

Learning to Let the Evidence Reveal the Truth:

The Body Farm Reveals More Than Just Bodies

By Major Ian J. Townsend

As you enter through the gate of the ten-foot-high, razor wire-topped, wooden fence into the sparsely wooded area, there are two things that hit you immediately—the sight of what seems to be randomly placed black plastic tarps littering the ground in the underbrush and the distinctive odor of death.

What is this place, and what happens here? This is the University of Tennessee Forensic Anthropology Center or—as it is more commonly referred to—the Body Farm. Simply stated, the Body Farm is “about how [forensic anthropologists and investigators] determine time of death, or whether a body was moved after death and where it might have been before it was moved, and who the dead person was, and how he or she died.”¹

The Body Farm was the site of recent professional development training for a dozen special agents and three leaders of the 1000th Military Police Battalion (CID),² Fort Campbell, Kentucky, and 3d Military Police Group (CID), Fort Gillem, Georgia. There, the officers and noncommissioned officers became better U.S. Army criminal investigators through instruction on taphonomy.

The four-hour class was conducted by two research center faculty members—Ms. Rebecca Wilson and Dr. Joanne Devlin. Their instruction began with a brief history of the Forensic Anthropology Center. The facility, which is part of the University of Tennessee Department of Anthropology, is the only one of its kind in the United States. It was officially opened by Dr. Bill Bass in 1981 and is now the premier human decomposition research facility in the country. There are currently about 170 bodies in various states of decomposition throughout the two-acre area of the Body Farm. Although additional information regarding the history of the facility is presented in Dr. Bass’ nonfiction book, *Death’s Acre*, one agent who attended the professional development training stated, “I’ve read two books written by Dr. Bass; and a complete appreciation for research efforts, along with the determination of his students, cannot be properly given until visiting the Body Farm.”

Ms. Wilson and Dr. Devlin covered many topics in the fast-paced, outdoor classroom instruction. Initial decomposition, insects, mold, death during various seasons, decomposition in an indoor versus outdoor

environment, and the disposition of blood were among the topics that were discussed, explained, and demonstrated.

Participants learned about the five stages of decomposition of animals—in this case humans—after they die. Stage 1, the initial decay or fresh decomposition stage, occurs from zero to seventy-two hours after death. Stage 2, the putrefaction (tissue liquefaction) or bloat stage, occurs about four to ten days after death. Because special agents usually arrive at a crime scene within the first forty-eight hours of a death, Stages 1 and 2 are generally the most important. However, bodies may be encountered in any stage of decomposition in an Army criminal investigation.

Agents observed and discussed bodies that were in various stages of decomposition, ranging from one that had just been placed in the Body Farm on the previous day to skeletons of bodies that had been there for more than twenty years. Comparisons were made between bodies that had been embalmed and those that had not. Agents discussed the fact that the bodies they are called upon to investigate are further along in the decomposition process than an embalmed body would be. This led to a discussion concerning what happens when a person dies and the body begins to decompose. Agents wanted to know what clues could be used to help determine the stage of decomposition upon their arrival at the scene.

Normally, the first insect to arrive at the scene of a recent death is the blowfly. Blowflies lay eggs primarily in the eyes, nose, and hair of a body within the first twenty-four hours following death. The eggs hatch, and maggots emerge by the second stage of the decomposition process. The maggots, in turn, increase the rate of decomposition as they further destroy the body through their actions. In addition to blowflies, ants also stimulate the decomposition of dead bodies. When ants feed on a body, the skin turns



yellow. To an untrained investigator, the result may look like abrasions. Therefore, it is important for agents to be capable of differentiating between decomposition caused by the actions of ants and abrasions that occurred prior to death.

Another easily recognized process that can provide clues about the stage of human decomposition is the formation of mold on the body. The instructors discussed the length of time necessary for the formation of molds and the order in which various molds generally form. They also showed many examples of mold that had formed on dead bodies.

Agents learned that investigations involving dead bodies require that the time of year be taken into account, since seasons affect the decomposition rates of remains. For example, the appearance of a body twenty-four hours after death in the summer is different than that of a body twenty-four hours after death in the winter. This professional development training took place in March, so the agents were able to observe the amount of putrefaction and bloat that had occurred during a week's time in the spring season by comparing a body that had been placed in the Body Farm the day prior to the instruction with one that had been placed there a week prior to the instruction. During the summer months, it is common for a dead body to quickly move to a full bloat. On the other hand, under cold and dry conditions, more mummification takes place and the skin and organs are preserved for longer periods of time. Additionally, a body that was in place during warm conditions and later subjected to sustained colder conditions (such as occurs when fall transitions to winter) can undergo saponification—the process by which body fat is converted to adipocere, a waxy-like substance. Ms. Wilson presented an example of saponification when, with her glove-covered hand, she pulled off layers of adipocere and reminded everyone that “We are what we eat.”

Agents also learned that bodies tend to move more quickly toward putrefaction and bloat in an outdoor environment and then decompose from there. In an indoor environment, such as a building or car, bodies move toward putrefaction and bloat more slowly and the subsequent decomposition is more gradual. This information is important, given that agents investigate indoor and outdoor deaths.

Ms. Wilson presented information about what happens to the blood in a body after death. Gravity initially causes

the blood to pool in certain locations; and as the molecules of blood break down, the skin in those locations begins to change color. Using several bodies as examples, Ms. Wilson showed the resultant multicolored, marbled effect of blood by-products on the skin. Although green is the most prominent color, blue, purple, black, and red also occur. Areas such as these are often mistakenly identified as locations of blunt-force trauma or bruises. Special agents should remember and consider this before jumping to conclusions on their next death investigation.

The professional development training at the Body Farm is one of the most interesting, informative, and professional training sessions available. Participants become better-equipped to perform investigations, and some even become interested in pursuing careers as CID forensic science officers. One agent said, “I believe [the training] was educational to help us understand the various stages of decomposition and how the environment, weather, and terrain affect the bodies. Most training concerning those factors is normally conducted with photographs. You don't get as much of an understanding of the different effects from viewing photographs as you do from seeing the actual bodies.”

Donations are an important factor in keeping the Forensic Anthropology Center going. Retired law enforcement officers and educators are the primary sources of donations—probably due to their desire to give something back in the effort to educate younger generations of detectives and teachers. This is a testament to the great things that police do for society—both while they are working and after they have passed on from their life of service.

Additional information about the University of Tennessee Forensic Anthropology Center is available at <http://web.utk.edu/~fac/>.

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Endnotes:

¹Patricia Cornwell, forward to *Death's Acre: Inside the Legendary Forensic Lab, the Body Farm, Where the Dead Do Tell Tales* (written by Dr. Bill Bass and Jon Jefferson), Penguin Group, New York, New York, 2003, p. xi.

²“CID” is an acronym commonly used to refer to the U.S. Army Criminal Investigation Command (USACIDC).

Military police Soldiers and noncommissioned officers make excellent CID agents. If the training described in this article or the opportunity to investigate felony crime in the U.S. Army interests you, you can get more information about becoming a special agent by visiting your local CID office or going to http://www.cid.army.mil/join_CID.html.