

Dr. Erik N. Johanson

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Appointments

Assistant Professor, Department of Geosciences, Florida Atlantic University, 2017–present
Lecturer, Department of Geography, University of Tennessee, 2016–2017

Education

PhD Geography, University of Tennessee, Knoxville, 2013–2016
Dissertation: *Reconstructing Late Holocene Fire, Agriculture, and Climate from Sediment Records in Costa Rica and the Dominican Republic*
MA Anthropology, University of Tennessee, Knoxville, 2008–2011
Thesis: *Predictive Modeling in Western Louisiana: Prehistoric and Historic Settlement Patterning in the Kisatchie National Forest*
BA Anthropology, University of Tennessee, Knoxville, 2003–2008

Publications

- Johanson, Erik N.**, Sally P. Horn, Chad S. Lane, Maureen Sánchez, Jacob Cecil. Fire History Across the Little Ice Age in Southern Pacific Costa Rica. Submitted to the *Journal of Paleolimnology*.
- Johanson, Erik N.**, Sally P. Horn, Chad S. Lane. Precolumbian Agriculture, Fire, and Spanish Contact: A 4300-year record from Laguna Los Mangos, Costa Rica. Submitted to *The Holocene*.
- Johanson, Erik N.**, Sally P. Horn, Chad S. Lane. Identifying Periods of Aridity in a 4000-year Sediment Record from a Highland Bog in the Dominican Republic. Submitted to *Palaeogeography, Palaeoclimatology, Palaeoecology*.
- 2018 Horn, Sally P., **Erik N. Johanson**, Kurt A. Haberyan, Matthew S. Boehm, Jessie L. Johanson, Maureen Sánchez P., and Mario Hernández V. Initial limnological observations at five small lakes in southern Pacific Costa Rica. Cuadernos de Investigación UNED Vol. 10(1): 119-134.
- 2012 **Johanson, Erik N.** *Predictive Modeling in Western Louisiana: Prehistoric and Historic Settlement within the Kisatchie National Forest*. Special Publication Number 1. Kisatchie National Forest, Louisiana.
- 2012 Driskell, Boyce, Jeremy Sweat, Katherine McMillan, Stephen Carmody, Phyllis Rigney, and **Erik N. Johanson**. Stone Implements from Cherokee Contexts at the Townsend Sites. In *The Cherokees of Tuckaleeche Cove*, edited by Jon Bernard Marcoux, pg. 137–156. Museum of Anthropology, University of Michigan memoirs; number 52.

- 2010 Anderson, David G., D. Shane Miller, Stephen J. Yerka, J. Christopher Gillam, **Erik N. Johanson**, Derek T. Anderson, Albert C. Goodyear, and Ashley M. Smallwood. PIDBA (Paleoindian Database of the Americas) 2010: Current Status and Findings. *Archaeology of Eastern North America*, 38:63–90.

Manuscripts in Preparation

Johanson, Erik N., Sally P. Horn, Chad S. Lane, Matthew S. Boehm, Jacob Cecil*, Luke Blentlinger*. A Multiproxy Reconstruction of the Quebrada Estero Wetland, Costa Rica. In preparation for submission to *Journal of Paleolimnology*.

Johanson, Erik N., Sally P. Horn, Matthew T. Kerr. A High-Resolution Fire History of Laguna Los Mangos, Costa Rica. In preparation for submission to *The Holocene*.

