# 2018 Publications, Conference Presentations, Theses and Dissertations by FAC Faculty and Students and Research Involving FAC Resources

# Publications

Algee-Hewitt BF, Hughes CE, Anderson BE. 2018. Temporal, geographic and identification trends in craniometric estimates of ancestry for persons of Latin American origin. *Forensic Anthropology* 1(1):4-18.

Corcoran KA; Mundorff AZ, White DA, Emch WL. 2018. A novel application of terrestrial LIDAR to characterize elevation change at human grave surfaces in support of narrowing down possible unmarked grave locations. *Forensic Science International* 289:320-328.

Damaso N, Jones KF, Carlson TL, Fleming J, Steadman DW, Jantz LM, Hauther K, Otterstatter LM, Donfack J. 2018. A study of the intrinsic variability and the effect of environmental conditions on the formation of a postmortem root band. *Forensic Science International* 293:63-69. <https://doi.org/10.1016/j.forsciint.2018.09.032>.

Dautartas A, Kenyhercz MW, Vidoli GM, Meadows Jantz L, Mundorff AZ, Steadman DW. 2018. Differential decomposition among pig, rabbit and human subjects. *Journal of Forensic Sciences* 63(6):1673-1683. <https://doi.org/10.1111/1556-4029.13784>

Dawnay, Nick, Robyn Flamson, Martin J. R. Hall, Dawnie W. Steadman. 2018. Impact of sample degradation and inhibition on field-based DNA identification of human remains. *Forensic Science International: Genetics* 37:46-53. <https://doi.org/10.1016/j.fsigen.2018.07.018>

Fojas CL, Kim J, Minsky-Rowland JD, Algee-Hewitt BFB. 2018. Testing inter-observer reliability of the Transition Analysis aging method on the William M. Bass forensic skeletal collection. *American Journal of Physical Anthropol*ogy 165(1):183-193.

Godde K, Thompson MM, Hens SM. 2018. Sex estimation from cranial morphological traits: Use of the methods across American Indians, modern North Americans, and ancient Egyptians. *HOMO – Journal of Comparative Human Biology* 69:237-247.

Godde K, Wilson Taylor RJ, Guttierez C. 2018. Entheseal changes and demographic/health indicators in the upper extremity of modern Americans: Associations with age and physical activity. *International Journal of Osteoarchaeology* 28(3):285-293. <https://doi.org/10.1002/oa.2653>

Gordon, Gwyneth W., Saul, Tiffany B., Steadman, Dawnie, Wescott, Daniel J., Knudson, Kelly. 2018. [Preservation of hair stable isotope signatures during freezing and law enforcement evidence packaging](https://utk-almaprimo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN_sciversesciencedirect_elsevierS2468-1709(18)30030-4&context=PC&vid=01UTK&lang=en_US&search_scope=OneSearch&adaptor=primo_central_multiple_fe&tab=default_tab&query=any,contains,Preservation%20of%20hair%20stable%20isotope%20signatures%20during%20freezing%20and%20law%20enforcement%20evidence%20packaging&sortby=rank&offset=0). *Forensic Chemistry* Vol.11, pp.108-119

Hadi H, and Wilkinson, C. 2018. Estimation and reconstruction of facial creases based on skull crease morphology. *Australian Journal of Forensic Sciences* 50(1), 42-56.

Hendy J, Warinner C, Bouwman A, Collins MJ, Fiddyment S, Fischer R, Hagan R, Hofman CA, Holst M, Chaves E, Klaus L, Larson G, Mackie M, McGrath K, Mundorff AZ, Radini A, Rao H, Trachsel C, Velsko IM, Speller CF. 2018. Proteomic evidence of dietary sources in ancient dental calculus. *Proc. R. Soc. B.* 285(1883):20180977.

Hepner TR, Steadman DW, Hanebrink JR. 2018. Sowing the dead: Massacres and the missing in Northern Uganda. In: Cheryl Anderson and Debra Martin, eds. *Massacres: Bioarchaeological and Forensic Anthropology Approaches.* Gainesville: University of Florida Press. pp136-154.

Junno JA, Niskanen M, Maijanen H, Holt B, Sladek V, Niinimäki S, Berner M, 2018. The effect of age and body composition of body mass estimation of males using the stature/bi-iliac method. *Journal of Human Evolution* 115:122-129.

Katsanis SH, Snyder L, Arnholt K, Mundorff AZ. 2018. Consent process for US-based family reference DNA samples. *Forensic Science International: Genetics*, *32*, pp.71-79.

Keenan SW, Schaeffer SM, Jin VL, DeBruyn JM. 2018. Mortality hotspots: Nitrogen cycling in forest soils during vertebrate decomposition. *Soil Biology and Biochemistry* 121: 165-176.

Langley NR, Dudzik B, Cloutier A. 2018. A decision tree for nonmetric sex assessment from the skull. *Journal of Forensic Sciences* 63(1):31-37.

