

EL SALVADOR

A Mission to Continue Exhumations at El Mozote, halted in 1993 by an amnesty law

At the request of Tutela Legal, the human rights office of the Catholic archdiocese of San Salvador, EAAF again conducted exhumations—halted in 1993 due to a general amnesty law—at El Mozote, site of a 1981 massacre that was the largest of the twelve-year civil war. In addition, we have started training local professionals from the Salvadoran Institute of Legal Medicine in forensic anthropology and archaeology techniques. This group hopes to develop a small forensic unit dedicated to work on the aftermath of the civil war, matching people killed in massacres and combat with unidentified human remains that are found in many parts of El Salvador. Finally, in December the remains of individuals exhumed in 2000 were reburied by their families in the new plaza of El Mozote.

THE EL MOZOTE CASE

Historical Background

Between the 6th and 16th of December, 1981, the Salvadoran armed forces initiated a major offensive, “Operation Rescue,” in the province of Morazán, in north-eastern El Salvador. The purpose of this operation, led by the elite U.S.-trained Atlacatl counterinsurgency battalion, was to force guerilla troops from the area, destroy their clandestine radio station, and eliminate any support for them among the civilian population. After several confrontations in hamlets near El Mozote, the FMLN guerilla front¹ troops left the area on December 9th, and the army established a base camp in the village of El Mozote. Over the next few days, the troops conducted daytime attacks on the nearby villages of La Joya, Jocote Amarillo, Ranchería, Los Toriles, and Cerro Pando. In each village, the army murdered residents, burned houses and fields, and slaughtered livestock, with as many as half of all the victims murdered on December 11th. They remained in the area for two weeks.

When the soldiers went back to their camp at El Mozote each night, survivors from other villages returned to the

massacre sites and buried as many of the dead as possible under the cover of darkness. These victims were interred in common graves close to where their bodies were found. However, due to security reasons, many bodies remained unburied and were left where they had fallen.

During this period, the Salvadoran army allegedly killed approximately 800 civilians in six neighboring villages. According to the investigation conducted by Tutela Legal—established by the late Archbishop Oscar Romero in 1980—over 40 percent of the victims were children under the age of ten.²

Many survivors of “Operation Rescue” escaped across the border with Honduras to UN refugee camps; others joined the FMLN or took refuge in other parts of El Salvador. The villages in this region were mostly abandoned until 1989, when survivors began to return. El Mozote itself remained deserted until several years later.

Investigation of the Massacre

This incident, which became known as the “Massacre of El Mozote” after the name of the largest village, became the subject of intense conflict in both El Salvador and the



Morazán, 1992. The monument in memory of the massacre of El Mozote. illustration by Claudia Bernardi.

United States. At the time of the massacre, little information was available to the Salvadoran public regarding the nature and mechanisms of military operations in the countryside. By the early 1980s, there was no longer an opposition press, and available information was strictly controlled by the armed forces. Only one local newspaper—*La Prensa Gráfica*—reported on “Operation Rescue” on December 9, 1981. Access to Mozote and the surrounding area was denied to journalists, the International Red Cross and others, and the area was under strict military control in order to “avoid whatever regrettable or unpleasant act”, according to an army spokesperson.³ The guerilla radio station, *Radio Venceremos*, reported the massacres by the end of December 1981.

On January 27, 1982, the international community was made aware of what had happened at El Mozote via the accounts of journalists Alma Guillermoprieto, Raymond Bonner, and photojournalist Susan Meiselas, who published their stories in the *Washington Post* and the *New York Times*. These accounts were based on personal inspections of the site and interviews with survivors such as Rufina

Amaya. Bonner and Meiselas crossed the Honduran border into El Salvador on January 3rd, 1982 and Guillermoprieto followed the same route over a week later. When they arrived in the region, many bodies had still not been buried. Bonner recalls: “the fragrance of the tropical flowers was overwhelmed by the stench of decaying bodies. In one adobe hut after another, charred skulls, leg bones, pelvises, femurs, rib cages and spinal columns protruded from the rubble of sewing machine parts, children’s toys, simple family belongings, smashed roofing tiles, and the charred beams that had held them.”⁴ On the walls of some houses it was written: “We are the little angels from Hell—*Atlatcatl Battalion*.”⁵

News of the massacre sparked an intense debate in the U.S. Congress, where the renewal of military aid to El Salvador was already the subject of controversy. According to a 1974 amendment to the Foreign Assistance Act, no military aid could be sent to countries where serious violations of human rights take place. As a result, both the Salvadoran government and the U.S. State Department declared that there had been a military operation in the



area, but what had occurred in El Mozote was a “shoot-out” between the Salvadoran army and guerilla troops. Since there was no evidence of such a massacre, they claimed, reports of it must be guerilla propaganda.⁶ Due to the war, the Reagan administration was required to certify the progress of the Salvadoran government on issues of human rights every six months. Therefore, future aid to El Salvador hung on the veracity of reports on El Mozote.

Nevertheless, the day after the Times and the Post published the accounts of the massacres, the Reagan administration certified that the Salvadoran government was “making a concerted effort to comply with internationally recognized human rights” and was “achieving substantial control over all elements of its own armed forces, so as to bring an end to the indiscriminate torture and murder of Salvadoran citizens.”⁷ Both governments refused to support further investigation into the incident, thereby largely removing it from public attention for the next several years.

