



### **A64 Mentoring by Example: Lessons in Cremation Analysis From the Forensic Case Files of Walter H. Birkby, PhD**

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After attending this presentation, attendees will appreciate the skill and knowledge of Dr. Birkby in the field of cremation analysis and the example he set for his students.

This presentation will impact the forensic science community and the field of forensic cremation analysis by demonstrating that: (1) heavily fragmented cremains can still be identified, especially when examined by a highly skilled analyst such as Dr. Birkby; and, (2) when plying their skills in police cases, forensic anthropologists may have to contend with politically charged, high-profile cases.

Attendees of this presentation will understand that the foundations of forensic anthropology lay, as with Dr. Walter H. Birkby, in “mentoring by example.” Students learned by observation — not only the methods for studying human remains but the subsequent presentation of the results. This reliance on training by example, rather than on textbooks, epitomizes the formational stages of forensic anthropology.

Birkby often cautioned his students about making overreaching inferences from osteological data, saying, “Don’t say anything in writing that you couldn’t defend on the stand.” Practical lessons in human osteology were often emphasized through similar, often humorous, sayings known as “Birkby-isms.” These phrases captured the essence of the principles behind lessons taught by example.

While the presenter worked and studied with Dr. Birkby from 1975 to 1980, he learned from Birkby’s emerging interest in the analysis of cremated and calcined bone. Birkby became an acknowledged expert in the study of human cremains and it was through him the presenter acquired a major interest in this mode of burial.

When it came to cremation analysis, Birkby said: “You get out of cremations what you put into them.” His meticulous approach to cremains is well exemplified in one of his early forensic cases and represents a unique and important study. Unfortunately, it went unpublished.

The case dates to the late 1960s when a male member of the Black Panther Organization in the San Francisco Bay area was reportedly shot at a rural training facility. As the ground was rocky, the perpetrator(s) could not bury the body and, instead, burned the remains for several hours on a pile of redwood branches, repositioning the body parts to facilitate cremation. Once the fire had consumed the corpse, the calcined skeleton was broken up and the fragments were scattered on the side of a hill. The bony fragments remained *in situ* until 1971 when an informer, who may have assisted in the disposal, told local authorities what had happened and where the individual’s remains could be located. A search of the scene revealed a number of personal items along with bone fragments.

The California authorities requested Birkby’s help in examining the cremains and, in the summer of 1971, the calcined bone was sent to him for study. As the authorities knew the probable identity of the deceased, they also sent antemortem radiographs of his head and chest. After working for several weeks identifying and reconstructing fragments Birkby was able to identify several points of similarity between bony features in the cremains and those in the radiographs. The similarities included age and sex, mandibular and frontal sinus morphology, and a lambdoidal ossicle.; however, and most importantly, was the remnant of a healed surgical wound in the reconstructed fragments of the right temporal bone that matched a defect present in the decedent’s radiographs. Birkby was able to extract from these burned and scattered bones the critical elements needed to cinch the case. Positive identification was



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later officially established by California authorities. The likely perpetrator was, himself, killed in 1972.

This case had significant impact on the direction of forensic anthropology. First, it proved that burning a body did not prevent identification when faced with someone of Birkby's skill and dedication. Second, this case showed that experts, like forensic anthropologists, often navigate dangerous waters around high-profile cases.

Similarly, Birkby's work on the Black Panther case also had an impact on the bioarchaeological study of cremains. The very same effort and attention he afforded forensic cases was given to prehistoric cremation burials. His work in the field of bioarchaeology likewise served as an example of what can be accomplished with fragmentary calcined bone.

The "Birkby-isms" hold true no matter what the year or what the nature of the case. By not over-reaching and by devoting the time and effort, Birkby was able to advance a difficult and politically charged case long before most of the anthropological studies on cremation were conducted. These examples are those that guided his students and "mentoring by example" lies at the heart of forensic training.

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### **Birkby, Mentorship, Cremains**