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| Langley NR, Meadows Jantz L, McNulty S, Maijanen H, Ousley SD, Jantz RL. 2018. Error quantification of osteometric data in forensic anthropology. *Forensic Sci Int.* 2018 Jun; 287:183-189 Epub 2018 Apr 10 PMID: 29698914   DOI: 10.1016/j.forsciint.2018.04.004    |
| Langley NR, Jantz LM, McNulty S, Maijanen H, Ousley SD, Jantz RL. 2018. Data for validation of osteometric methods in forensic anthropology. *Data in Brief*. 2018 Aug; 19:21-28 Epub 2018 May 07 PMID: 29892612   PMCID: 5992973   DOI: 10.1016/j.dib.2018.04.148Langley NR, Jantz LM, McNulty S, Maijanen H, Ousley SD, Jantz RL. Error quantification of osteometric data in forensic anthropology. *Forensic Science International*. 287:183-9. |

Maijanen H, Jeong Y. 2018. Discrepancies between reported and cadaver body size measurements associated with a modern human skeletal collection. *HOMO – Journal of Comparative Human Biology* 69: 86-97.

Milner GR, Boldsen JL, Ousley SD, Getz SM, Weise S, Tarp P, Steadman DW. 2018. Selective mortality in middle-aged American women with Diffuse Idiopathic Skeletal Hyperostosis (DISH). *PLoS ONE* 13(8): e0202283. <https://doi.org/10.1371/journal.pone.0202283>

Mundorff AZ, Amory S, Huel R, Bilić A, Scott AL, Parsons TJ. 2018. An economical and efficient method for postmortem DNA sampling in mass fatalities. *Forensic Science International: Genetics*, *36*, pp.167-175.

Mundorff AZ, Vidoli GM. 2018. Mass disasters. In: Wenda Trevathan (ed.), *The International Encyclopedia of Anthropological Biology* Vol. II. Hoboken, NJ: JohnWiley & Sons, Inc. pp. 975–978.

[Niskanen M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Niskanen%20M%5BAuthor%5D&cauthor=true&cauthor_uid=29223292), [Junno JA](https://www.ncbi.nlm.nih.gov/pubmed/?term=Junno%20JA%5BAuthor%5D&cauthor=true&cauthor_uid=29223292), [Maijanen H](https://www.ncbi.nlm.nih.gov/pubmed/?term=Maijanen%20H%5BAuthor%5D&cauthor=true&cauthor_uid=29223292), [Holt B](https://www.ncbi.nlm.nih.gov/pubmed/?term=Holt%20B%5BAuthor%5D&cauthor=true&cauthor_uid=29223292), [Sladék V](https://www.ncbi.nlm.nih.gov/pubmed/?term=Slad%C3%A9k%20V%5BAuthor%5D&cauthor=true&cauthor_uid=29223292), [Berner M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Berner%20M%5BAuthor%5D&cauthor=true&cauthor_uid=29223292). 2018. Can we refine body mass estimations based on femoral head breadth? *Journal of Human Evolution* 115:112-121.

Ousley SD, Jantz RL, Hefner JT. 2018. From Blumenbach to Howells: The slow, painful emergence of theory through forensic race estimation. In: C.C. Boyd and D.C. Boyd, eds. *Forensic Anthropology: Theoretical Framework and Scientific Basis.* New York: John Wiley and Sons. pp 67-87.

Steadman DW. 2018. Who needs data? I’ve got experience! *Human Biology* 90(1):77-82.

Steadman DW. 2018. Bodies of evidence: The body-as-evidence paradigm in domestic and international forensic anthropology. In: Buikstra JE (ed), *Bioarchaeologists Speak Out - Deep Time Perspectives on Contemporary Issues*. New York: Springer. pp243-255.

Steadman DW, Dautartas A, Kenyhercz MW, Meadows Jantz L, Mundorff AZ, Vidoli GM. 2018. Differential scavenging among pig, rabbit and human subjects. *Journal of Forensic Sciences* 63(6):1684-1691. <https://doi.org/10.1111/1556-4029.13786>

Tuller H. 2018. Translating Forensic Science in Northern Uganda. *Practicing Anthropology* 40(2):6-10.

Wescott DJ, Steadman DW, Miller N, Sauerwein KA, Clemmons C, Gleiber DS, McDoneld C, Meckel L, Bytheway JA. 2018. Validation of the total body score/accumulated degree-day model at three human decomposition facilities. *Forensic Anthropology* Vol 1(3):143-149.

# Conference Presentations

Beasley MM, Lesnik J, McKee H, Steadman DW. 2018. Using Stable Nitrogen Isotope Ratios from Human Muscle Tissue for Postmortem Interval (PMI) Estimation. Southwestern Association of Biological Anthropologists, November 3, 2018, Las Vegas, NV.

Beasley MM, Lesnik J, Perri A. 2018. Putrid, fermented, spoiled, decayed, let’s call the whole thing “off”: consumption of putrid meat by Neanderthals. Mid-Atlantic Bioanthropology Interest Group, Oct 13, 2018, Richmond, VA.