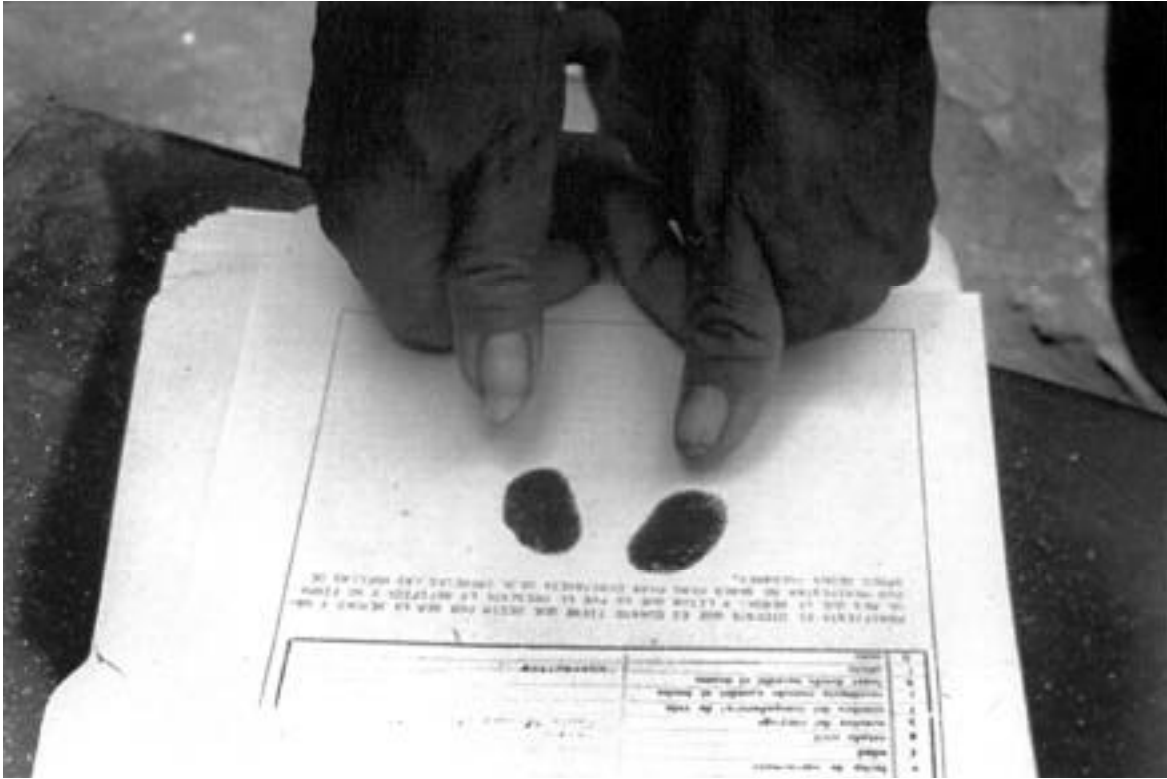
Human rights groups and the inhabitants of Morazán, including survivors and relatives of the victims, however, continued to press for a thorough investigation of what had

happened at El Mozote. In 1989, Tutela Legal and local organizations from Morazán began an extensive investigation into the massacre. On October 26, 1990, Tutela Legal filed an initial brief on behalf of survivors of the massacre before Judge Federico Ernesto Portillo Campos in San Francisco Gotera, Morazán.

As part of their investigation, Tutela Legal insisted on exhumations in El Mozote and the nearby villages where the massacres took place. Due to a shortage of specialists to carry out this work, Tutela Legal contacted EAAF in 1991 and requested our assistance in the investigation. EAAF members conducted a preliminary mission at the end of 1991 but Salvadoran judiciary officials did not grant permission for the work to proceed.

Investigations After the Civil War

In early 1992, shortly after the Salvadoran government and the FMLN signed peace agreements to end the war, Tutela Legal again invited EAAF to assist with their ongoing investigation of the massacre at El Mozote. Three EAAF members traveled to El Salvador to conduct exhumations at the sites.



(left) Morazán, 1992. Rufina Amaya, a survivor from the massacre. photo by Stephen Ferry.
 (above) Morazán, 1992. Witness signing his testimony. photo by M.Doretti/EAAF.

However, after several months spent preparing, avoiding obstacles and attending to bureaucratic requests from the court, permission was denied by the Supreme Court, and the local judge. EAAF members returned to Argentina.

Finally, in the fall of 1992, under the auspices of the UN Peace Commission for El Salvador (ONUSAL) that was created as a result of the peace agreements, EAAF conducted exhumations of Site 1, the so-called ‘convent’ in El Mozote—a small one room building close to the church. From the 31 square meter room, EAAF recovered the skeletons of 143 individuals, 131 of whom were children under the age of twelve. One of the adult skeletons belonged to a woman who was in her last trimester of pregnancy. Fetal bones were found in her pelvic area. Most of the children were dressed and a few carried personal effects, such as toys, marbles, medals, crosses, and coins.

We found 263 bullet fragments and 245 spent cartridges in Site 1. All of the cartridges, with the exception of one, were fired from 5.56 mm NATO caliber firearms. According

to the report of U.S. ballistics specialist Dr. Douglas Scott, the expert witness who analyzed all of the ballistic evidence, the cases appear to have been fired from M-16 military rifles manufactured in the United States. Various sources claim that the Atlacatl Battalion was the only Salvadoran army unit to use this type of rifle at the time of the massacre. All cartridge cases were head-stamped “L.C.,” which indicates that they were manufactured for the U.S. government by the Lake City Plant outside Independence, Missouri. The firearm identification analysis conducted by Scott indicates that there were at least 24 individual firearms used at the site.

