Taking the Bite out of Bad Evidence

Sept. 14, 2015 (Mimesis Law) — Bite mark evidence gained national attention in the Ted Bundy trial in 1979. Since that pivotal moment, American courts have time and again improperly legitimized this allegedly “scientific” evidence. The common—yet untested—assumption is that each person produces a unique bite mark, unlike any other in the world. That assumption produces the further postulation that bite mark analysis must be correspondingly reliable.

This leap of logic continues to incarcerate innocent people despite a profusion of overturned convictions. In fact, bite mark analysis seems to have a sort of Teflon-like quality that allows it to continually evade real scrutiny. But for the first time in more than 40 years, the incredible claims of bite mark testimony may finally be on the chopping block.

According to the Dallas Morning News, the Texas Forensic Science Commission agreed last month to examine cases where bite mark analysis played a role in the conviction. The litany of errors associated with bite mark evidence prompted the sweeping review:

“We’re talking about the whole field, the validity of the field of bite marks,” said Dr. Vincent DiMaio, the chief presiding officer at the Texas Forensic Science
Commission, and the former Dallas County medical examiner. “The problem justifies an investigation.”

The Texas Forensic Science Commission review isn’t the first big chink in the bite mark armor. Journalists Radley Balko and Jordan Smith have chronicled numerous cases of faulty bite mark evidence. Last year, the American Academy of Forensic Sciences evaluated forensic odontologists and determined that they lacked the ability to simply conclude which marks were actually bite marks.

The fact that Texas has become the bellwether state for testing previously “reliable” forensic science is important. Texas routinely hands out the death penalty (although California is making quite the run at it these days), and the case of Cameron Todd Willingham is one where we are compelled to ask, “Did Texas execute an innocent man?”

To a certain extent, the work of the Texas Forensic Commission in the wake of the Willingham execution set new standards for forensic arson analysis. Perhaps the Commission can do more than set new standards for bite mark evidence. Perhaps it can drive the final nail in the coffin.

That may sound harsh, but the fact is that bite mark evidence has been introduced in trials all over the country, and oftentimes it is the lynchpin that garners the conviction. Bite marks seem to be an important piece of evidence, especially at violent crime scenes. As the Bundy case illustrated, murderers and rapists sometimes bite their victims.

Evidence left behind at a crime scene does not always lend itself to reliable analysis. The now-discredited hair microscopy analysis demonstrates this. What may initially appear to be bite marks can actually be just another injury; a cut or scrape that looks strikingly similar to a tooth pattern. Moreover, bite marks, unlike a dental mold taken of a suspect’s teeth, are left in malleable material: human skin. It moves, it slips, it makes it difficult to truly define the boundaries of an impression.

To illustrate the shortcomings of bite mark evidence, take the case of Bennie Starks: faulty forensic testimony sealed his fate when he stood trial for a brutal rape in 1986. The prosecution’s forensic serologist testified that, based on her analysis of a semen sample taken from the victim’s underpants and a sample obtained from Starks, she could not exclude Starks as the source. The prosecution also hired two dentists who self-identified as “experts” in forensic odontology (always a red flag) to testify that bite marks on the victim’s shoulder had been made by Starks.

The dentists testified that after comparing the evidence, photos, X-rays, and a model of Starks’s teeth, the bite marks shared sixty-two characteristics with Starks’s teeth. After hearing these forensic “experts” testify that scientific evidence tied the defendant to the crime, the jury convicted Starks of two counts of aggravated criminal sexual assault, attempted aggravated sexual assault, and aggravated battery. Starks was sentenced to sixty years in prison.

In 2006, after spending nearly twenty years behind bars, a DNA test categorically excluded Starks as the source of the semen. Additionally, two other odontologists’
independent examinations of the bite mark evidence completely discredited the conclusions and testimonies presented at trial. Their reports pointed out that the examination method used by the State’s odontologists had since been rejected by its own creators and concluded that the dentists “misapplied the methodology and used flawed preservation and photography techniques.”

The appeals court ordered Starks released on bond pending a new trial. His convictions were vacated and the last charges dismissed in January, 2013, which led to his full exoneration. During the twenty years Starks spent behind bars, advancements in technology progressed exponentially (see the DNA that helped set him free), and it left bite marks in the dust. But bite mark evidence continues to suffer from fatal flaws and a low threshold of reliability yet somehow it still perseveres.

Bite mark evidence’s absurd perseverance is obvious in the case of the William Richards. This year, the California Supreme Court will consider Richards’s habeas case. This isn’t the first time Richards’s case has found its way to California’s highest court. In 1997, a jury convicted Richards in the murder of his wife, Pamela. The smoking gun was bite mark testimony. The analyst testified that he compared an autopsy photo of Pamela’s body to the unusual gap William’s dentition and found a match.

More than a decade later, the analyst recanted his testimony and called the once-matching gap a defect in the photo. To add insult to injury, the analyst further stated that he no longer even believed the bite was made by a human. Finally, four other forensic odontologists said that the photo did not offer enough detail to provide a match to William Richards.

Roundly criticized as the "worst opinion of the year," the California Supreme Court upheld Richards’s conviction in 2012. The court concluded that Richards would have to prove that the evidence used against him went beyond the bounds of exaggeration: he would have to prove that it was false.

Thus, even though the bite mark analyst retracted his prior testimony, Richards can’t fight it because at the time of trial, the analyst thought he was giving accurate testimony. So much for advancements in science: California seems inclined to perpetuate bad science, bad convictions, and bad law.

Richards has managed to find himself again in front of the California Supreme Court and perhaps it will reverse its previous insurmountable hurdle. While I hesitate to say that as Texas goes, so goes the country, the Texas Forensic Science Commission deserves applause for opening up what may be a Pandora’s Box of wrongful convictions brought about by the junk science of bite mark testimony.


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