NOTE: The following article:

*Tales From the Crypt*, by Dr. Michael Baden and Marion Roach


This article is copyrighted 2001 by Maxim Magazine and is excerpted from the book *Dead Reckoning*, by Dr. Michael Baden and Marion Roach

The article is included as part of an introduction to forensic science for educators and students under the fair use provisions of copyright law as educational information.
After 20,000 autopsies, Dr. Michael Baden has seen the results of just about every kind of mayhem imaginable.
TALES FROM THE CRYPT

Think you can get away with murder? Dr. Michael Baden uses everything from blood splatters to maggot larvae to solve crimes. And some of his best witnesses are the dead.

Photographs by Clay Patrick McBride

say you happen to have died under questionable circumstances in the greater New York metropolitan area in the past few decades. Chances are good that Dr. Michael Baden was casting a critical eye over a fistful of your guts. Dr. Baden sees dead people. Thousands of 'em. One of the nation's leading forensic specialists, Baden is director of the Forensic Science Unit for the New York State Police in Albany. He also maintains a private practice in Manhattan, providing his services as an expert consultant—a Sam Spade with a scalpel.

Baden is one of the models for the forensic pathologist William Petersen plays on the hit series C.S.I. He has performed more than 20,000 autopsies in his career, helping the police and defense investigators alike in clearing the books of thousands of mysteries. Along the way he has been involved in cases as diverse as the O.J. Simpson trial, the exoneration of civil rights leader Medgar Evers and the identification of victims in the Paris-bound TWA flight 800 disaster.

In the following excerpt from his book Dead Reckoning, co-written with Marion Roach, Dr. Baden conducts a guided autopsy tour through a fresh corpse, illustrating that, to the trained eye, dead men really do tell tales.

THE BIG CUT

It is called the Y incision, but it is really more of a U with a tail. It allows you to reflect back the skin with ease.

As soon as the scalpel plunges into the skin, you sweep it from the left shoulder, down under the nipples, and over to the right shoulder. One motion, smooth and fast, and the
skin parts like a ravine. Then you lift the scalpel, place it at the bottom of the U, and swoop to the pit of the abdomen, under the sternum, straight down, left of the bellybutton.

If there are any fainters, this is when they go. Those present during a homicide autopsy will usually be the police working the crime, an assistant district attorney, the mortuary assistant, the body, and me. There's a rule of thumb: the bigger the cop, the faster they drop.

I lift my hands off the body at the end of the initial incision, left of the bellybutton, down at the pubic bone—the spot that connected us to our mothers. Convention is to cut to the left of the navel because a ligament comes in from the right side, a remnant of the umbilical cord, but that same convention includes a respect for how we are born and forbids slicing that umbilical cord.

After the incision, the skin is reflected back and you can immediately note the color of the tissue. Using the scalpel and cutting under the tissue, close attention must be paid to dissecting between the skin and the rib cage.

In every autopsy there will be something unique. Inside stomachs I've seen ears bitten off and worse. Once a man cut off his own penis and swallowed it, bleeding to death.

The heart is removed by cutting through its attachment to the veins and arteries that enter and leave its four chambers. I place the heart on the stainless-steel tray and slice it open with a scalpel. All the organs get sectioned and carefully examined. Going through the body methodically, we look at the weight and condition of each organ and then describe each one in terms of its architecture and color: the yellow fatty enlargement of an alcoholic's liver; the scarring down of the spleen of sickle cell anemia; the granularity of the kidneys in diabetes.

The stomach looks like a small, saggy pink pouch when removed. It slits open with the touch of a scalpel. The contents are scooped out with a stainless-steel ladle and spread out for a look. Since 90 percent of what we eat is out of the stomach in two to three hours, we can tell how long ago the food was consumed before the victim died.