The majority of bullet fragments were found embedded in or in direct association to the skeletons in the northeast side of the room, while the majority of spent cartridges were found in the southwest corner of the room. This indicates the approximate locations of shooters and victims when the bullets were fired. Thirty-eight holes resulting from gunshots were found on the floor of Site 1, and many of the holes contained bullet fragments. It’s impossible to



determine whether or not the victims were alive when they were brought to the convent. However, in at least nine cases, the victims were shot inside the convent while lying in a horizontal position on the floor. The shots were fired downwards, passing through the bodies and clothing, producing distinct holes on them and in the floor where bullet fragments were found. Some of the children may have been shot outside of the building and subsequently dumped inside, but sufficient rounds of ammunition were fired in the convent to account for all of the deaths.

Laboratory tests conducted by U.S. forensic experts Drs. Snow (forensic anthropologist), Kirschner (forensic pathologist), and Fitzpatrick (forensic radiologist) showed severe trauma to the skeletons, indicating high velocity gunshot wounds, post-mortem crushing, and fire/heat damage, which is consistent with the high velocity ammunition found at the site and the witness's accounts. Taken together, the evidence strongly suggested mass summary extra-judicial executions, a conclusion that was consistent with the testimonies of survivors. There was no evidence of a shoot-out.

During the 1992 mission, EAAF exhumed only one mass grave at the El Mozote site; many other clandestine graves still remain, both in El Mozote itself and in the five outlying villages. The UN Truth Commission, which finished its mandate in 1993, strongly recommended that investigations of human rights violations that occurred during the war—including the El Mozote massacre—be continued. Nevertheless, just several days after the Commission issued its report, the Salvadoran legislature passed an amnesty law that not only barred prosecution of human rights violators, but was also interpreted at the time as foreclosing any further investigations, including exhumations, in the El Mozote case.

EAAF's findings from the 1992 mission were one of the principal bases for the UN Truth Commission's conclusion that the Salvadoran army committed a massacre in El Mozote and five nearby villages, resulting in the deaths of at least 500 people and probably many more. The report also included the names of high-ranking officers in the armed forces of El Salvador who were responsible for the operation. The findings of the Commission prompted the Clinton administration to publicly rectify the US State Department's official position that the massacre had never occurred, finally acknowledging that the reports made by Guillermprieto, Bonner and Meiselas were correct.



(left). Morazán, 1992. Dress of a newborn, Site 1, Convent. photo courtesy of Stephen Ferry.

(above). Morazán, 2000. Relatives of the victims assist during EAAF's excavation. Over forty percent of the victims were children under ten years of age. photo by M.Doretti/EAAF.



1999: *El Mozote Seven Years Later*

A major problem in the aftermath of the war in El Salvador, as pointed out by the UN Truth Commission, was the incapacity of the judiciary, tightly controlled by the Supreme Court, of fulfilling the requirements of justice due to their extreme politicization.⁸ This situation made it impossible for the commission to recommend fair trials and prosecutions until judicial reforms were implemented and restructuring had taken place in light of the peace agreements. A full page of their report, *From Madness to Hope*, was devoted to this dilemma, which was extremely controversial. On the one hand, the commission considered the possibility of recommending an amnesty because the judicial system was so biased.⁹ On the other hand, human rights activists were dismayed that the report did not even call for the immediate prosecution of forty high-level officials named as responsible for serious abuses. Finally, according to Priscilla Hayner, the head of one human rights organization felt that the way in which the issue of justice was approached by the commission “undid everything else good in the report’

by taking away the expectation and the obligation of the judicial system to work.¹⁰

Without settling this crucially important issue, investigations into the war and families’ desires to find the remains of their loved ones were halted. Despite the amnesty law, relatives of the victims of the El Mozote massacre and other incidents of human rights violations in El Salvador continued to demand further investigations. Finally, in the past three years, changes in the Salvadoran Supreme Court have resulted in a political climate more conducive to human rights investigations. In response to relatives’ demands, by the end of 1998, Tutela Legal once more began the process of seeking permission to begin new exhumations at El Mozote. New directors in both the Supreme Court and the Institute of Legal Medicine supported this request, stating that relatives of the victims had a right to recover the remains of their loved ones. Tutela Legal contacted EAAF to request that we conduct another large-scale mission.

During the first investigations between 1989 and 1992, a list of more than 800 presumed victims had been compiled. EAAF had also mapped out locations of burial sites



(above) Morazán, 2000. Marbles, coins and buttons found in the trousers pocket of one of the children at Site 1, Grave A, in the hamlet of Jocote Amarillo. (right) Morazán 2000. Dress of a child, Site 5, Esqueleton 3, La Joya. photos by M.Doretti/EAAF.



in El Mozote and the hamlet of La Joya, two locations where massacres took place. However, the exhumations that EAAF conducted at the one site in 1992 represented just a fraction of the bodies that remain to be uncovered. The sites that have not yet been investigated remain much as they were in the aftermath of the massacres.

In March 1999, Louis Fondebrider of EAAF traveled to El Salvador to visit sites and to analyze the feasibility of continuing the investigation. Together with Tutela Legal staff, Fondebrider went to Morazán and re-established contact with relatives of the victims who made it clear that they very much wanted the exhumations to continue. He verified the locations of the mass graves and the names of the presumed victims in La Joya and visited untouched burial sites at Jocote Amarillo.

During this same trip, Fondebrider also interviewed the new judge in charge of the El Mozote case, the president of the Supreme Court, and the director of the Institute of Legal Medicine. Each confirmed their support for further

investigations on the grounds that the families had a right to the remains. Accordingly, EAAF and Tutela Legal joined forces to conduct exhumations, both to clarify the historical record and to assist the relatives of the victims in their right to recover the remains.

