



May 2012

# Taphonomy and Cremation of Human Remains from San Francisco de Borja

Cheryl P. Anderson

*University of Nevada, Las Vegas*, [ande1095@unlv.nevada.edu](mailto:ande1095@unlv.nevada.edu)

Debra L. Martin

*University of Nevada, Las Vegas*, [debra.martin@unlv.edu](mailto:debra.martin@unlv.edu)

Jennifer L. Thompson

*University of Nevada, Las Vegas*, [jennifer.thompson318@yahoo.com](mailto:jennifer.thompson318@yahoo.com)

Follow this and additional works at: <https://scholarworks.umass.edu/lov>

### Recommended Citation

Anderson, Cheryl P.; Martin, Debra L.; and Thompson, Jennifer L. (2012) "Taphonomy and Cremation of Human Remains from San Francisco de Borja," *Landscapes of Violence*: Vol. 2 : No. 2 , Article 16.

DOI: 10.7275/R54Q7RWF

Available at: <https://scholarworks.umass.edu/lov/vol2/iss2/16>

This Article is brought to you for free and open access by the ScholarWorks@UMass Amherst at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Landscapes of Violence by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

---

# Taphonomy and Cremation of Human Remains from San Francisco de Borja

## **Abstract**

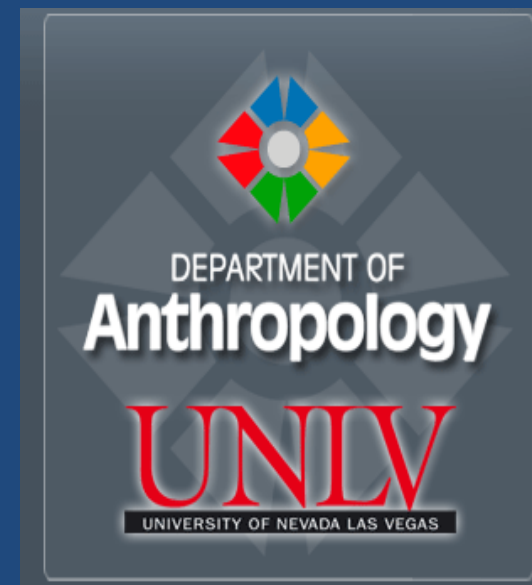
San Francisco de Borja is a cave-shelter burial site located in Chihuahua, Mexico, that was excavated in the 1950s by Richard and Sheilagh Brooks and is now curated at UNLV. Human remains collected from this cave site include male, female and juvenile individuals dating from the late prehistoric period. This project documents and analyzes the wide range of taphonomic processes that have affected these remains. These processes include perimortem chop marks, surface bleaching and burning. Based on these observations, violence and partial cremation of some individuals is suggested.

## **Keywords**

Tarahumara, violence, taphonomy

# 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.

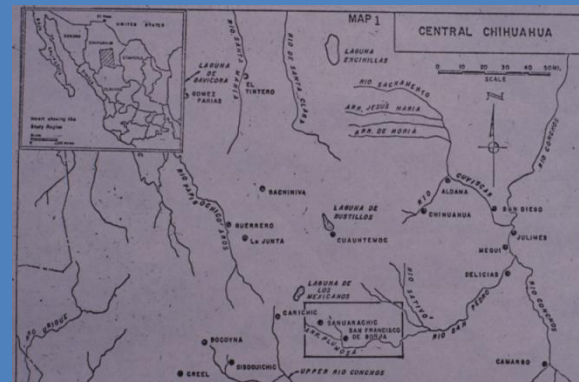


Photo courtesy of Richard and Sheilagh Brooks



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).



