sulaco	02	?	01
Olancho	02	?	08
Olanchito	01	?	25
<b>Totals</b>	<b>93</b>	<b>2,841+</b>	<b>1,008+</b>

**Table 3. Honduras: Pueblos de Indios reporting most deaths in smallpox epidemic, 1781.**

Curatos	Settlements	Deaths in 1781
Tegucigalpa	Comayaguela	212
Gualzinse	Gualsinse	175
Tegucigalpa	Santa Ana	163
Tegucigalpa	Curaren	162
Cururu	Guajiquiro	130
Comayagua	Lejamani	121
Camasca	Guaranjanbala	119 (males only)
Ocotepeque	Ocotepeque	99
Gracias a Dios	Laiguala	93
Yntibuca	Yntibuca	91
Yntibuca	Yamalanguira	78
Tegucigalpa	Ojojona	76
Tegucigalpa	Aguanqueterique	76
Gualzinse	Piraera	72
Gracias a Dios	Talgua	71
Yntibuca	San Juan	67
Cururu	Opatoro	64
Gracias a Dios	Lepaera	55

As should be expected, in the decade surrounding the epidemic, *tributario* numbers declined through most of Honduras. However, the degree of loss varied widely. It can be seen



further that between 1786 and 1801 the number of tributaries grew, almost reaching pre-epidemic proportions. (See Table 4)

**Table 4. Tributary loss in 23 settlements, western Honduras, 1776-1786.**

Place	Tributaries			1786 num. as % of 1776 num.
	1776	1781 (loss)	1786 - 1801	
Jalapa	16	11	15 - 36	93.8%
Joconguera	31	2	27 - 19	87.1%
Piraera	269	20	228 - 294	84.8%
Corquin	21	6	17 - 15	81.0%
Guarabasque	153	?	121 - 164	79.1%
Yambalanguira	174	26	134 - 222	77.0%
Tambla	25	3	19 - 36	76.0%
Majatique	52	12	39 - 49	75.0%
Gualcha	163	8	119 - 142	73.0%
Xicaramani	48	10	34 - 23	70.8%
Celilaca	56	11	39 - 97	69.6%
Chucucuco	71	13	49 - 35	69.0%
Gualsinse	232	49	159 - 254	68.5%
Cururu	19	3	13 - 12	68.4%
Tiuma	24	3	15 - 8	62.5%
Sn Andres Ocotepeque	275	4	156 - 110	56.7%
Guajinlaca	225	?	122 - 237	54.2%
Erandique	125	26	66 - 101	52.8%
Cucuiagua	26	4	13 - 18	50.0%
Sn Sebastian Hermita	35	?	17 - 16	48.6%
Guancapla	69	17	30 - 57	43.5%
Macholoa	45	26	16 - 63	35.6%
Chinda	29	?	3 - 46	10.3%
<b>Totals</b>	2,183		1,451 - 2,054	66.5%

### Some details from the data.

For some details, below are examples from Guajiquiro, Cururú, and Tambla (southwest of upper Comayagua Valley) and Camasca, Colomoncagua, and Guarajambala (in far south Intibucá). Guarajambala (now Concepción) is three km from Camasca

In Cururu, a curato center of perhaps 200 residents, 12 inhabitants died. In the count of October 22, 1781, seven are males, aged 1 month, 3 y. 9 m., 9 y. 6m., 10 y., 11 y. 6 m., 18 y., and 25 years. The five females, of no interest as "tributarios," are without names or ages. In Tambla, another piedmont town like Cururu, 19 "indias" and 10 males died. Of the males, 5 are over 8 years, 5 are under. Higher in the mountains, in Guajiquiro, of 130 deaths, 74 are "indias." Age distribution of the males was: 0-4 = 12, 5-9 = 15, 10-19 = 29. Clearly, in this area of Honduras, smallpox was primarily a disease deadly for the young.