2000 MISSION

Training and Exhumations in La Joya and Jocote Amarillo

From April 1st to June 15th, anthropologists Patricia Bernardi, Mercedes Doretti and Anahi Ginarte of EAAF conducted a mission to El Salvador at the request of Tutela Legal and the judge from San Francisco Gotera overseeing the El Mozote case. The purpose of this mission was to continue exhumations of mass graves containing victims of the El Mozote massacre and to conduct training of professionals from the Institute of Legal Medicine (IML). As in the 1992 mission, EAAF members served as expert witnesses for San Francisco Gotera, now Judge Paz Canales.

Between April 6th and May 25th, EAAF members exhumed 12 graves identified by witnesses, recovering the bones of 37 individuals and the remains of a fetus. The graves were located in the hamlets of La Joya and Jocote Amarillo (Guacamaya county, department of Morazán), two of six hamlets destroyed in the massacre of El Mozote.

Laboratory work was carried out between May 15th and June 15th at the headquarters of the Institute of Legal Medicine in Santa Tecla, San Salvador. Using techniques of forensic anthropology, pathology, odontology and radiology, we worked to identify the victims buried in these graves and establish the causes of their deaths. Associated evidence—clothing, personal effects and ballistic materials—was also recovered and examined in this context.

Collaboration and Training

During both the archaeological and laboratory work, we worked with and provided training in methods of forensic anthropology and archaeology to the following members of the IML: forensic doctors Pablo Mena Alvarado, Orellana, Francisco Menjivar, and odontologists Dr. Saul Quijada Roque and Dra. Miriam Beatriz Criollo Mendoza. EAAF collaboration with the IML is part of an effort to incorporate new techniques of analysis and recovery into local forensic work while helping to train a recovery and identi-



(above) Morazán, 2000. Primary and Secondary dentition of a child. Estimated age: Seven years plus or minus twenty four months. (below) Skull of a woman, multiply fragmented by the passage of a bullet. Reconstructed in the laboratory. Site 5, Skeleton #4, La Joya. photo by EAAF.

fication unit to work on the aftermath of the civil war.

EAAF is grateful for the important contributions to the project made by the Salvadoran Institute of Legal Medicine. In particular, we would like to thank Dr. Hernandez Gavidia, Director of the IML, Dr. Carlos E. Mendez director of IML at Santa Tecla, San Salvador regional office and Drs. Orellana and Menjivar, director and vice director of San Miguel's IML office.

During the laboratory work, we had the invaluable support of Dr. Clyde Snow, senior forensic anthropologist from the US, who also worked as an expert witness during the 1992 mission. Dr. Snow worked in the laboratory between May 29th and June 6th 2000. Dr. Douglas Scott, US archaeologist, ballistic expert, and expert witness to the case, analyzed ballistic evidence, as he had in 1992. Tutela Legal assisted in the daily investigations, providing legal advice, contacting judicial officials and families of the victims, and managing the logistics of the mission.

MAIN RESULTS

Biological profiles of the victims

During this mission, all six of the massacre-related burial sites in Jocote Amarillo were exhumed. The remains of eight individuals were recovered. Another six burial sites

were exhumed at La Joya, where the remains of 29 individuals and one fetus were recovered. During the EAAF 2002 mission to El Salvador, the outstanding burial sites in La Joya will probably be excavated.

In La Joya and Jocote Amarillo, a total of 37 individuals, 14 of them adults and 23 children under the age of fourteen, were recovered. Among the children, eighteen were under the age of eight and five were eight to fourteen years of age. Of the adults, 3 were men and 11 were women. The ages of the adult men ranged from about forty to over sixty years of age at the moment of death. The adult women were between 20 and 60 or more years old at the time of death.

According to witnesses' testimony, one of the women reportedly buried at what was designated Site 5- La Joya was in her third trimester of pregnancy. Indeed, the fetal remains of an approximate 6 months fetus were found in that grave. However, the fetal bones lay 40 cm from the pelvic area of the presumed mother, suggesting that she had miscarried or the fetus was violently removed from her body at or around the time of death.

The overall number of individuals found in each site, their sex ratio, and their age ranges, were generally consistent with those described by the witnesses. In sum, approxi-

Table 1. Number of individuals recovered per site in La Joya and Jocote Amarillo hamlets.

Hamlet	Site	Number of Individuals Reported	Number of Individuals Found	Comments
La Joya	Site 1	01	00	Grave was not found; area washed out by Hurricane Mitch
	Site 2B	10	09; possibly 10	
	Site 04	01	01	
	Site 05	09, including one pregnant woman	08 + 01 fetus	One adult woman not found
	Site 16	09	09	
	Site 17	02	02	
Jocote Amarillo	Site 01	02	02	
	Site 02	01	00	Burial reportedly at edge of a creek
	Site 03 A	02	02	
	Site 03 B	03	00	Grave not found
	Site 03 C	03	03	
	Site 04	01	01	
Total	12 sites examined	44	37 + 01 fetus	

mately 62% of the remains correspond to children, 29% to adult women, and 8% to adult men.

Cause of death

The remains were found completely skeletonized (without soft tissue). Therefore, peri-mortem injuries affecting the soft tissue can only be indirectly inferred from trauma observed on the bones, such as fractures caused by blunt force or projectiles. With a skull displaying evidence of a bullet entrance and/or exit, for example, it is safe to conclude that lethal cerebral injury may have also occurred. Similar conclusions can be drawn from skeletal evidence of projectile wounds to the thoracic, abdominal or pelvic regions, especially under circumstances where no prompt medical or surgical intervention was available. Thus, in the majority of cases observed here, the skeletons exhibited sufficient evidence of peri-mortem gunshot lesions in vital body regions to establish that they were sufficient to cause the deaths of the victims.

