



F15 The Nose Knows? Residual Odor and Cadaver Dogs: A Review

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Learning Overview: After attending this presentation, attendees will understand some of the scientific problems faced when using dogs to detect places where human remains once were and the current state of the law regarding the admissibility of dogs for this purpose.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by explaining the current state of the science involving cadaver dogs, particularly as it relates to so-called “residual odor,” and how that science has been understood, or misunderstood, by courts. This presentation will provide an overview for the historical uses for cadaver dogs and the trajectory toward their current use to detect residual odor. Specifically, the presentation will discuss the science (and lack thereof) supporting these determinations and other problems with using dogs in this manner, including cognitive bias and prejudice.

Dogs have long been used by human beings for their superior scenting abilities, with reports of dogs finding missing or absconded people going back to medieval times. Dogs, as natural scavengers, also have a long history of being used to find deceased human remains. In 1809 Bavaria, a court clerk used his own dog to ostensibly find the victims of the “Bavarian Ripper,” and in 1974, the first purposely trained dog—a Golden Retriever named Pearl—recovered the remains of a deceased college student in upstate New York.

This use, and the use of dogs to find the extant remains of other deceased persons (such as after a natural disaster), is relatively non-controversial; remains are either found or they are not. However, there has been a rise in the use of dogs to ostensibly detect places not where human remains *are*, but where human remains *have been*—days, weeks, months, or even years after those remains have been removed. There is, however, little empirical evidence that dogs are capable of such feats. There is also no evidence about how long such odors could last, and how that may vary with differing environmental conditions. Nor is it understood what, in particular, dogs are detecting when they alert to human remains, and how that may differ when those remains are no longer present. The extremely limited research in this area will be discussed. This presentation will also cover how cognitive bias may play an outsize role in these cases, given the evolutionary relationship between humans and dogs. Scientific research showing how jurors credit and understand dog evidence will also be examined.

Despite these issues, the use of this evidence is on the rise, with at least a half-a-dozen active cases at various stages of litigation in the first half of 2019 alone. Yet courts have failed to fully grapple with these and other problems with using dogs in this manner; many are refusing to subject the claimed abilities of the dogs to the scrutiny demanded of scientific evidence. These decisions and the law underlying the admissibility of this evidence will be examined.

Cadaver Dogs, Admissibility, Residual Odor