



## Anthropology Section - 2016

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### A115 Differential Taphonomy Based on Microenvironment: The Case of Botanical Boy

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After attending this presentation, attendees will better understand how seemingly minor differences in environment, such as the presence of textiles, can dramatically affect decompositional and taphonomical processes in human remains.

This presentation will impact the forensic science community by providing a unique example of differential taphonomy in a singular burial and offering those involved in human remains recovery and analysis points to consider when approaching potentially similar cases.

The lush area now known as the Denver Botanical Gardens and Cheesman Park, Denver, CO, was originally established in 1859 as the Mount Prospect Hill Cemetery, but due to poor management, disrepair, and alternate ideations for the purpose of the land, interments were largely halted in 1893. Bodies were moved to alternate locations within the city, but graves were poorly marked and burial records virtually non-existent; thus, many decedents remained where they were initially laid to rest.

In October of 2012, human remains were discovered while road construction and irrigation drainage repair were being performed adjacent to the Denver Botanical Gardens. Multiple exhumations were conducted over the following week to include the removal of the remains belonging to a child, estimated at approximately eight years of age at time of death. Coffin hardware and bits of wood were recovered in association with the child. The remains were skeletonized with minor amounts of mummified tissue adherent in the forearm regions. The cranium was present with light-colored hair affixed, combed, and parted. Additionally, the individual was fully clothed in knickers and a jacket (not uncommon dress for young boys of this period) with the suit in exceptional condition. While no headstone was recovered in association with this individual, headstones recovered nearby during this disinterment effort dated from 1878 to 1885. It is not uncommon to find well-preserved skeletal remains owing to the arid climate of the “Mile High City.” What is exceptional is to find intact clothing dating back to the 1880s.

The remains were housed in cold storage at the Denver Medical Examiner’s Office and were recently examined and fully cataloged so that the unidentified individual may be reinterred locally. The elements in direct contact to the burial environment were quite well preserved; however, those encased within the clothing demonstrated a completely different taphonomy. Large amounts of insect frass were recovered external and internal to the suit. More importantly, the thoracic and appendicular elements contained inside the clothing were delaminated and friable with significant degradation of most cortical surfaces. The slightest movement of these bones led to the osseous material crumbling in place.

This presentation will consider the possible mechanisms behind this differential preservation and what this means to the modern forensic practitioner.

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#### Differential Taphonomy, Microenvironment, Disinterment