Where gunshot wounds injuries are concerned, evidence of the cause of death was established by one or more of the following findings:

1. Peri-mortem fractures consistent with the path of projectiles observed on the bones;
2. Presence of metallic bodies compatible with bullets or bullet fragments embedded in the affected bones and observed either directly or radiologically;
3. Presence on bone surface of characteristic greenish stains (verdigris) due to the oxidation of copper-jacketed bullets;
4. Discovery of loose ballistic evidence (bullet, bullet fragments, etc) in close contextual relationship—or direct association with the skeletal remains during archaeological exhumation.

In at least twenty-six (70.3%) of the thirty-seven recovered skeletons, clear-cut evidence of death from gunshot wounds to the head, chest or other vital regions of the body was



Morazán, May 20, 2000. Skull showing a fragment of a bullet inside right orbite with associated premortem fractures. On the right, human remains buried on a roof tile by relatives of the victim. Site 7, Jocote Amarillo. photos by M.Doretto/EAAF.

exhibited. It is possible that some or all of the seven children from Site 16 also died of gunshot wounds since projectile fragments were found among their bones. Also, x-rays of a number of bone fragments from these cases showed embedded metal fragments. Unfortunately, however, due to massive fragmentation and commingling of the bones of these children, it was not possible to sort and assign the remains to specific individuals. Finally, in four cases, the cause of death could not be determined, in part due to the fact that only a few bones of each individual were recovered. In at least two cases, in addition to projectile wounds, evidence of blunt force trauma was also present.

Ballistic evidence

With the help of a metal detector, ninety-six items of ballistic evidence were recovered from the sites and areas immediately close to them. They included forty-seven bullet fragments, thirty-eight spent cartridge cases, and three rounds of live ammunition. Also found were six fragments from heavier ammunition such as rocket-propelled grenades or other explosive artifacts, and two ammunition containers. All ballistic evidence was sent to the United States to be analyzed by specialist Dr. Douglas Scott at the Midwest Archaeological Institute in Lincoln, Nebraska. Examination of the evidence was conducted using a comparative microscope. There were no cross matches between cartridges or bullets among the sites.

Most ballistic evidence from the site falls into two major categories: bullets and bullet fragments, and cartridge cases. The comparative study of ammunition components, known as firearms identification analysis, is a form of wear-pattern analysis (Scott 1989). When firearms are discharged, they leave behind distinctive metallic fingerprints or signatures on the ammunition components. These are called class characteristics and can be used to determine what model or brand of gun was fired. Once the class characteristics are identified, it is also possible to establish the number of different types of guns in a given situation. In addition, these signatures may be used to identify individual weapons using unique qualities called individual characteristics. According to Scott, this is essential because “coupled with the precise evidence location, identical signatures can be used to identify specific firing areas. With this information, patterns of movements [of possible shoot-

ers] can be established and sequences of activity can be more precisely interpreted.”¹¹

Cartridge cases are generally recovered in better shape than impacted bullets and tend to provide valuable information. In addition to suggesting possible location and movements of shooters, factory stamps on the cases indicate the place and year of manufacture. Taken together, this data may allow for identification of the possible party that did the shooting. In this case, most of the recovered cartridge cases were oxidized and corroded from being buried at the sites. Only a few cartridge cases were not well preserved, but most bullet fragments could only be sorted according to class characteristics.¹²

Dr. Scott’s analysis indicated that at least 15 individual firearms were employed at these sites, implying 15 possible shooters, and at least four types of weapons were present. These included two types of shoulder-fired weapons, the Heckler & Koch G3 rifle (9) and the M16 rifle (5), and one Browning pattern .50-inch caliber heavy machine gun. Finally, the use of high explosive ordinance, probably mortars, is also verifiable, implying a fourth type of weapon.¹³

The bullet fragments examined by Dr. Scott were copper jacket fragments, with lead steel cores from 5.56mm and 7.62mm NATO cartridges, and steel bullets from a .50 inch heavy machine gun. That is to say, bullets and cartridge cases correspond to the same calibre. Analysis of the cartridge cases revealed that out of 38 total cases, six were manufactured by military suppliers in Belgium, Germany, and Portugal to NATO specifications and shot from Heckler & Koch G3 rifles. Of those manufactured in the US, 25 bore the “LC” stamp, indicating that they were made at the Lake City Ordnance Plant, a U.S. government supplier located near Independence, Missouri.

Of the 25 cartridges made in Lake City, 20 were manufactured in 1978 from which at least 17 corresponds to a 5.56 mm calibre, and at least 13 have been fired from M16 rifles- consistent with the place and date of manufacture, the calibre and the rifle found at Site 1- El Mozote in 1992. This strongly suggest the presence in the examined La Joya sites of the Atlacatl Battalion, the only unit within the Salvadoran Armed Forces carrying M16 ‘s at the time of the massacre. The other US-made cartridge cases included five 7.62mm Lake City cartridges, made in 1974 and

