



E17 Training Needs for Search and Rescue (SAR) Teams During Mass-Disaster Fire Scene Recoveries: Lessons Learned From the 2018 California Camp Fire

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Learning Overview: After attending this presentation, attendees will gain a better understanding of the training needs of SAR teams that are involved in large-scale fire scene recoveries. The lack of osteological training of SAR teams can hinder the search and recovery process of fatal fire victims, especially in large disaster zones. With this in mind, this presentation will provide insight on the key aspects of search and recovery that are most pertinent to SAR teams who lack training in fatal fire scenes.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting a training guide that will be used to educate SAR teams and other recovery workers on the search and recovery of burned human remains in the context of mass-fatality fire scenes. This training guide will provide SAR teams with the basic tools to identify burned osseous material in the field, resulting in better outcomes for the search efforts, victim identification, and closure for families.

On November 8, 2018, the Camp Fire in northern California resulted in the destruction of 18,804 structures and 85 fatalities, making this the deadliest wildfire in California history. In large-scale disasters such as this, it is unfeasible for forensic anthropology teams to search every burned residence. For the Camp Fire recovery, many of the burned structures were first searched by SAR, California Department of Forestry and Fire Protection (CAL FIRE), and National Guard teams that lacked osteological knowledge, especially for burned remains. This disparity in knowledge concerning osteological identification and, more specifically, the appearance of bone within a burned context became evident early in the recovery process. SAR teams often requested short lessons on osteology and general tips for bone identification and human remains recovery in order to more confidently approach the large number of fire scenes. This research and its resulting product, a SAR fire scene recovery guide, will provide these individuals with the basic tools and knowledge needed to streamline search and recovery efforts for fatal fire victims.

The information within this SAR guide will address two main issues: first, where remains are most likely to be located within a structure fire, to streamline search efforts; and, second, how to distinguish human bone from materials that are commonly misidentified as human remains, including animal bones and burned debris. Data from the Camp Fire regarding the location of recovered remains will be used to extrapolate trends of high-priority areas within burned structures to be searched first. Tips on how to locate these areas within the debris will be outlined with accompanying photographs from prior house fire scenes. Furthermore, trends regarding materials commonly misidentified as human remains are detailed through professional experience from members of the California State University (CSU), Chico Human Identification Laboratory. Tips to aid in the determination of osseous from non-osseous material, and human remains from faunal remains, are provided through straightforward descriptions and archetypical pictures.

Ultimately, many individuals who participate in search and recovery efforts, including firefighters, police officers, and search and rescue personnel, would benefit from a training guide that outlines how to approach a scene and that serves to dispel common misconceptions surrounding house fire recoveries and the appearance of burned human remains. While this SAR guide provides information on how to approach a scene, it in no way serves to replace the role of forensic anthropologists, but rather to streamline the search and recovery process overall. Therefore, this guide will allow for a more expedient search and recovery process of fatal fire victims by providing SAR with tips and trends to more confidently approach mass disaster fire scenes.

Fire Scene, Search and Recovery, Human Remains