A STUDY OF THE USE OF CADAVER DOGS FOR BLOOD SCENT DETECTION IN CRIMINAL INVESTIGATIONS

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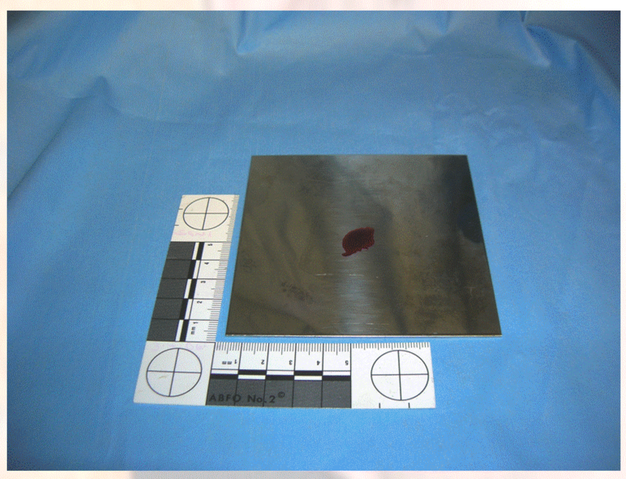
Introduction

Blood is one of the most important and often encountered types of physical evidence linked with the forensic investigation of death and violent crime Anecdotal evidence has suggested that dogs are capable of detecting and alerting to human blood. This evidence may be presented to a court of law in order to substantiate or corroborate further forensic evidence against a suspect or suspects of a crime. The main job of cadaver detection dogs (sometimes referred to as cadaver dogs or human remains detection HRD dogs or body dogs or more accurately Victim Remains Detection Dogs) is to search for hidden or buried human bodies or body parts, however more recently, a new aspect of cadaver detection work has been used in criminal investigations in which dogs are deployed to search for blood that has been in an area or on an object for various lengths of time and is in various stages of decomposition. A frequent problem in a murder investigation is the location and identification of objects, weapons and places associated with either the commission of the incident or the actual location of a victim's body. Dogs showing the capacity to detect human blood scent effectively and reliably can be used as an inexpensive screening test to assist the police in their investigations when looking for a weapon used in a crime for example or recovery of victims or perpetrators blood for DNA analysis or pin pointing crime scenes for the SOCO's to focus upon.



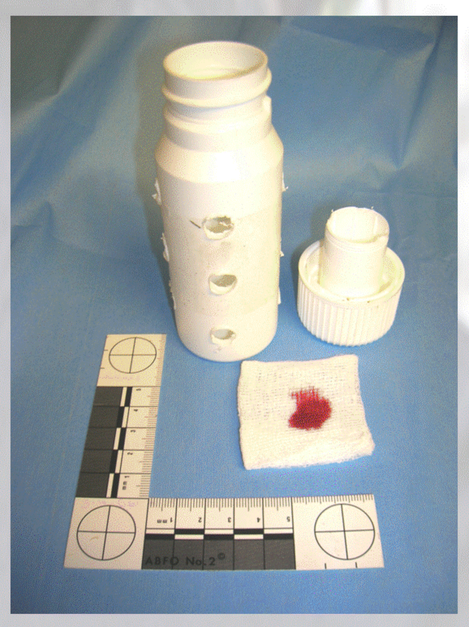
Stainless Steel Plate with blood

Scenario training

Team	Total trials	Blood correctly identified	misses	False positives	Comments
Frankie/ John	3	3	0	0	2 of these search areas contained articles with blood and one with blood on ground
Buster/ Simone	14	12	1	1	2 of these searches were for blood on the ground rest were for blood on articles

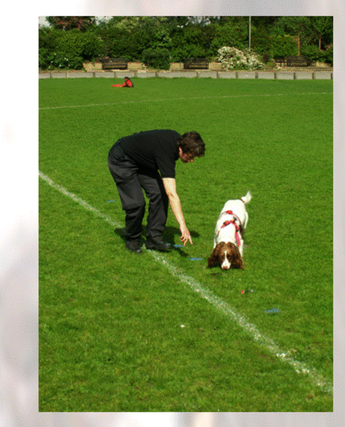
Summary of results for square tests

Car Search by Buster



Scent tube with blood swab

Materials and Methods

Team	Buster	Frankie
Handler	PC Simone Thompson SYP	PS John Ellis SYP
Handler Experience	Least experienced	Many years
Breed	Springer Spaniel	Border Collie
	 PC S. Thompson & Buster	 PS J. Ellis & Frankie
Sex	Male	Male
Age	2	7
PreviousTraining	Cadaver	Cadaver & blood
Deployments	Few	Many over last 7 years

Discussion

This project demonstrated the reliability of the dogs and the purposes to which they can be utilised in an ongoing investigation where detection of blood may be important. This project explored different scenarios in which the dogs may be utilised and showed that they can be reliably used indoor and outdoors and detect blood on a variety of surfaces and under different circumstances.

In this project two handlers from South Yorkshire police dog unit were used along with their licenced and certified cadaver dogs. The findings showed that an experienced forensic search dog can detect blood that is day old through to months old. Dog 1 was a male Border collie and had been working for 7 years and dog 2 a male Springer spaniel aged had only few weeks experience.

The two dogs, one novice and one veteran, used for victim remains detection, were used to detect small amounts of human blood on various surfaces; the lowest detectable amount of used in this study was 0.01ml of blood. The dogs were used in a line up and real life scenarios. Results indicated that the dogs can detect and alert to very small amounts of blood on different surfaces under various conditions. The data suggests that the potential error rate of both dogs and handlers were low and can be used in criminal cases to help other branches of forensic investigators to recover biological evidence. With an overall successful positive diagnostic ratio of id of blood scent of 17.5 for Frankie and a positive diagnostic ratio of 7.6 for Buster and with negative ratios of 38.5 and 16.4 respectively, it is clear that certain dogs have the ability to detect human blood scent in principal in both trial and scenario training. Any conclusions must be drawn carefully as by the nature of this project there were many limitations mainly due to lack of number of dogs to compare and the limitations of number of trials that could be done at any one time and within the overall time frame of this project.

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