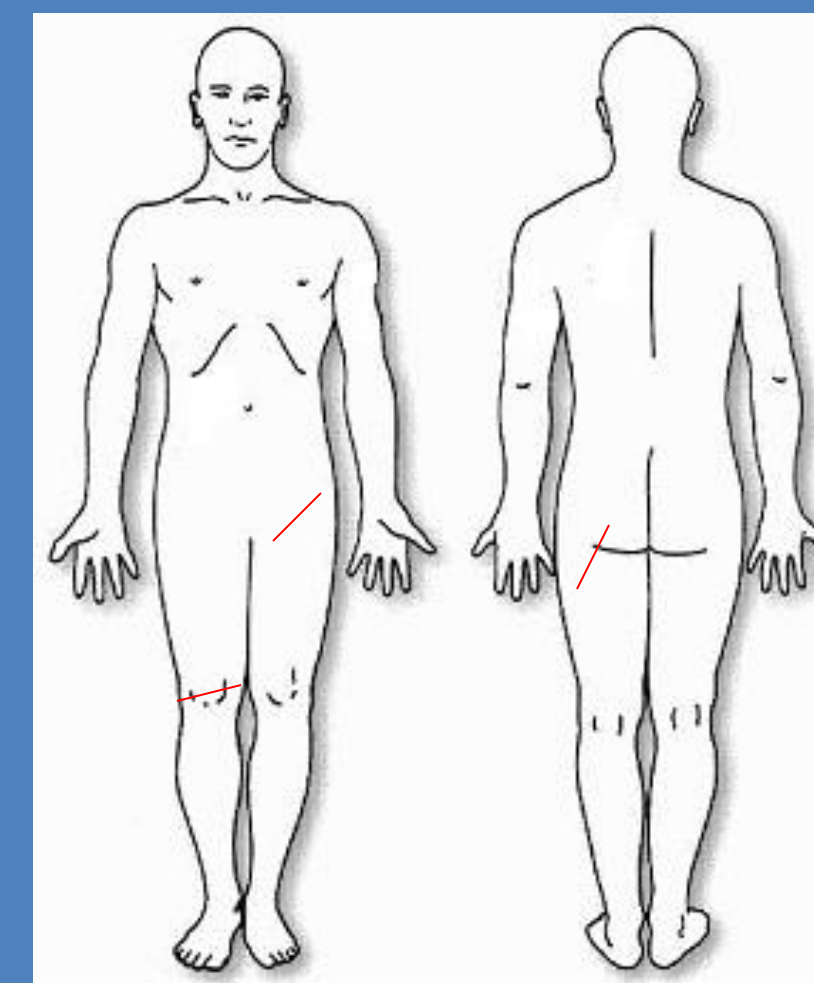
## Weathering:

- 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.