Reports

- 2015 Horn, Sally P., Maria Caffrey, **Erik N. Johanson**. Storm Surge Modeling and Ecosystem Services at Cape Lookout National Seashore Final Technical Report. Report submitted to USGS and NPS in Denver, Colorado. PR # 0020049716. University of Tennessee, Knoxville.
- 2014 Kerr, Matthew T., Sally P. Horn, Chad S. Lane, **Erik N. Johanson**. Report on Stable Carbon and Nitrogen Isotope Analysis of 6 Pottery Surface Residue Samples and 1 Soil Sample from Site L72NC, Costa Rica. University of Tennessee, Knoxville.
- 2014 Kerr, Matthew T., Sally P. Horn, Chad S. Lane, **Erik N. Johanson**. Report on Stable Carbon and Nitrogen Isotope Analysis of 3 Pottery Surface Residue Samples from Site C304AC, Costa Rica. University of Tennessee, Knoxville.
- 2012 **Johanson, Erik N.** *Predictive Modeling in Western Louisiana: Prehistoric and Historic Settlement within the Kisatchie National Forest*. Report Number R2010080600007. Kisatchie National Forest, Louisiana.
- 2011 Driskell, Boyce, Katherine M. Barry, Jeremy Sweat, Edward W. Wells III, Stephen B. Carmody, Phyllis Rigney, and **Erik N. Johanson**. Chapter 7: Stone Implements and Artifacts. In *Archaic and Woodland Occupations in Tuckaleechee Cove, Blount County, Tennessee* by Kandace D. Hollenbach and Stephen J. Yerka. Report submitted to the Federal Highway Administration and the Tennessee Department of Transportation Nashville, Tennessee. Archaeological Research Laboratory, University of Tennessee, Knoxville.
- 2011 Shannon D. Koerner, Lynne P. Sullivan, and **Erik N. Johanson**. Chapter 3: Introduction to the Mississippian Remains from Tuckaleechee Cove. In *The Mississippian Period Occupation of Tuckaleechee Cove, Blount County, Tennessee* by Shannon D. Koerner and Lynne P. Sullivan. Report submitted to the Federal Highway Administration and the Tennessee Department of Transportation Nashville, Tennessee. Archaeological Research Laboratory, University of Tennessee, Knoxville.
- 2011 Driskell, Boyce, Jeremy Sweat, Katherine McMillan Barry, Stephen Carmody, Phyllis Rigney, and **Erik N. Johanson**. Chapter 5: Stone Implements and Other Artifacts. In *The Mississippian Period Occupation of Tuckaleechee Cove, Blount County, Tennessee* by Shannon D. Koerner and Lynne P. Sullivan. Report submitted to the Federal Highway Administration and the Tennessee Department of Transportation Nashville, Tennessee. Archaeological Research Laboratory, University of Tennessee, Knoxville.

- 2010 Driskell, Boyce, Jeremy Sweat, Katherine McMillan, Stephen Carmody, Phyllis Rigney, and **Erik N. Johanson**. Chapter 8: Stone Implements from Cherokee Contexts at the Townsend Sites. In *The Cherokees of Tuckaleechee Cove* by Jon Marcoux. Report submitted to the Federal Highway Administration and the Tennessee Department of Transportation Nashville, Tennessee. Archaeological Research Laboratory, University of Tennessee, Knoxville.

Grants and Awards (\$500,868)

- 2017 SGA Open Education Award, University of Tennessee
 2017 NSF (GSS) Developing a Network of n-Alkane Hydrogen Isotope Records in Costa Rica to Elucidate Drivers and Impacts of Holocene Droughts; \$421,992 (PI SP Horn, Co-PIs DW Gamble and CS Lane, Faculty Associate EN Johanson).
 2016 Stewart McCroskey Memorial Research Fund, University of Tennessee, \$450
 2015 Yates Dissertation Fellowship, University of Tennessee, \$15,000
 2015 Science Alliance Fellowship Award, 2014–2015 Academic Year, UT, \$3,000
 2015 Outstanding Teaching Associate Award, Department of Geography, University of Tennessee
 2015 University of Tennessee Graduate Student Senate Travel Award, \$650
 2015 University of Tennessee Undergraduate Research Summer Grant (Jacob Cecil), \$2,000
 2014 AAG Biogeography Specialty Group Graduate Student Research Grant (PhD), \$1,000
 2014 AAG Paleoenvironmental Change Specialty Group Student Research Grant (PhD), \$200
 2014 Geological Society of America Research Grant, \$900
 2014 Stewart McCroskey Memorial Research Fund, University of Tennessee, \$500
 2014 Quest Scholar (*December*), University of Tennessee
 2014 Science Alliance Fellowship Award, 2013–2014 Academic Year, UT, \$1,500
 2014 Fieldwork Excellence Award, Department of Geography, University of Tennessee
 2014 University of Tennessee Graduate Student Senate Travel Award, \$900
 2014 Sea Level Rise Storm Surge Modeling USGS/NPS (PIs: Sally Horn and Maria Caffrey), \$18,000
 2013 Student Publication Award, Department of Geography, University of Tennessee
 2012 Kisatchie National Forest Modeling Contract (PI: David Anderson), \$34,776