**Table 5. Male Deaths Reported in the Smallpox Epidemic of 1781, by Age, in Guajiquiro, Cururu, and Tambla, Western Honduras. (AGI Guatemala 568; AGCA [1781c] 516-5422)**

Age	All Settlements			by Quartiles
	Guajiquiro	Cururu	Tambla	
19-20	01	00	00	
18-19	05	01	01	
17-18	05	00	00	
16-17	02	00	00	
15-16	<u>03</u>	<u>00</u>	<u>01</u>	
	16 (29%)	01	02	19 (26%)
14-15	01	00	00	
13-14	07	00	00	
12-13	02	00	00	
11-12	01	01	00	
10-11	<u>02</u>	<u>01</u>	<u>00</u>	
	13 (23%)	02	00	15 (21%)
09-10	02	01	02	
08-9	06	00	01	
07-8	02	00	00	
06-7	01	00	01	
05-6	<u>04</u>	<u>00</u>	<u>00</u>	
	15 (27%)	01	04	20 (28%)
04-5	01	00	01	
03-4	03	01	00	
02-3	02	00	01	
01-2	03	00	01	
00-1	03	01	01	
	12 (21%)	02	04	18 (25%)
<b>Total</b>	<b>56 (100%)</b>	<b>06</b>	<b>10</b>	<b>72 (100%)</b>

Notes for:

*Guajiquiro.* Only one other male died, aged 40. Seventy-four females died, without ages given. Document records 130 total died, but total noted within document is 127.

*Cururu.* One male, aged 25, also died. Five females, ages unreported in the document, died.

*Tambla*. Nineteen females also died in the epidemic.

**Table 6. Male Deaths Reported in the Smallpox Epidemic of 1781, by Age, in Camasca, Colomoncagua, and Guarajambala, Western Honduras.** (AGI Guatemala 568; AGCA [1781c] 516-5422)

Settlement -->	Camasca	Colomoncagua	Guaranjanbala	Total
Ages				
19-20	02	00	02	04
18-19	02	00	08	10
17-18	00	04	03	07
16-17	02	04	04	10
15-16	04	04	06	<u>14</u>
				45 (23%)
14-15	00	02	06	08
13-14	02	00	04	06
12-13	01	02	04	07
11-12	04	01	04	09
10-11	02	01	00	<u>03</u>
				33 (17%)
09-10	01	01	02	04
08-9	02	00	06	08
07-8	03	01	03	07
06-7	02	01	04	07
05-6	01	00	10	<u>11</u>
				37 (19%)
04-5	01	01	13	15
03-4	04	00	20	24
02-3	04	01	08	13
01-2	03	05	06	14
00-1	05	03	04	<u>12</u>
				78 (40%)
<b>Totals</b>	<b>45</b>	<b>31</b>	<b>117</b>	<b>193 (100%)</b>

Note: Only three other males died, aged 21, 24, and 36; one was from Camasca, the other two were from Guarajambala.

As in the case of the Guajiquiro-Cururu-Tambla deaths, children were most affected in southern Intibucá.

\*\*\* \*\*

**The interesting case of the Paya (Pech) re-settled near Comayagua, 1781.**

The first indication of trouble among the newly “reduced” Paya on their finca near Comayagua was from January 8, 1781, when Col. Francisco Aybar, from Comayagua, wrote to the palace in Guatemala and asked for money to benefit the “Indios Payas” because of the viruelas epidemic (ACGA A3.16/193-1993). An unknown number of Paya who were under his control were residing on the outskirts of Santa Lucía, a northeastern barrio of Comayagua (AGCA A1.12/50-512). Because the “indios” were recently “confessed” and “reduced” and placed on their own finca, they must be aided during the epidemic. Aybar made several requests during the year before finally receiving a little money in August 1781 for chickens, sugar, vinegar, and bread.

Another letter of April 19, 1782, it was recalled that in August 1779 140 indios “butucos” (probably Tawahka), recently reduced, were moved to Catacamas to give them a better opportunity in the Catholic religion and to settle among Spaniards to help defend against the Zambos and Mosquitos raiders up the Patuca. Despite the supposed “good treatment they received” the “Butucos” repeatedly escaped into their eastern mountains. After a few recaptures and repeated escapes, Captain Manuel Ayes violently gathered 130 “butucos” and escorted them over 240 kms. west to the Maniani Valle just north of Comayagua. There the natives were placed under the care of Franciscan missionaries from Yoro.

However, supposedly because of the warmer climate at Maniani, 69 Pech soon died, so the remaining were relocated closer to Comayagua into mountain areas and settled them with Indians in manso towns. The names of the new villages are not revealed, but were likely to the western piedmont settlements: Ajuterique, Lejamani, and Cayngala. All of these places were cooler and well incorporated into the colonial system. Only 14 Pech fled their new home villages around the Comayagua valley (AGCA A1/legajo 1531, folios 311-312).

Given the date, the deaths at Maniani must be suspected to have been from viruelas, although they were not reported as such.