What had functioned just the day before as a closed system, a human life is now laid open, ready to be examined.
DEAD MEN TALKING

THE HANDS: LIFTING THE PRINTS

After the deceased's personal effects are inventoried, Dr. Baden removes the paper bags from the corpse's hands. These are put on by detectives at the crime scene in order to preserve fingerprints or any evidence that may be under the fingernails. But fingerprint identification of the corpse is not always a straightforward matter.

Only once have I had to remove a hand. It was in the Robert Meloni case in the late 1980s. Earlier, as police had investigated a Mafia case, the defendant, trying to make a deal, told the investigators that he could reveal where a body was buried. The police excavated a huge site, but found nothing. But a year or two later, when another suspect told them the same story, the detective on the case figured there must be something at this site. Another dig was arranged.

On the fifth day, up came a body. It had on the clothes the witness said it would be wearing. It was the right height and weight. We brought the body back to the morgue. The man had been missing for two years, so there was a lot of decomposition. The forensics odontologist looked at the dental x-rays and gave us a startling answer: It was the wrong guy. Now, the fingerprints became very important.

Looking at the hand, I didn't see much in terms of prints. The FBI offered to lift the prints if New York State Police Senior Investigator Ralph Gagliardi took the hands from the FBI lab in Quantico. Keeping the hands moist, Gagliardi took them down by helicopter. The lab technicians worked on rehydrating them and got one usable print off one index finger. It was... the guy we had been told it was.

But what about those teeth? We never discovered whether the dental records were deliberately taken or exchanged. It remains a mystery to this day.

THE HEAD: ABSOLUTE PROOF

Forensic examiners can objectify a body: it's just rotting meat on a marble slab. But the head is a bit more disturbing. Maybe there's something about that nose that reminds you of a cousin, or the lips are just like an old girlfriend's. The head, with its features and traceable dental work, is key to solving a crime. But what happens if all the pathologist has of the deceased won't quite fill a tablespoon?

It is unsettling to hold a human head.

I press the blade into the scalp and circumnavigate the orb. After it is cut, the scalp is folded so it will sit like a tight cap over the dead man's eyes. The brain makes everybody uncomfortable. As it moves once around the skull, the saw casts off fine dust in all directions. Then the diener (morgue assistant) puts down the saw and inserts a small chisel-like device, which he twists and pops open the skull. In a straight, two-handed back motion, he then removes the skullcap.

There is simply no comparison between holding a head and holding a skull. I can keep an emotional distance from a skull; you can literally hold one at arm's length. They

CORONER'S CASE FILE #1:
MURDER AND MEATBALLS

It was late November in 1979 when Lenny Sciambrino, a low-level mobster, sat down to a helping of spaghetti and meatballs, a favorite recipe handed down through his family's history. During dinner he got a call from an associate, Joey Calabrese, who demanded a meet that night. He left and never returned.

Five months later, infused by the bacteria in the warming spring water, a body floated to the surface of a Brooklyn waterway. The police called Dr. Michael Baden, then chief medical examiner for Brooklyn. Only through dental records was he able to identify the dead man as Sciambrino. Three bullet wounds to the head indicated the cause of death.

But police couldn't connect Calabrese to the hit. Water erases a lot of evidence; establishing a precise time of death was problematic. When Baden opened the stomach, he found Lenny's last meal preserved: spaghetti and meatballs. Since 90 percent of a meal is digested within two hours of eating, it was obvious Calabrese had given Lenny a few slugs for dessert.

The DA's case against Joey Calabrese threatened to crumble in court when a woman claiming to be Lenny's former girlfriend came forward to testify that Lenny had come to stay with her after meeting with Joey. He'd also eaten several meals of her spaghetti and meatballs. Naturally, this coincided with Calabrese's alibi that he was in Hawaii in the days following his nighttime meet with Lenny.

Baden didn't believe the girlfriend's story. He had saved the dead man's stomach contents, and asked Mrs. Sciambrino if she could identify them. On the witness stand, she named ingredients in the meatballs only the real chef would know, saying, "That woman's lying. This is my mother's recipe!" The jury believed her, and Calabrese was convicted of murder.