Teaching

Undergraduate:

Natural Hazards, Climate, & Society (EVR 4112), Florida Atlantic University
 Weather and Climate (MET 2010), Florida Atlantic University
 World Geography (GEA 2000), Florida Atlantic University

Graduate:

Paleoenvironmental Reconstruction (EVR 6115), Florida Atlantic University
 Past Landscapes and People (GEO 6930), Florida Atlantic University

Past Teaching

Weather, Climate, & Climate Change (GEOG 131), University of Tennessee, 2014–2016
 World Geography (GEOG 101), University of Tennessee, 2014–2017
 People and the Environment (GEOG 345), University of Tennessee, 2016–2017

Student Committees (* indicates committee chair)

7. *Friedel, Taber. Late Holocene Environmental Change, Climate Stress, and Pre-Columbian Agriculture in the Central Valley, Costa Rica. PhD in Geosciences, Florida Atlantic University, in progress.
6. *Watson, Donald. Reconstructing Late-Holocene Hyroperiod and Fire History in the Florida Everglades. MS in Geosciences, Florida Atlantic University, in progress.
5. *Garzon-Oechsle, Andres. Ancient settlement pattern analysis and landscape use of people in pre-contact coastal Ecuador. PhD in Geosciences, Florida Atlantic University, in progress.
4. Uperty, Sudan. Farming Household's Adaptive Capacity to Changes in Food Systems. PhD in Geosciences, Florida Atlantic University, in progress.
3. Endicott, Jessica. Paleoclimate Record in South Florida. MS in Geosciences, Florida Atlantic University, in progress.
2. Carroll, Robert. Assessing Sr/Ca Paleotemperature Calibration Techniques for Subtropical Western Corals Using *Pseudodiploria strigose*. MS in Geosciences, Florida Atlantic University, Fall 2018.
1. *Cecil, Jacob. Fire History from Charcoal in the Sediments of the Quebrada Estero Wetland, Costa Rica. Undergraduate Honors Thesis in Geography (*co-chair with Sally Horn*), University of Tennessee, Spring 2017.

Mentorship of Undergraduate Students

Undergraduate Research Experience (GEOG 494), University of Tennessee, 2014–2016, 12 students
Sediment core sampling/documentation; macroscopic charcoal; XRF; stable isotopes; loss on ignition

Presentations and Talks (* indicates student)

- 2019 **Johanson, Erik N.**, Mathew T. Kerr, Sally P. Horn, Luke R. Blentlinger, Chad S. Lane. A 4,200-year record of fire history from the southern Pacific Costa Rica lowlands. Paper presented at the annual meeting of the American Association of Geographers in Washington DC.
- 2019 Yanuskiewicz, Elizabeth, Chad S. Lane, **Erik N. Johanson**, Mathew T. Kerr, and Sally P. Horn. Compound-Specific Stable Carbon Isotope Analysis of Vegetation and Land-Use Change from Laguna Los Mangos, Costa Rica. Paper presented at the annual meeting of the American Association of Geographers in Washington DC.
- 2019 **Johanson, Erik N.** Agriculture, Drought, and Fire: Reconstructing Past Environments and Climates to Inform the Present. Invited, Institute for Learning in Retirement, Boca Raton, Florida, January 14, 2019.
- 2018 **Johanson, Erik N.**, Sally P. Horn, Chad S. Lane, and Jacob A. Cecil*. Fire History Across the Little Ice Age in Southern Pacific Costa Rica. Poster presented at the annual meeting of the American Association of Geographers in New Orleans, LA.
- 2018 **Johanson, Erik N.** Environmental Change, Climate, and People Across the Late Holocene. Invited, Marine Science seminar, Department of Biological Sciences, Florida Atlantic University, January 19, 2018.