### **Concluding remarks.**

In the end, it seems that the strength of the virus ravaged western Honduras – especially in the territory of the Lenca. All six of the largest outbreaks –over 100 deaths per town-- occurred in their region. The intensity of the disease seemed to lessen as it entered the less densely settled regions of Olancho and to the southeast, Choluteca and El Paraíso.

Fortunately, by the turn of the century, the populations of most settlements had rebounded to pre-epidemic numbers.

### **Bibliography**

AGCA (Archivo General de Centro América, Guatemala)

- 1752-4 A3.16/438-8949, 8950, 8956: "padrón de tributarios . . ."
- 1776 A3.29/1749-28130, fol. 88 ff., "Clases de población en curatos de Honduras."
- 1780a A1.24/201-4077, viruelas en Sololá, Guatemala
- 1780b A1.24/6097-55507, viruelas en Totonicapan y Huehuetenango
- 1780c A1.47/40226-31005, comité formado
- 1780d A1.47/5347-45090, sobre un padre medico
- 1780e A1.2/2177/15712, folio 63, sobre inoculación en Guatemala
- 1781a A3.16/193-1993, Francisco de Aybar, payas en epidemia, de 8 de enero.
- 1781b A1.23/1531-497, Francisco de Aybar, de 25 de julio.
- 1781c A1.12/50-512, Francisco de Aybar, payas en Santa Lucia
- 1781d 516-5422: "Provincia de Comayagua -- Estado que manifiesta los Yndios que en dicha Provincia murieron en la epidemia de Viruelas . . . , Francisco de Aybar, 20 sept. 1781.
- 1782a A1.23/1531-311, de 19 de abril.
- 1782b A1.47/118-1402: "Sobre la peste de viruelas experimentada en la Provincia de Tegucigalpa." (See Rápalo F. 2003)
- 1783 A3.16/193-1992: "Quenta y relación jurada que . . . hago los tributos . . . , provincia de Comayagua, 1783," de Comayagua. Juan Nepomucemo.
- 1786 "Estado que manifiesta varios pueblos de la Prov. de Comayagua que se an presentado acerca del agravio que sufren en la paga de tributos . . . ", de Guatemala, julio 15 de 1786. Juan Hurtado.
- 1803 A3.16/244-4871: "Comayagua, mapas de tributaries . . . , 1801" por Ignacio Guerra: 109 pueblos de indios.

AGI (Archivo General de Indias, Sevilla, España)

- Guatemala 568: "Testimonio de los autos sobre perdon de tributos a todos los pueblos de la Prov. de Comayagua por la mortalidad de tributarios -- pesta general de Viruelas," de Guatemala 1783. folios 122.
- Indiferente General 1527 (1777), "Estado y Padron General . . .," (See Newson 1986: 325)

Bernardino, de Sahagún,

- 1499-1590 *Florentine Codex : General History of the Things of New Spain*. Santa Fe, N.M.: Salt Lake City, Utah: The School of American Research ; University of Utah, 1970.

Cook, Sherburne F. and Woodrow Borah

- 1971-4 *Essays in population history: Mexico and the Caribbean*. 2 vols. Berkeley: University of California Press.

Crosby, Alfred W.

- 1997 *The Columbian Exchange*. Washington, D. C.: American Historical Association.

Davidson, William V.

1985 "Geografía de los indígenas toles (jicaques) de Honduras en el siglo XVIII," *Mesoamérica* (Guatemala) Año 6, June: 58-90.

Denevan, William M.. editor

1976 *The native population of the Americas in 1492*. Madison: University of Wisconsin Press.

Fenn, Elizabeth A.

2001 *Pox Americana. The Great Smallpox Epidemic of 1775-82*. New York: Hill and Wang.

Juarros, Domingo

1818 *Compendio de la historia del reino de Guatemala, 1500-1800*. Edición de 1981. Guatemala: Editorial Piedra Santa.

Lovell, W. George

1985 *Conquest and Survival in Colonial Guatemala: A Historical Geography of the Cuchumatán Highlands, 1500-1821*. Kingston and Montreal: McGill-Queen's University Press.

Newson, Linda

1986 *The cost of conquest. Indian decline in Honduras under Spanish rule*. (Dellplain Latin American Studies, No. 20) Boulder and London: Westview Press.

1992 *El Costo de la Conquista*. Tegucigalpa: Editorial Guaymuras.

Rápalo Flores, Oscar

2003 "Efectos demográficos de la epidemia de viruela de 1780 en la población indígena de la Alcaldía Mayor de Minas de Tegucigalpa," *Yaxkin* (Tegucigalpa) XXII: 92-103.

\*\*\* \*\*