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Cheryl P. Anderson
University of Nevada, Las Vegas, ande1095@unlv.nevada.edu

Debra L. Martin
University of Nevada, Las Vegas, debra.martin@unlv.edu

Jennifer L. Thompson
University of Nevada, Las Vegas, jennifer.thompson@unlv.edu

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Taphonomy and Cremation of Human Remains from San Francisco de Borja

Cheryl P. Anderson, Debra L. Martin, and Jennifer L. Thompson

Introduction:

•San Francisco de Borja is a cave burial site in Chihuahua, Mexico dating to the late prehistoric period (AD 1280-1400).
•Excavated by Richard and Sheilagh Brooks in the 1950s.
•Human remains collected from this site currently curated at UNLV.
•Individuals are thought to be affiliated with the Tarahumara cultural group.
•This project documents the wide range of taphonomic processes that have affected these remains.

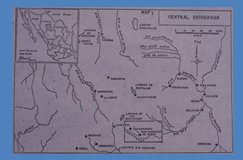


Photo courtesy of Richard and Sheilagh Brooks

Photo courtesy of Richard and Sheilagh Brooks

Photo courtesy of Richard and Sheilagh Brooks

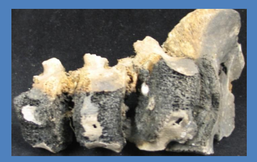
Photo courtesy of Richard and Sheilagh Brooks

Materials and Methods:

•Analyses indicate that a minimum of 11 adults and 7 subadults were interred at this site.
•MNI based on number of left femora.
•Standard osteological methods used to estimate sex and age at death (Buikstra and Ubelaker, 1994).
•Weathering was scored using methods of Behrensmeyer (1978).

Burning:

•At least 3 individuals were partially burned.
•No evidence for fire was found in the cave (Brooks and Brooks, 1990).
•This may be the result of Tarahumara burial practices, which include lighting fires next to the deceased (Ascher and Clune, 1960; Bennett and Zingg, 1976; Lumholtz, 1903).

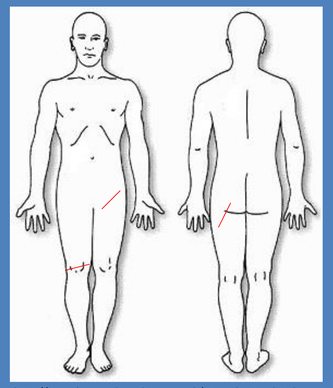


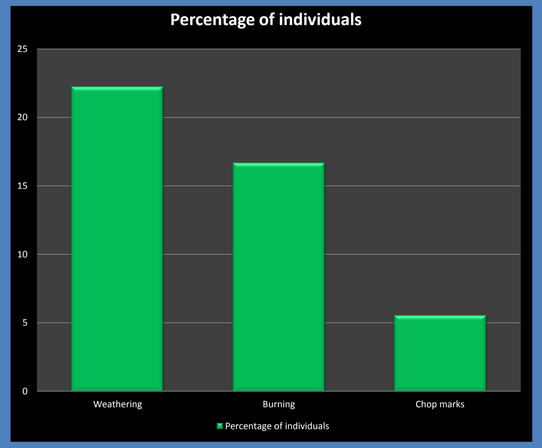
Weathering:

•Evidence of weathering was found on at least 4 individuals.
•Scored as stage 2 or above (Behrensmeyer 1978) .
•Weathering may indicate secondary interment of some individuals and/or that the cave was used repeatedly.

Chop marks:

•One adult male exhibited several chop marks located on the left femur, left os coxa, and right tibia.
•This individual also showed signs of illness.
•The chop marks appear to have been made by a weapon and could have been the cause of death.
•These may have occurred while this individual was defending the community against enemies.


http://www.harpendencalipers.co.uk/site-selection.html
Red lines show locations of chop marks



Conclusions:

•Human remains collected from cave at San Francisco de Borja were affected by a wide range of taphonomic processes.
•Signs of burning found on at least 3 individuals may have been accidental and the result of the Tarahumara practice of lighting fires next to the deceased.
•Weathering observed on at least 4 individuals may indicate that some were buried elsewhere and then moved to the cave at a later time.
•It seems likely that this cave was used repeatedly over a long span of time and this is consistent with other Tarahumara burial caves (Ascher and Clune, 1960; Bennett and Zingg, 1976).
•Ethnohistoric accounts suggest that there was a pattern of intergroup violence in the early historic and possibly late prehistoric time periods (Beals 1973; Beals 1933; Kelley 1978; Moser 1972, Nelson et al. 1992).
•This would indicate that individuals in the region were at risk for violent death.
•The adult male, in addition to being in poor health, may have been killed during conflict with another local group or was a victim of intragroup violence.
•The combination of taphonomic processes affecting the remains further supports the hypothesis that these individuals are Tarahumara.

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