*Names have been changed.

— Jeff Wise

Undigested food can be a clue years later.
are not upsetting... unlike a head.

In part it is the soft tissue—the skin, hair and eyes, the ears and lips—that upset us so. There are the aspects of the face, of course, and it is in the millions of faces we see in a lifetime—coming at us down the street, looking out from magazine photographs or movie screens—that make up our picture of humanity.

The skull, or at least a tiny fraction of it, was essential in solving the Helle Crafts case. Her disappearance was the first time anyone had been tried for murder in Connecticut without a body.

The case began before Christmas in 1986 when Richard Crafts told neighbors that his wife, Helle, an airline flight attendant, had driven off after an argument. A snowplow driver remembered seeing a man fitting Crafts’ description running a wood chipper near a body of water. One of the reasons the image stuck in the driver’s memory was the chipper was being done at 3:30 A.M. during an unexpected snowstorm.

The speculation grew that Richard Crafts had killed his wife, cut up her body with a chainsaw, placed the parts in plastic bags and into a rented truck, driven to Lake Zoar and, using a rented wood chipper, chipped her body into mulch.

A chainsaw was recovered from the water and traced back to Crafts, as was the rental of the wood chipper and the truck to transport it. That helped to complete the circumstantial evidence. For three weeks investigators searched the area where the chipper had been spotted, recovering and removing what appeared to be wood chips and tissue.

The wood chips were examined in pinches, an attention to detail that resulted in the discovery of body fragments, including pieces of bone, a fingernail, a toenail, teeth, dental crowns... But the total body parts recovered by police weighed only a few ounces.

But teeth are not a body: Maybe she was alive with missing teeth or missing fingers. I could identify one small fragment as coming from a skull bone. Fragments from the skull bones mean the person is dead.

Nearly 100 witnesses testified. Human tissue on the chain saw matched that in the mulch; strands of hair recovered at the scene matched those in a hairbrush in the Crafts’ home; and fingernail polish from a shard of human nail matched that found in a bottle in the Crafts’ home.

It took almost three years of painstaking work, but, in 1989, Richard Crafts was convicted of the murder of his wife.

THE BLOOD: LIQUID EVIDENCE

DNA fingerprinting has revolutionized forensics since its introduction 13 years ago, linking perps to crimes with microscopic drops of saliva, semen, or blood. Subsequently, an entire science has developed around the way blood drips,
Bugs tell us when and where someone was killed, and they do it with accuracy no man-made system will ever reproduce.

drops, falls, splatters, cascades, dries, shoots, travels, and its velocity as it pumps out of the heart and sprays out of a severed artery and lands on every surface known to man.

Bloodstain evidence is not about genetic markers such as DNA and ABO typing. The idea is to learn to interpret bloodstain evidence through the examination of the size, shape, and distribution of bloodstains. This is about reading the scene of a crime based on the blood that was left.

Retired forensic investigator Herb MacDonell runs a school devoted to this science in Corning, New York called the Institute on the Physical Significance of Human Bloodstain Evidence. He once engaged his students in measuring the velocity of droplets flung off the blood-soaked long hair of a young female volunteer. It arose during a 1974 case in Oregon in which a 67-year-old woman, Gertrude Lawrence,* had been severely beaten. The suspect was her 21-year-old companion who became enraged when she learned she would not be compensated to her liking in Lawrence’s will. Her reaction was to attack the older woman with a fire poker. A review of the bloodstains revealed that the attack took place in the dining room, the living room, on the stairway, and the bedroom. The older woman’s thick skull saved her life.

For its part, the defense provided the story that the victim had fallen in the living room and that her head had struck the brick edge of the fireplace. The companion said she had helped the woman upstairs and had begun telephoning doctors. She claimed that the blood splatter on the ceiling of the bedroom resulted when the victim shook her head “no” over and over, rejecting one doctor and then the next.