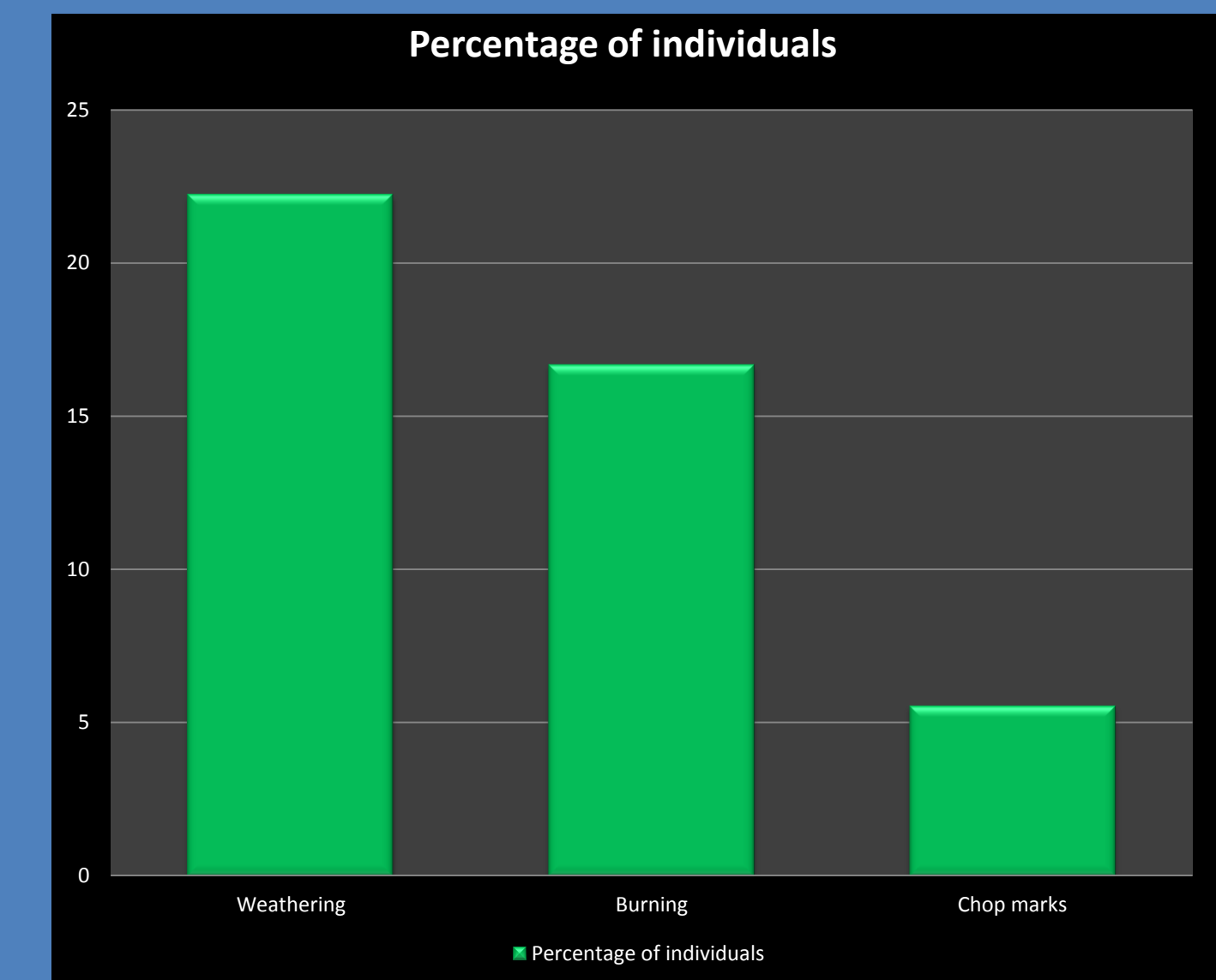
## Chop marks:

- 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.harpendentalipers.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.

## Acknowledgements:

This project would not have been possible if not for the excavation, documentation, and curation of the collection by the late Drs. Richard and Sheilagh Brooks. This research was funded by the Graduate and Professional Student Association at the University of Nevada, Las Vegas.

## Works Cited:

- Ascher R, Clune FJ. 1960. Waterfall Cave, Southern Chihuahua, Mexico. *American Antiquity* 26: 270-274
- Beals RL. 1973. *The Comparative Ethnology of Northern Mexico Before 1750*. Cooper Square Publishers Inc, New York.
- Beals RL. 1933. *The Acaxee: A Mountain Tribe of Durango and Sinaloa*. University of California Press, Berkeley.
- Behrensmeyer AK. 1976. Taphonomic and Ecologic Information from Bone Weathering. *Paleobiology* 4:150-162.
- Bennett WC, Zingg RM. 1976. *The Tarahumara: An Indian Tribe of Northern Mexico*. The Rio Grande Press, Inc. p. 236-251.
- Brooks ST, Brooks RH. 1990. Skeletal Remains from La Cueva de Dos Cuchillos, San Francisco de Borja, Chihuahua, Mexico. In: *Para conocer al hombre: homenaje a Santiago Genovés a 33 años como investigador en la UNAM*. Universidad Nacional Autónoma de México. p. 261-271.
- Buikstra JE, Ubelaker DH. 1994. *Standards for Data Collection from Human Skeletal Remains*. Arkansas Archaeological Survey Research Series No. 44. Fayetteville: Arkansas Archaeological Survey.
- Kelley EA., 1978. The Temple of the Skulls at Alta Vista, Chalchihuites, In: Riley, C.L., Hedrick, B.C., Eds., *Across the Chichimec Sea: Papers in Honor of J. Charles Kelley*. Southern Illinois University Press, Carbondale and Edwardsville, pp. 102-126.
- Lumholtz C. 1903. *Unknown Mexico*. London: MacMillan and Co., Limited.
- Moser CL. 1973. Human Decapitation in Ancient Mesoamerica. *Dumbarton Oaks, Trustees for Harvard University, Washington*.