- 2018 Horn, Sally P., **Erik N. Johanson**, Kurt A. Haberyan, Mathew S. Boehm, Jessie L. Johanson, Maureen Sánchez P., Mario Hernández V. Limnological Observations at Five Costa Rican Lakes. Paper presented at the 3rd biennial Geography Symposium: Mapping Outside the Lines: Geography as a Nexus for Interdisciplinary and Collaborative Research, 15–16 February 2018 in Knoxville, TN.
- 2017 Cecil*, Jacob A., Sally P. Horn, **Erik N. Johanson**, Mathew S. Boehm, and Luke R. Blentlinger*. Late Holocene Fire History from Wetland Sedimentary Charcoal in the Central Valley of Costa Rica. Poster presented at the annual meeting of the SouthEastern Division of the American Association of Geographers in Starkville, MS.
- 2017 Blentlinger,* Luke R., Sally P. Horn, **Erik N. Johanson**, Matthew T. Kerr, Chad S. Lane, Mathew S. Boehm, and Jacob A. Cecil*. Proxy Analyses of Wetland Sediments in Costa Rica. Poster presented at the annual meeting of the SouthEastern Division of the American Association of Geographers in Starkville, MS.
- 2017 Blentlinger,* Luke R., Sally P. Horn, **Erik N. Johanson**, Matthew T. Kerr, Chad S. Lane, and Mathew S. Boehm. Reconstructing Past Environments in Costa Rica through Analyses of Wetland Sediments. Poster presented at Discovery Day Undergraduate Research, University of Tennessee.
- 2017 **Johanson, Erik N.**, Sally P. Horn, and Chad S. Lane. Pre-Columbian Agriculture, Fire, and Spanish Contact: A 4300-year record from Laguna Los Mangos, Costa Rica. Invited paper presented at the annual meeting of the American Association of Geographers in Boston, MA.
- 2017 Horn, Sally P., Mathew S. Boehm, **Erik N. Johanson**, Elizabeth MacLennan, and Chad S. Lane. A New Sediment Record from the Blue Ridge Mountains of North Carolina. Invited paper presented at the annual meeting of the American Association of Geographers in Boston, MA.
- 2017 Horn, Sally P., Chad S. Lane, **Erik N. Johanson**, Maureen Sánchez P., Zachary P. Taylor and Matthew T. Kerr. Isótopos de Carbono Estables en los Sedimentos Lacustres en Costa Rica como Indicador de la Deforestación y el Cultivo [Stable Carbon Isotope Ratios in Costa Rican Lake Sediments as a Proxy for Forest Clearance and Crop Cultivation]. XI Congreso de la Red Centroamericana de Antropología [XI Congress of the Central American Anthropology Network], 27 February–3 March 2017, San José, Costa Rica.
- 2017 **Johanson, Erik N.** Environmental Change, Climate, and People Across the Late Holocene. Invited, Department of Geography and the Environment, California State University, Fullerton, January 31, 2017.
- 2017 **Johanson, Erik N.** Environmental Change, Climate, and People Across the Late Holocene. Invited, Department of Geosciences, Florida Atlantic University, January 27, 2017.
- 2016 Horn, Sally P., Maureen Sánchez, Chad S. Lane, Zack Taylor, Matthew Kerr, **Erik N. Johanson**, and Jacob Cecil. Late Holocene Fires in Costa Rica: Patterns and Drivers. Invited paper presented at the annual meeting of the American Association of Geographers, San Francisco.
- 2015 **Johanson, Erik N.** Environmental Change Across the Holocene: A Research Introduction. Invited, Department of Geography and Geology, Sam Houston State University, December 3, 2015.
- 2015 Cecil*, Jacob A., **Erik N. Johanson**, and Sally P. Horn. Agricultural Practices Around Laguna Danta, Costa Rica: An 800 Year Reconstruction Based Upon Macroscopic Charcoal Analysis. Poster presented at Discovery Day Undergraduate Research, University of Tennessee.

