



F34 Innocent People Convicted by Bite Mark Evidence: Is There Still a Problem?

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The goal of this presentation is to demonstrate how innocent people are serving sentences for crimes based upon erroneous bite mark identification evidence.

This presentation will impact the forensic science community by proposing a solution to the problem of wrongful convictions based on bite mark evidence.

False convictions using bite mark evidence continue to be a serious concern for the criminal justice system. The educational objectives of this presentation are to identify common errors made in bite mark cases where factual innocence has been demonstrated, and to propose solutions for improving the reliability of bite mark analysis. The attendee will understand the need for extreme caution in reaching any conclusion of identity solely upon a bite mark comparison.

DNA identity testing continues to exonerate innocent people in cases that involved bite mark comparison evidence. The problem of innocent people being convicted and unjustly imprisoned for crimes they did not commit should be of serious concern to the forensic odontology community. Two recent bite mark cases will be discussed.

In a case from Wisconsin, Robert Lee Stinson, served 23 years of a life sentence for the 1984 murder of lone Cychosz. Ms. Cychosz had been a neighbor of Mr. Stinson, and her body was bitten a number of times in the course of a brutal assault that killed her. Mr. Stinson consistently maintained his innocence. In 1986, Stinson's direct appeal of his first degree murder conviction was denied (*State of Wisconsin v. Robert Lee Stinson* (1986) 134 Wis.2d 224; 397 N.W. 2d 136). In February of 2008, after DNA testing, the State of Wisconsin agreed that Robert Lee Stinson should be granted a new trial. On July 27, 2009, the State of Wisconsin dismissed the murder charge against Robert Lee Stinson.

In a Mississippi case, Kennedy Brewer was accused of the 1991 murder of Christine Jackson, the 3-year-old daughter of his girlfriend. Mr. Kennedy Brewer was initially convicted of raping and strangling Jackson to death in 1995. He was sentenced to death and spent 12 years on Mississippi's death row. In February of 1987, Kennedy Brewer's case was dismissed by the State of Mississippi after another person identified by DNA evidence confessed to killing the 3-year-old girl. The prosecution had relied exclusively upon bite mark evidence to convict him.

Both Stinson and Brewer were convicted because the prosecution relied upon bite mark evidence. In both the Robert Lee Stinson and Kennedy Brewer cases the dental bite mark experts were board certified by the American Board of Forensic Odontology (ABFO). The Stinson and Brewer cases are examples in a growing number of cases where bite mark evidence has been shown to be erroneous. Bite mark identification evidence is now on the brink of being proven to be a junk science. Defense attorneys are filing challenges against bite mark evidence. The challenges contend that there is effectively no valid documented scientific data to support the hypothesis that bite marks are demonstrably unique. Although there is evidence that a person's teeth can be unique, it is argued that there is no documented scientific data to support the hypothesis that a bite mark is a true and accurate reflection of this uniqueness. To the contrary, what little scientific evidence that does exist supports the conclusion that crime-related bite marks are grossly distorted, inaccurate, and therefore unreliable as a method of identification. These criticisms were echoed in a study recently published by the National Research Council entitled *Strengthening Forensic Science in the United States: A Path Forward*, (The National Academies Press, 2009, National Academy of Sciences, hereafter NAS Report). In the specific section on forensic odontology, the NAS Report found that bite mark comparison was the most controversial area of forensic odontology and that there is continuing dispute over the value and scientific validity of comparing and identifying bite marks (*Id.* at p. 5-35). In its criticism of bite mark comparisons, the NAS Report stated: There is no science on the reproducibility of the different methods of analysis that lead to conclusions about the probability of a match... Even when using the [American Board of Forensic Odontology] guidelines, different experts provide widely differing results and a high percentage of false positive matches of bite marks using controlled comparison studies.

If bite mark evidence is to remain as viable evidence of identification in our judicial system, serious and specific measures must be taken to correct all circumstances where miscarriages of justice have occurred. One principal lesson learned from bite mark exoneration cases is that errors occur when an overstatement of the validity and certainty of a bite mark identification is testified to by the odontologist. Exoneration cases also demonstrate the need to develop a minimum threshold objective criteria for the suitability of a suspected bite mark before a comparison is attempted.

The investigation of bite mark cases by forensic dentists has necessarily evolved as the result of deficiencies uncovered only after convictions which relied on bite mark evidence were overturned by DNA. Developments in this area include improved technology as well as an increasing awareness by



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forensic dentists that previous assumptions were unsupportable. As a direct result of past mistakes there should be a better understanding by forensic dentists of the inherent variability and resulting distortion of marks left in human skin by teeth. Also, forensic dentists should accept that there is rarely, if ever, a scientific basis to make a statement that a person is an A positive match.

One path forward: A scientific technical working group of the most highly qualified and experienced forensic odontologists should be formed. This technical working group would objectively review all bite mark cases where a person is serving a prison sentence to determine if the error factors found in exonerated cases also exist in those cases. If so, steps would be taken to guarantee that an innocent person is not being wrongfully confined based upon bite mark evidence.

Bite Mark, DNA, False Conviction