MacDonell knew the castoff pattern could not have come from the victim shaking her head. Drops resulting from even the most adamant protest would have to show a crisscross pattern if they ever reached the ceiling. These drops on the ceiling were perpendicular to that and, in Herb’s words, “radiated out from the area directly above the pillow…”

The elliptical geometry had to be translated for the court to make sense to the jury. It would require a model with the same length hair. A local nurse fit the description. At the chemistry building at Elmira College, Herb massaged blood into the nurse’s hair. Then, blood-soaked and on film, she shook her head as if to say “no” over and over again and never produced a single drop on the ceiling.

Then Herb dipped a short broom handle into the blood. He struck the pillow on the table many times, producing patterns of blood on the classroom ceiling that were remarkably similar to the bedroom ceiling.

When called to the stand, Herb gave his opinion that the blood on the ceiling could not have resulted from the victim shaking her head when her hair was soaked with blood.

“Come now, professor, you certainly have never conducted

*Name has been changed.
experiments with a live subject whose hair was wet with blood to see how far they should shake it, have you?"

"As a matter of fact, I have done that very experiment."

The young woman went to prison.

THE FLESH: A BUG'S LIFE

The skin is one of the most vulnerable of organs, decomposing so quickly it can often leave frustratingly few clues in a murder investigation. That's why bugs are among forensic pathology's best allies. At a research facility in Tennessee nicknamed "the Body Farm," human bodies in various stages of decay are scattered over a few acres like decomposing flesh sculptures to see how quickly insects attack them. "After death insects move in within minutes," says facility director Dr. Richard Jantz. "They are critical in estimating time since death."

Because of their almost immediate infestation of corpses and the precise breeding patterns that result, maggots can tell pathologists a tremendous amount. One of Dr. Boden's favorite "bug men" is Dr. Neal Haskell, one of the leading forensic entomologists in the country. He is a hulking middle-aged prankster from Indiana who collects vintage war vehicles and wears T-shirts that read NO FLIES ON ME.

There are five major stages of decomposition: fresh, bloat, decay, dry, and remains. Moving from one to the next is more of a slide on a continuum. During this, insects come and go in what is known as insect succession. There are various things that bugs can do relating to unnatural death. Body lice and mosquitoes, as well as maggots, may contain the DNA of a victim and, in some cases, of a perpetrator as well.

Bugs tell us when and where someone was killed and they do it organically and with accuracy that no man-made system will ever reproduce. Dr. Haskell relates the details of a case he worked in Oklahoma, one of the 500 or so that will have him driving back and forth across the country this year.

August in Stroud, Oklahoma is hot, and flesh left out in the sun turns bad real fast. One morning a neighbor followed his nose across the street to the home of Aureliano Cisneros and his wife, Linda Howell. The stench emanating from a pile of junk in the driveway of the home had gone from being a curiosity to being a nuisance. And it was swarming with flies.

Underneath a pile of dresser drawers, suitcases, and a tarp was the body of Aureliano Cisneros, last seen leaving a local bar with his wife. "On the tarp was a powdery substance that they initially thought was drugs," says Dr. Haskell. "It wasn't. Arm & Hammer might take care of your fridge, but it doesn't do shit for the decomposing body on your front lawn."

When Linda Howell was arrested for the murder of her husband, law enforcement investigators had a body and a motive but a hazy time line.

"Are we talking 24 to 48 hours that he's been lying there," asks Haskell, "or are we talking four days? We have to know."

The bugs around the body of Aureliano Cisneros were two common flies: the black blow fly and the secondary screwworm. The fly larvae—maggots—collected at the crime scene were enough evidence for Haskell to determine their species and conclude they were in their third development stage, or instar, the final stage before they would crawl off to pupate and mature into adult flies.

Temperature is the key in the length of the maggot's development process. Heat speeds it up, cold slows it down. And they do so on a predictable time line that Haskell can recite like the Pledge of Allegiance. Temperature records from weather stations near Stroud were consulted for the days following the couple's argument in the bar.