Table II: 38 Cartridge cases distributed by site, type of weapon, place and date of manufacture					
Hamlet & Site	Fired by same weapon	Calibre	Headstamps information	Place & Date of Manufacture	weapon
Jocote Ama. - Site 1	01	7.62x51mm	HP/308/7.62x51	US,date undet.	G3
	01	7.62x51mm	HP/308/7.62x51	US,date undet.	G3
Jocote Ama. Site 2	01	7.62x51mm	IWK/&.62X51N-60	Germany	G3
	01	7.62x51mm	Undetermined	Undetermined	?
Jocote Amarillo Sitio 3	01	7.62x51mm	HP/7.62x51/78	US, 1978	?
	03	7.62x51mm	HP/7.62x51/308	US, date undet.	G3*
	02	7.62x51mm	FNM/7.62x51/94-60	Moscavide, Portugal	G3**
		7.62x51mm	MS/200-59/7.62x51	Bubingen, Germany	G3**
		7.62x51mm	FNM/7.62x51/94/60	Moscavide, Portugal	G3***
7.62x51mm	MEN/24-60/7.62x51	Nassau, Germany	G3***		
La Joya Sitio 2B	01	7.62x51mm	L.C./74	US, LakeCity, 1974	G3
	05	5.56 NATO	L.C./78	US, LakeCity, 1978	M16*
	01	5.56 NATO	L.C./78	US, LakeCity, 1978	M16
	01	5.56 NATO	L.C./78	US, LakeCity, 1978	M16
	04	?	L.C./78	US, LakeCity., 1978	?
La Joya Sitio 4	01	7.62x 51mm	FN/59	Belgium NATO	?
La Joya Sitio 5	04	5.56 NATO	L.C./78	US, Lake City,1978	M16**
	03	5.56 NATO	L.C./78	US, Lake City,1978	?
	01	5.56 NATO	L.C./85	US, Lake City, 1985	M16
	01	5.56 NATO	L.C./78	US, Lake City, 1978	M16
	01	7.62x51mm	L.C./74	US, L.C.NATO,1974	G3
	01	7.62x51mm	L.C./74	US, L.C.NATO,1974	G3
	01	7.62x51mm	L.C./74	US, L.C.NATO,1974	G3
	01	7.62x51mm	L.C./74	US, L.C.NATO,1974	G3
Totals	38 cartridges				

fired from G3 rifles - found at Site 5 and 2b from La Joya- and six other US-made cartridges with no longer readable headstamps. Two magazine charges made to refill the clips of an M16 were also recovered a few meters away from Site 5-La Joya, where many cartridge cases were also found.

The G3 rifle was a standard weapon used by most units in the Salvadoran Army at the time. During the later stages of the war, most companies started to use M16 rifles. G3 ammunition at the site may imply the presence of other Army units aside from the Atlacatl Battalion. This would be consistent with the assertion of the UN Truth Commission Report that troops from the Commando Instruction Center in San Francisco Gotera and the 3rd Brigade from San Miguel also participated in Operation Rescue.¹⁴

Other ballistic evidence included heavy steel shrapnel, probably from a mortar. Witnesses to the massacre concur that the army launched heavy artillery from the hills in the

days prior to the massacre, including mortars and other fire from airplanes and helicopters.

At certain sites, notably, Site 5-La Joya; Site 3 -Jocote Amarillo, and Site 2B-La Joya, the distribution of cartridge cases and bullets in areas adjacent to the graves suggest the possible location of the shooters and of the victims when they were killed. Graphics showing this distribution were included in the report made to Judge Paz Canales. Again, this is consistent with testimonies of people who heard and/or saw the incidents from a distance and later buried the remains. They stated that they buried the victims very close to where they believed they were killed.

Personal belongings

In most cases, we found clothing associated with the remains of the victims. We also found personal effects such as a belt buckles, combs, mirrors, barettes, coins, etc. In the graves containing the skeletons of the children, several toys

were found including a doll, three metal toy trucks and several marbles. Finally, in some of the graves—particularly at the La Joya sites—household items such as plates, boxes, plastic containers, etc, were mixed with extra clothing, seeming to reinforce the testimonies of witnesses that the victims were about to flee their houses when they were killed. The La Joya and Jocote Amarillo massacres reportedly occurred on December 11 and December 12 respectively, a few hours and a day after the one in El Mozote.¹⁵ Thus, while men took refuge in nearby hills, women, children and old men were either fleeing or preparing to do so shortly, carrying utensils and clothing with them for the time they would spend hiding out in the nearby caves and hills.

Dating

Twelve coins were found among the clothing associated with the remains of individuals exhumed from sites 5, 2B and 16 of La Joya and in sites 1 and 3 of Jocote Amarillo. The dates on these ranged from 1958 to 1978. Spent cartridges were also useful for establishing a time frame: the date they were produced is engraved on their base. The manufacture dates of the cartridge cases found at these sites include 1959, 1974 and 1978 (the majority) and 1985. The 1985 5.56mm NATO cartridge case was not oxidized to the degree seen on the other cartridge case from Site 5. This lack of significant verdigris build-up and the overall better condition of this case suggest that this was deposited on the site more recently than the other evidence. In sum, the coins and cartridge case are consistent with the date of the massacre.

Identification

On the basis of information provided by the people who buried the victims and/or witnessed their burial, we compiled a list of names of those they believed to be buried in the graves at the sites investigated. We proceeded to interview approximately fifty relatives of the putative victims, with the purpose of gathering pre-mortem information – physical data about the victims when they were alive, such as age at the time of death, height, sex, right or left-handedness, older lesions, dental information, and so on. This pre-mortem information was later compared with information derived from the study of the skeletons in the laboratory in order to establish identification. Of

the thirty-seven individuals exhumed, 12 (32.4%) were positively identified. A further 25 individuals (67.2%) were tentatively identified. All the individuals positively identified were adults, while those tentatively identified were children.

Difficulties in the identification of children's skeletal remains

It is difficult to positively identify children in a mass grave from skeletal evidence alone. On the one hand, they do not generally have identification features in their teeth or bones that differentiate them from one another. Therefore, available pre-mortem data tends to be very general, such as sex and age, and even these are difficult to discern at the level of pre-mortem information and/or during laboratory analysis. In this case, it was particularly difficult to know their exact ages because none of the relatives had birth certificates or other documentation confirming the exact ages of the children. These documents were lost when the town hall in the municipality of Meanguera burned down during the war. Therefore, the ages of the victims given by the families are approximate.