- 2015 **Johanson, Erik N.**, Sally P. Horn, and Chad S. Lane. Late Holocene Paleoenvironments and Human-Environment Interactions from Southern Pacific Costa Rica: Two New Records. Invited poster presented at the annual meeting of the American Association of Geographers, Chicago, Illinois.
- 2014 **Johanson, Erik N.**, Mathew S. Boehm, and Sally P. Horn. Stable Carbon and Nitrogen Isotope Analysis as an Indicator of Late-Holocene Aridity in the Valle de Bao, Cordillera Central, Dominican Republic. Invited paper presented at the annual meeting of the Association of American Geographers in Tampa, FL.
- 2013 **Johanson, Erik N.** Using Predictive Modeling to Study Archaeological Site Location and Settlement Patterns in the Southeastern United States. Invited, Department of Archaeology, University of Costa Rica, June 18, 2013.
- 2013 **Johanson, Erik N.** and Mathew S. Boehm. Wallowing in Konza: $\delta^{15}\text{N}$ variability in Vernonia. Stable Isotopes in the Paleoenvironment Workshop, Kansas State University, May 27–31, 2015.
- 2011 **Johanson, Erik N.** Predictive Modeling in Western Louisiana: Prehistoric and Historic Settlement Patterning in the Kisatchie National Forest. Paper presented at the annual meeting of the Southeastern Archaeological Conference in Jacksonville, FL.
- 2010 Anderson, David G., D. Shane Miller, Tom Pertierra, Derek Anderson, Thad Bissett, Stephen Carmody, Tracy Hadlett, **Erik N. Johanson**, Ashley M. Smallwood, and Sarah Walters. Cumberland River/Midsouth Paleoindian Survey Project. Paper presented at the 67th Annual meeting of the Southeastern Archaeological Conference, Lexington, KY.
- 2010 **Johanson, Erik N.**, David G. Anderson, D. Shane Miller, Stephen J. Yerka, Derek T. Anderson, J. Christopher Gillam, and Ashley Smallwood. PIDBA: Challenges Related to the Curation and Dissemination of Paleoindian Data at a Hemispheric Scale. Paper presented at the annual meeting of the Society for American Archaeology in St. Louis, MO (Invited Session).
- 2010 Miller, D. Shane, Joseph A.M. Gingerich, and **Erik N. Johanson**. Ambiguous Chronologies and Biface Morphology: Examining Spatial and Temporal Trends in Eastern Fluted Points. Paper presented at the annual meeting of the Society for American Archaeology in St. Louis, MO.
- 2009 **Johanson, Erik N.**, David G. Anderson, D. Shane Miller, Stephen J. Yerka, Derek T. Anderson, J. Christopher Gillam, and Ashley Smallwood. PIDBA: The State of the Database. Paper presented at the annual meeting of the Southeastern Archaeological Conference in Mobile, AL.
- 2009 Anderson, David G., D. Shane Miller, Derek T. Anderson, Stephen J. Yerka, J. Christopher Gillam, **Erik N. Johanson**, and Ashley Smallwood. Paleoindians in North America: Evidence from PIDBA (Paleoindian Database of the Americas). Poster presented at the annual meeting of the Society for American Archaeology in Atlanta, GA.
- 2008 Anderson, David G., Scott C. Meeks, D. Shane Miller, Derek T. Anderson, Stephen J. Yerka, J. Christopher Gillam, Albert C. Goodyear, **Erik N. Johanson**, and Allen West. The Effect of the Younger Dryas on Paleoindian Occupations in Eastern North America: Evidence from Artifactual, Pollen, and Radiocarbon Records. Poster presented at the American Geophysical Union, San Francisco, CA.
- 2007 Anderson, David G., J. Christopher Gillam, D. Shane Miller, **Erik N. Johanson**, Jason O'Donoghue, Michael K. Faught, and Stephen J. Yerka. Paleoindian Research in the Southeast: Examples Using PIDBA (Paleoindian Database of the Americas). Paper presented at the annual meeting of the Southeastern Archaeological Conference in Knoxville, TN.