"Now, we're going to need 950 to 1,150 accumulated degree hours to get blow flies to mature," Haskell explains, "so I'm going to take the known weather data and calculate forward or backward. For her story to prove true, that he was alive Saturday night, the sixth, knowing that his body was discovered on the eighth, knowing that blow flies are not active at night, there's no energy adding up there. On the seventh, we've got heat from sunrise on, with accumulated hours until midnight, giving us a total, maximum, of 450 degree hours.

"You can't get the eggs hatched in those degree hours, so there's no way that her story could be true. Some time prior to..."
to the sixth, yes, on the fifth, we move into the ballpark for accumulated degree hours."

The death, Haskell determined, happened Thursday night. Not long after that, Linda Howell accepted a plea bargain.

**REPACKING THE SUITCASE**

You do what you need to do. You do it because that is what the dead deserve.

People ask me about the effect on my life of forensic pathology—year after year, body after body—and I sometimes find myself saying that I am an atheist. It is hard for me to believe in a God who would allow people to do the horrible things they do to one another. Seeing what humans do to one another every single day for more than 40 years, I have turned away from religion toward science.

At the end of the autopsy, the morgue assistant will pick up the organs with forceps and return them to the cavity of the body. The important specimens will be saved in a jar for evidence. They will join the jars lining the walls of the room, packed in tight between rows of slide boxes, on which there are more tissue samples. In [one] room, there is a box of breast implants that have been stored for possible civil action.

The morgue assistant will finish packing the body and then sew up the incisions with large looping movements of the baseball stitch.

Soon after an autopsy report will be delivered to those who need it. Page one states the name, birth date, date of discovery and autopsy date. At the bottom it says:

*Manner of death: homicide.*

---

**DAY OF THE MAGGOTS**

On Sunday morning, April 28, 1985, residents of a run-down neighborhood of Plainfield, New Jersey noticed a person in the front seat of an abandoned, rusted-out Volkswagen, sitting motionless. Too motionless. Looking closer, they realized it was the corpse of a woman, surrounded by empty beer cans and vodka bottles.

The deceased was Gail Morris, a 30-year-old alcoholic. Morris hung out with 45-year-old Leonard Barco, a janitor married to another woman. Morris' brother-in-law had last seen them together Friday morning.

After the police grabbed Barco, he admitted he fought with Morris. He said they had gotten drunk on Saturday night. At 11 a.m., he told her he was going home to his wife. They argued. She hit him with a broom handle. Barco said she hit her back and left.

Investigators were sure they had their man. The medical examiner believed Morris had been dead more than 24 hours; bruises on her neck and chest suggested she had been beaten and strangled. Police interrogated Barco again, and under determined prodding he changed his story. Yes, they had fought early Friday morning, and he had murdered her. "I feel bad because I killed Gail," Barco sobbed.

Despite the confession, there were discrepancies in the case. Investigators believed Morris had died of strangulation, yet Barco testified that he'd hit his girlfriend with a stick. The public defender asked Dr. Baden to review the case.

Reviewing the evidence, Baden saw glaring holes in the prosecution's story. There were no petechial hemorrhages typical of strangulation, and the bruises on her chest and neck were minor, the sort of injuries long-term alcoholics frequently get from falling down and bumping into things. Her blood alcohol level was a lethal 0.46 percent. Most telling of all, a close examination of autopsy photos revealed unhatched maggot eggs on her eyes.

Baden knew the eggs had probably been laid around the time of death, and would have hatched in less than 24 hours. Morris could not have died Friday morning. The maggots placed her death just a few hours before she was found on Sunday.

More evidence was gathered that proved Barco's original story was true, including testimony from witnesses who had seen Morris alive on Friday and Saturday. Morris had not been murdered at all. She had drunk herself to death. Barco was set free. —J.W.