At the same time, age ranges obtained through the analysis of the children's dental and bone development are similarly broad because of wide variation in the physical development of children in a given population. This must be taken into account when attempting to specifically identify a single child buried in a mass grave among a group of children around the same age. In one instance, we established that the age of a child at the time of death was 5 years, plus/minus (standard deviation) 18 months. Children who were reported by their relatives as between 4 to 7 years of age when they died and were buried in the same grave are all theoretically candidates for that particular skeleton. This was certainly the case at Sites 5, 2b and 16 of La Joya, for example, where several children were close in age. While this problem may also occur among adults, in general they have other features that differentiate them.

Determining sex from bone remains is also more problematic with children. Most indicators of sex are located in the skull and pelvis. While it is possible to diagnose sex from these with near 100% accuracy, they do not develop until puberty. Only a few sexual traits are present in the



Morazán, May, 2000. Mr Sotero Guevara (second from left) with his new wife and children at the excavation Site 5, La Joya. His wife Petrona Chicas and their daughter died in the massacre. photo by M.Doretto/EAAF.

bones of children and these are rather difficult to interpret with confidence.

In the graves excavated by EAAF, the people who buried the remains in the aftermath of the massacres—often husbands or fathers burying their own families—indicated how many children they had buried in the graves. With the exception of one site, our findings corresponded exactly to the information provided by these witnesses. At La Joya 2B, it was not possible to determine whether five or six children were present due to fragmentation of the skeletons and commingling of the bones. In

the majority of cases, witnesses' accounts of the ages of children in specific graves were consistent with laboratory findings. Table I shows the distribution of children found in the different graves we worked on.

Positive identification of most of the victims could eventually be made through the extraction of genetic material from the bones and comparison with material from the supposed relatives of the victims. Currently, these tests are not done in El Salvador and to perform them elsewhere is very costly. At the same time, because of the unusually high number of victims related by kinship ties, in this case the

Table 1. Child Skeletons Reported and Found in Excavated Sites

Locality	Site	Reported	Found
La Joya	2 B	Six children	Five or six children
	5	Four children, one fetus	Four children, one fetus
	16	Seven children	Seven children
	17	One child	One child
Jocote Amarillo	1	Two children	Two children
	3A	Two children	Two children
	3C	Two children	Two children

genetic analyses would be more complex than usual. Finally, because the results of DNA testing could take up to two years in the event that it were performed, the families decided to rebury the remains of the children together, even if they belonged to more than one family.

CONCLUSIONS

In three of the twelve sites EAAF investigated, results were different from what had been projected. These differences include the following:

1. In Site 2b of La Joya, because of the fragmentation of the skeletons, we could not clearly establish if there was a child missing who should have been buried in that grave;
2. In Site 5, we did not find the body of an adult woman that we had expected to find there; and,
3. We did not find the graves labeled Site 1 in La Joya—it was possibly washed away by Hurricane Mitch in 1998; Site 3-Grave B in Jocote Amarillo, and Site 2 in Jocote Amarillo which was at the edge of a creek

Although these differences are not highly significant to the overall investigation, they are of fundamental importance to the relatives of the victims.

The findings of the El Mozote investigation, we hope, will contribute factual evidence to national discussions about the past, thereby helping to clarify the historical record concerning one of the most debated and contested events in recent Salvadoran history. Moreover, both the training of the professionals from the Institute of Legal Medicine and the introduction of physical evidence obtained through forensic anthropological methods into the Salvadoran justice system may also contribute to strengthening democratic and judicial institutions by providing new tools to uphold the rule of law.

FUTURE WORK

EAAF's work investigating the massacre of El Mozote will continue in 2001 and 2002, during which we hope to exhume approximately 20 graves in the hamlets of Los Toriles, El Mozote, Rancheria and Cerro Pando. According to lists compiled by Tutela Legal and EAAF, the graves contain the remains of some 120 individuals. The remains will be analyzed in the laboratory to determine the cause(s) of

death and the identities of the victims when possible. Once the analyses are complete the remains will be returned to the relatives or the community for proper reburial. EAAF's experience in different countries including El Salvador showed that exhumations and reburial ceremonies related to these tragic events have a strong healing effect on the communities.

Finally, training of local professionals from the Institute for Legal Medicine will hopefully result in the basis of a Salvadoran forensic anthropology team able to excavate the hundreds of bodies in common graves throughout the country in the aftermath of the war.

On December 10, 2000 the remains of 34 individuals exhumed by EAAF in April and May were reburied in the new plaza of El Mozote, named Heroes de El Mozote. This village monument—a metal sculpture of a family holding hands—already contains the remains of 141 individuals exhumed in 1992. Nineteen years after the massacre of El Mozote, the act of finally burying the dead was particularly important. One eighteen-year old woman who has shared her family's struggle to find the remains of all of their loved ones commented on how it feels to not know where they are: "It's uncomfortable. One doesn't know where to put the flowers."¹⁶

FOOTNOTES

1. The Frente Farabundo Martí para la Liberación Nacional or FMLN, a front of guerrilla organizations
2. "El Masacre en El Mozote", Tutela Legal, 1990 and "From Madness to Hope", UN Truth Commission Report, March 1993.
3. Americas Watch Report, The Massacre of El Mozote: The Need to Remember, March 4, 1992, Vol. IV, No. 2.
4. R. Bonner in *Weakness and Deceit*, Times Books, 1984, p. 337
5. *Ibid.*, p. 337.
6. Cable sent from the US Embassy in El Salvador to the State Department, January 31, 1982 in the National Security Archives and M. Danner, *The Massacre at El Mozote*, Vintage, New York, 1993.
7. Bonner, p. 340.
8. *Ibid.*, pgs. 78-9.
9. *Unspeakable Truths: Confronting State Terror and Atrocity*, by Priscilla Hayner, Routledge, NY, 2001
10. *Ibid.*, pp. 91.
11. Scott, D. *Firearms Identification in Support of Case 238/90*, Second Court of the First Appeal, San Francisco Gotera, Morazan, El Salvador, Nebraska, August 12, 2000, pp2.
12. *Ibid.* Scott, ppg. 3.
13. *Ibid.* Scott, ppgs. 9 and 10
14. *De la Locura a la Esperanza. Informe de la Comisión de la Verdad para El Salvador*; Naciones Unidas, San Salvador-New York, 1992-1993, March 1993, pp.118.
15. *Ibid.* UN Truth Commission Report, pp. 119.
16. "In El Salvador, the Slain Finally Rest in Peace", by David Gonzalez, *The New York Times*, December 11, 2000.

