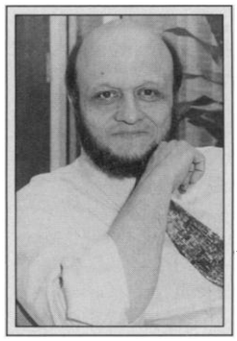
FORENSIC MEDICINE

Scientists Search for "The Disappeared" in Guatemala

The highlands of Guatemala contain hundreds of unmarked graves, the final resting places of the victims of military and paramilitary shootings over the past decade. Now, a delegation of North and South American forensic scientists is traveling to one of those highland provinces—El Quiche—to exhume the bodies from at least one mass grave to try to identify them. They hope their work will help comfort the families of some of the 45,000 *desaparecidos*, or "disappeared ones," in Guatemala and expose that nation's miserable record of human rights violations, which is one of the worst in the Western Hemisphere, according to a report completed in January for the United Nations Commission on Human Rights.



Forensic anthropologist. Robert Kirschner.

The first members of the expedition, which is being sponsored by the American Association for the Advancement of Science (AAAS),* traveled to Guatemala last week (departing 13 July) at the invitation of human rights groups there. Although expedition members had last-minute concerns about getting the necessary permits to exhume bodies, they are proceeding with their plans anyway—including selecting a mass grave in El Quiche and beginning the training of at least five Guatemalans in forensic science so they can form the first independent forensic anthropology team based in the country.

The scientists hope they will be able to use scientific methods in Guatemala as they have in recent years in Argentina and Chile, where they helped expose the military-led torture and killings. "We're using forensic science in its best sense to preserve a record of human rights violations," says Robert Kirschner, a member of the team and the deputy chief medical examiner for Cook County, Illinois.

Leading the expedition is Clyde Collins Snow, the 62-year-old independent forensic anthropologist from Norman, Oklahoma, who has gained fame for his intrepid efforts to identify human remains in at least a dozen countries. As part of the first expedition of forensic scientists to Argentina organized by AAAS in 1985, Snow helped train a team of Argentine forensic scientists that has since identified many of the people who disappeared in that country. The AAAS Science and Human Rights Program has also sent forensic missions to Kenya, Israel, Bolivia, Brazil, El Salvador, Mexico, and Panama, and helped train a Chilean Forensic Anthropology Group.

But despite their vast experience in those countries, Snow and Kirschner are not optimistic about the job ahead in Guatemala. First of all, the sheer magnitude of the problem is much greater: Whereas roughly 9000 people disappeared in Argentina in the late 1970s and early 1980s, in Guatemala at least five times as many people have disappeared and another 100,000 have been killed at the hands of Guatemalan military and civilian patrol groups since the 1960s, according to the *Human Rights Watch World Report 1990*. And, unlike in the other nations, the situation is getting worse, not better.

Since the democratically elected President Jorge Serrano Elias took office last year, he has been unable to prevent the military from increasing their death threats, physical attacks, and torture of leaders of human rights groups, trade unions, and other popular organizations, says Audrey Chapman, director of the AAAS human rights program. That makes human rights work in Guatemala more difficult—and dangerous—than anywhere else. Says Snow: "In other countries, we've gone in after the repressors have left power. In Guatemala, the repression is ongoing." As a result, "in many cases, the people who are responsible for the killing are still located in the area," says Chapman. And so, the AAAS team "hopes to visibly tie the Guatemalan team to a scientific organization in the United States to reduce the security risk."

Despite the danger, there are some signs that the situation could improve: Although the president cannot control the military violence, some members of his government are boldly trying to improve the situation. The government's ombudsman for human rights invited Snow and Chapman to Guatemala last year, and in discussions with the minister of government, they were encouraged to organize forensic training in Guatemala.

Since then, Snow has recruited five Guatemalan students to form the nucleus of an eight-member forensic science team. Their training should start later this month at the grave site in El Quiche—assuming that the relatives of one of the disappeared request the exhumation, as required by law. "We can't go into a country and just start digging up bodies," says Kirschner, who adds that human rights groups in Guatemala are working with families to make the request.

Then, the AAAS forensic team—composed of Snow, Kirschner, and several forensic scientists from the United States, Argentina, and Chile—will move the remains of about 20 people from the grave to a lab where they will show the Guatemalans how to identify them. Part of the intensive 4-week long scientific methods training to follow in August will include showing them how to collect "anti-mortem" data on the disappeared, such as information about childhood injuries, that might lead to their identification. But this could prove particularly difficult in Guatemala, where few of the disappeared have dental or medical records that would make the job easier.

To get around this problem, the team is hoping to use new molecular methods to compare the mitochondrial DNA in the blood of living relatives with the DNA in the bone or hair of the dead. Geneticist Mary Claire King of the University of California, Berkeley, has volunteered to test the biological samples in her lab, where she has helped identify orphaned children in Argentina so they can be reunited with their grandparents.

But training a team of Guatemalans how to identify the dead is not enough. The AAAS team also will offer a technical training workshop later in July to teach the Guatemalan forensic team, judges, members of human rights groups, and representatives of governmental bodies how corpses can yield clues about the way they died—and, in the cases of murder, who killed them. They will show them how to determine the cause and manner of death—and how to use that forensic evidence in a way that will stand up in court. In Guatemala today, forensic doctors are only required to determine the cause of death and not the manner, such as whether the death was a homicide or an accident. That determination has traditionally been made by judges, who lack forensic training.

The AAAS team hopes that the cases it works on this summer will provide a new model that the Guatemalans can use to obtain justice for the families of the disappeared. "It clearly will not be possible to exhume and identify all 40,000 to 45,000 disappeared," says Chapman. "It will be possible, however, to select potential precedent-setting cases to establish the cause and manner of death and possibly identify the perpetrators of human rights abuses."

–Ann Gibbons

*The project is sponsored by the AAAS Science and Human Rights Program, with funding from the Ford Foundation, the Joyce Mertz-Gilmore Foundation, the John Merck Fund, and the AAAS Corporate Associate Fund.