Boyd D, MacKenzie A, Turner-Gilmore B, Vorder Bruegge R, Bruehs W, Walker J. 2018. Observer agreement in the identification and quantification of dorsal hand traits from digital images. Poster presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 21, 2018, Seattle, Washington.

Brandt HM, Nawrocki SP, Latham KE. 2018. An examination of pelvic scarring as a determinant of parturition status. Poster presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 21, 2018, Seattle, Washington.

Bugajski K, Dautartas A, Jantz LM, Steadman DW. 2018. A comparison of insect activity on different carrion types at the Anthropology Research Facility (ARF) in Knoxville, Tennessee. Paper presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 23, 2018, Seattle, Washington.

Caple JM, Byrd JE, Stephan CN. *SkullProfiler*: A simple new capability for the estimation of ancestry and sex from lateral skull photographs. 70th Annual meeting of the American Academy of Forensic Sciences. February19-24, 2018, Seattle, Washington.

Elgerud LMMK, Tuller HH, Komakech WL. 2018. Displacement and Burials in Wartime Acholiland: Archaeological Surveying and Ethnographic Research in Northern Uganda. Paper presented at the 83rd Annual Meeting of the Society for American Archaeology, April 14, Washington D.C.

Emmons, A, Keenan SW, Taylor LS, Davoren J, DeBruyn JM, Phillips G, Bernard E, Mundorff AZ. Microbial ecology and soil geochemistry in a multi-individual grave. Poster presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 23, 2018, Seattle, Washington.

Emmons, AL, Keenan, SW, Mason, A, Holand, K, Campagna, SR, Davoren, J, DeBruyn, JM, Mundorff, AZ. 2018. Edaphic and biogenic influences of skeletal DNA degradation in a multi-individual grave. 17th International Symposium on Microbial Ecology, ISME, Leipzig, Germany.

Hauther K, Boyd DA, Cawley W, Sauerwein K, Jeong Y. 2018. Seasonal and spatial variation in local weather station data from Knoxville, Tennessee. Poster presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 23, 2018, Seattle, Washington.

Horbaly HE. 2018. Associations between sexually dimorphic skeletal traits and body size: an exploratory analysis. American Association of Physical Anthropologists 87th Annual Meeting*.* April 12, 2018, Austin, Texas.

Jeong Y, Hauther K. 2018. When do blowflies lay eggs on human bodies? North American Forensic Entomology Association Meeting July 23-25, 2018, in Orlando, Florida.

Sauerwein S, Upton S, Albee E, Duncan A, Steadman DW, Bolme D. 2018. The effects of scanner performance on campfire ability and identification success on postmortem biometric data. Paper presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, February 23, 2018, Seattle, Washington.

Stoyanova DK, Kim J, Algee-Hewitt DFB, Slice DE. 2018. A study on the asymmetry between the left and right human pubic symphysis for age-at-death estimation based on 3d laser scans and computational methods. Paper presented at the NIJ Forensic Science Research and Development Symposium, 70th Annual Meeting of the American Academy of Forensic Sciences, February 20, 2018, Seattle, Washington.

Winburn A. 2018.  Validation of the acetabulum as a skeletal indicator of age at death.  Oral presentation at the 70th annual meeting of the American Academy of Forensic Sciences, February 23, 2018, Seattle, WA.

Yan W, Mockus A, Saul TB, Steadman DW. 2018. Curating forensic image collection using machine learning. Paper presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, Seattle, WA, February 22, 2018.

Yerka S, Devlin JB. 2018. The incorporation of 3D photogrammetry and geophysics in the recovery of a mass grave: six years of experiential learning. Paper presented at the 70th Annual Meeting of the American Academy of Forensic Sciences, Seattle, WA, February 22, 2018.

# Theses and Dissertations

Berezowski, Victoria. Evaluating the Morphological and Metric Sex of the Human Skull Using 3d Technology. Masters Thesis, Department of Anthropology, University of Toronto, 2018.

Dautartas, Angela. A Comparison of Human and Domestic Pig Decomposition Using Multivariate Methods. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2018.

Kleeschulte, Megan. NAGPRA's Broader Impacts: Assessing the Variety of Procedures followed by Medical Examiner and Coroner Offices for the Analysis and Disposition of Human Skeletal Remains. Masters Thesis, Department of Anthropology, University of Tennessee, 2018.

Lopez, Maria Alexandra Cerquera. The Law Of Justice And Peace And The Disappeared: A Critical Evaluation Of Forensic Intervention As A Tool Of Transitional Justice In Colombia. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2018.

Sauerwein, Kelly. Perceptions and Cognitive Bias in Decomposition Scoring Methods in Forensic Anthropology. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2018.

Watson, Jenna. Positive Identification vis Frontal Sinus Morphology: A Geographic Information Systems (GIS) Approach. Masters Thesis, Department of Anthropology, University of Tennessee, 2018.