NAMES OF THE VICTIMS BURIED BY WITNESSES IN THE 12 SITES EXCAVATED IN 2000

■ Site 5 La Joya

PETRONA CHICAS

approximately 40-45 years old, wife of Sotero Guevara. According to witnesses, she was supposed to have been buried here but her remains were not found in this site.

CATALINA CHICAS

approximately 7 years old, daughter of Sotero Guevara y Petrona Chicas.

JACINTA GUEVARA

approximately 22-24 years old, 8 months pregnant

AMBROSIO GUEVARA

approximately 3 years old, son of Jacinta Guevara and Genaro Sánchez 5. Roque Guevara, approximately 3-4 years old, son of Jacinta Guevara y Brigido Chicas.

MARIA GUEVARA

approximately 6-8 years old, daughter of Jacinta Guevara y Magdaleno Martínez.

JUSTINIANA GUEVARA

approximately 50 years old

HILARIA HERNANDEZ

approximately 43-49 years old

JOSEFINA HERNANDEZ

approximately 61 years old

Eight individuals and one fetus were found.

MARIA MARTÍNEZ

approximately 3-6 months old, daughter of Concepción Vigil y Maria Eugenia Martínez

MARIA ARGUETA

approximately 30 years old

SANTOS ANIBAL ARGUETA

approximately 5-6 years old, son of Maria Argueta

MARINA ARGUETA

approximately 6-8 years old, daughter of Maria Argueta. Newborn daughter of Maria Argueta, approximately several days to 2 months old

At least 9 and possibly 10 individuals were recovered on this site.

■ Site 16, la Joya:

DOMINGA SÁNCHEZ

approximately 50-55 years old, compañera of Domingo Márquez.

JACINTO SÁNCHEZ

father of Dominga Sánchez, approximately 84 years old

JUAN EVANGELISTA SÁNCHEZ

approximately 9 years old, son of Dominga Sánchez

MARIA ANGÉLICA SÁNCHEZ

approximately 14 years old, daughter of Dominga Sánchez

MARIA IRMA SÁNCHEZ ARGUETA

approximately 11 years old, daughter of Santos Ceferina Argueta Díaz.

MARIANA SÁNCHEZ ARGUETA

approximately 9 years old, daughter of Santos Ceferina Argueta Díaz.

FIGENIA SÁNCHEZ ARGUETA

approximately 12-13 years old, daughter of Santos Ceferina Argueta Díaz.

JACINTO SÁNCHEZ ARGUETA

approximately 4 years old, daughter of Santos Ceferina Sánchez Argueta.

PERFECTO SÁNCHEZ ARGUETA

approximately 6 years old, daughter of Santos Ceferina Sánchez Argueta.

Nine individuals were found

■ Site 2B, La Joya:

MATEA VIGIL

approximately 80 years old

CONCEPCIÓN VIGIL

approximately 40-45 years old, son of Matea Vigil.

MARIA EUGENIA MARTÍNEZ

approximately 27-30 years old, wife of Concepción Vigil.

MARTA MARTÍNEZ

approximately 6 years old, daughter of Concepción Vigil and Maria Eugenia Martínez.

FEDERICO MARTÍNEZ

approximately 2-3 years old, son of Concepción Vigil and Maria Eugenia Martínez.



The families of the victims held a candlelight vigil. photo by Agence France-Presse in The New York Times, December 11, 2000

■ Site 17

SANTOS CEFERINA ARGUETA DÍAZ.
and her newborn baby girl

CONCEPCIÓN ARGUETA.
3-4 days old whose only remains were skull fragments and little outfit.

The two individuals were found.

■ Site 4, cantón La Joya, Meanguera:

LORENZO VIGIL.

One individual was found.

■ Site 1, Jocote Amarillo:

SANTOS HERNANDEZ ARGUETA.
10-12 years old

MARÍA ELVIRA HERNÁNDEZ ARGUETA.
6-8 years old

The two individuals were found.

■ Site 3, Graves A, B, and C, Jocote Amarillo
The eight people buried by Mr. Vigil are the following:

LORENZA MARQUEZ
approximately 35 years old, wife of Domingo Vigil.

BENEDICTA MARQUEZ VIGIL
approximately 8 years old, son of Lorenza Marquez y Domingo Vigil.

MODESTO MARQUEZ VIGIL
approximately 6 years old, son of Lorenza Marquez y Domingo Vigil.

MARÍA BERNARDA MARQUEZ VIGIL
approximately 4 years old, daughter of Lorenza Marquez y Domingo Vigil.

FLORENTINA VIGIL
approximately 35 years old

EMILIO VIGIL
approximately 7 years old, son of Florentina Vigil.

BENJAMÍN VIGIL
approximately 5 years old, son of Florentina Vigil.

ROSA VIGIL
approximately 3 years old, daughter of Florentina Vigil.
Only five individuals were found. Grave B was not found

TOTAL INDIVIDUALS FOUND: 37 INDIVIDUALS AND ONE FETUS.