Guest Lectures

- 2015 University of Tennessee, Geography 530, Pollen, Microfossils, and Quaternary Research
- 2015 University of Tennessee, Geography 333, Climate Change & Human Response
- 2015 University of Tennessee, Geography 131 Honors, Paleoenvironmental Lab Tour
- 2015 South College, Geography 1010, Human-Environment Interaction
- 2014 University of Tennessee, Geography 131
- 2013 University of Tennessee, Geography 132

Reviewer

Economic Botany, Atmosphere

Professional Service

- Director, Paleoenvironmental Change Specialty Group of the AAG, 2018–2021
- Faculty, Environmental Sciences Program, Florida Atlantic University, 2018–present
- Member, Harbor Branch Oceanographic Institute, Florida Atlantic University, 2018–present
- Undergraduate Programs Committee, Geosciences, Florida Atlantic University, 2018–present
- Geosciences Scholarship Committee, Florida Atlantic University, 2018–present
- Geosciences Library Representative, Florida Atlantic University, 2018–present

- Faculty Advisor to Undergraduate Club Geography, University of Tennessee, 2016–2017
- Undergraduate Program Committee member, University of Tennessee, 2016–2017
- World Geography Course Coordinator, UT Dept. of Geography, 2016–2017
- Reviewer for Master's-Level Research Grant Proposals, AAG Biogeography Specialty Group, 2015
- President, UT Graduate Association of Research Geographers, President, 2014–2015
- Volunteer, Geography Awareness Week, 2014–2017
- Faculty Awards Committee Chair, UT Dept. of Geography, 2013–2016
- Student Committee Officer, Southeastern Archaeological Conference, 2009–2012

Outreach Activities

- Institute for Learning in Retirement, Boca Raton, FL
Spring 2019 Invited research presentation. (January 14, 2019)

- Unity School (Primary), Delray Beach, FL
Fall 2018 What do Geographers do? (Invited, October 8, 2018, with Taber Friedel)

- Geography Awareness Outreach (*Tennessee Geographic Alliance*)
Fall 2015 UT Geography Awareness Week Committee and GIS Day
Fall 2014 UT Geography Awareness Week Committee

- Térraba Indigenous Reservation & Pilas, Costa Rica
2014–2015 Térraba Indigenous Community Council with Sally Horn and Maureen Sanchez
2014 Pilas Community Meeting Research Proposal with Sally Horn

- Thackston School (Primary), Knoxville, TN
Spring 2014 Fossils: Revealing the Past. Elementary Outreach Lecture and Activity

- South Doyle Middle School, Knoxville, TN
Spring 2015 Science Olympiads Touring the Paleoenvironmental Labs at UT, Sediment Coring

Fall 2013 Research on Past Climates and Environments. Science Outreach Lectures

Professional Workshops Attended

- Smart Book Online Text Book Workshop (2015)
- Syllabus Workshop at the University of Tennessee (2015)
- Chironomid Workshop at the University of Tennessee (2013)
- Stable Light Isotopes in the Paleoenvironment Course at Kansas State University (2013)

Professional Memberships

American Association of Geographers
Southeastern Division of the Association of American Geographers
Gamma Theta Upsilon – International Geographical Honor Society
Geological Society of America
Society for American Archaeology