

PhD Project – Michael Ben Alexander
Human Remains Detection Dogs Generalization Capabilities

Participants Needed.

Texas A&M University
Applied Ethology
Michael Ben Alexander

Researcher looking for HRD K9 handlers to participate in a new study on the generalization capabilities of HRD dogs.

Requires experienced handlers who have already certified at least one dog to a national or state certification and are starting or planning to start a new dog soon.

This study will benefit the SAR Community by providing needed knowledge on generalization and thresholds of our HRD dogs during the introductory stage of their training. It will help us refine our target odor exposures and give us scientific evidence to help us obtain access to the training aids we need to provide more competent HRD dogs to the field.

Interested parties please contact:

Ben Alexander
ben-alexander@tamu.edu
979-739-8353

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Research Proposal Objective

Determine whether human remains detection (HRD) dogs trained on single small component targets, such as teeth, blood, bone, and tissue produces dogs that are capable of generalizing to composite scents (whole limbs or bodies) and larger target odors.

Study Overview

It has been debated for many years among K9 handlers and Trainers whether the average training aids available to handlers produce HRD dogs capable of locating entire bodies or the full array of human decompositional odors.

This study will look at this through a controlled training regiment of small aids, 30 grams or less, and only component targets such as teeth, tissue, blood, or bone. Upon satisfactory completion of initial training as analyzed through a basic independent final response trial, the dogs will then be exposed to component target odors (whole limbs) and large odors (such as a body or body cavity), and evaluated for whether or not they offer their final response behavior to the novel target odors.

The null hypothesis for this research states that there would be no difference and that the dogs would offer their final response to all target odors regardless of type or size.

The prediction is that there will be some variance between novel odors and final response behavior.

Further testing of the dogs after exposed to the initial two novel odors will take place, time allowing, to see if after initial exposure to composite and large target odors, better generalization begins to occur.

The purpose of this study is to provide handlers with a better understanding of how dogs generalize odors and when that generalization begins to occur. This may give credence to credentialed and responsible HRD handlers to obtain legal access to larger and more varied scent sources when training their dogs. It will also help handlers in deployment of young dogs and better use of resources when fielding a dog for a particular type of HRD mission.

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Study Participant Requirements:

1. Experienced handler who has credentialed at least 1 dog to a national, state, or regional certification in human remains detection.
2. Dog must be naive to human remains at the enrollment into the study
3. Just like training logs, handler must track the following on forms provided and return to investigator:
 - a. Type of target.
 - b. Size.
 - c. Age.
4. Handlers must adhere to the following target odor exposure guidelines throughout enrollment in the study:
 - a. Dog must not be exposed to more than 30 grams of any type of HRD.
 - b. Dog must not be exposed to a natural composite scent (i.e. dog cannot be exposed to any type of full scent picture like a finger, hand, foot, leg, arm, etc).

Definitions:

Component – teeth, blood, bone, or tissue

Composite – full natural combination of all scent components (i.e. a finger, toe, foot, hand, leg, arm, etc)

Man-Made Composite – handler blend of teeth, blood, bone, tissue or other.

Contaminated Soil – Soil which contains human decompositional fluids (i.e. from a grave)

Training versus Testing

Training Phase

Aids acceptable to use in the training phase:

Non-Contemporary bone (i.e. bone from Bone Room or Skulls Unlimited)

Blood at any age

Teeth of any age

Tissue of any age

Testing Phase

1. Dog will be tested for final response on one of its own aids
2. Dog will be tested on a contemporary bone (fresh or fresh decomposition)
3. Dog will be tested on 1 – 5 lbs of composite target odor (i.e. a foot)

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4. Dog will be tested on 50 – 70 lbs of composite target odor (body or part of a body)