

SALLY P. HORN

Education

University of California, Berkeley	Geography	B.A. 1980
University of California, Berkeley	Geography	M.A. 1983
University of California, Berkeley	Geography	Ph.D. 1986

Academic Appointments

Professor, Department of Geography, University of Tennessee, 2000–present

(Associate Professor, 1993–2000; Assistant Professor, 1987–1993)

Adjunct Professor, Department (formerly Program) of Ecology and Evolutionary Biology, 1988–present

Adjunct Professor, Department of Botany, 1992–2004 (until department merged with Ecology)

Visiting Lecturer, Department of Geography, University of California, Berkeley, 1986–1987

Research Interests

Paleolimnology; Fire history and fire ecology; Quaternary vegetation and climate change in the circum-Caribbean region and southeastern USA; prehistoric and modern human influences on vegetation; páramo ecosystems.

Honors and Awards

Chancellor's Award for Excellence in Advising, 2018.

Outstanding Graduate Teaching Award, Department of Geography, University of Tennessee, 2016, 2017, 2018.

Distinguished Senior Research Award, College of Arts and Sciences, University of Tennessee, 2015.

Lifetime Achievement Award, SE Division of the American Association of Geographers, 2014.

James J. Parsons Distinguished Career Award from the Biogeography Specialty Group of the American Association of Geographers, 2014.

Betty Lynn Hendrickson Professorship, College of Arts & Sciences, Univ. Tennessee, 2013–15

Senior Teaching Award, College of Arts and Sciences, University of Tennessee, 2013.

Barry Bishop Distinguished Career Award from the Mountain Geography Specialty Group of the American Association of Geographers, 2010.

Chancellor's Professor, University of Tennessee, 2008–present.

Faculty Academic Outreach Award, Arts and Sciences, University of Tennessee, 2008.

Betty Lynn Hendrickson Professorship, College of Arts & Sciences, Univ. Tennessee, 2007-09

Elected as Fellow, Section on Geography and Geology, American Association for the Advancement of Science, 2003.

Provost's Award for Research and Creative Achievement, University of Tennessee, 2003.

Carl O. Sauer Distinguished Scholarship Award, Conference of Latin Americanist Geographers, 2002.

Science Alliance Awards, University of Tennessee (8 awards), 1993–2001.

Fellow, Center for Undergraduate Excellence, University of Tennessee, 2000, 2001.

Selected Publications (2000–2018)

Books

- Lafon, C.W., Naito, A.T., Grissino-Mayer, H.D., Horn, S.P., Waldrop, T.A. 2017. *Fire History of the Appalachian Region: A Review and Synthesis*. General Technical Report SRS-219. Asheville, North Carolina: U.S. Department of Agriculture, Forest Service, Southern Research Station. 97 p.
- Kappelle, M. and Horn, S.P. (Eds.). 2005. *Páramos de Costa Rica*. Santo Domingo de Heredia, Costa Rica: Instituto Nacional de Biodiversidad, INBio.

Chapters

- Horn, S.P. 2017. Lakes and Limnology. In Richardson, D., Castree, N., Goodchild, M.F., Kobayashi, A., Liu, W., and Marston, R.A. (Eds.), *The International Encyclopedia of Geography: People, the Earth, Environment, and Technology*. John Wiley and Sons. 8 p. doi: 10.1002/9781118786352.wbieg0105/
- Horn, S.P. and Haberyan, K.A. 2016. Lakes of Costa Rica. Pp. 656–682 in Kappelle, M. (Ed.), *Costa Rican Ecosystems*. Chicago: The University of Chicago Press.
- Kappelle, M. and Horn, S.P. 2016. The *Páramo* Grasslands of Costa Rica's Highlands. Pp. 492–523 in Kappelle, M. (Ed.), *Costa Rican Ecosystems*. Chicago: The University of Chicago Press.
- Horn, S.P., and Underwood, C.A. 2014. Methods for the Study of Soil Charcoal as an Indicator of Fire and Forest History in the Appalachian Region, U.S.A. Pp. 104–109 In Waldrop, T.A. (Ed.), *Proceedings, Wildland Fire in the Appalachians: Discussions among Managers and Scientists*. General Technical Report SRS-199. Asheville, North Carolina: U.S. Department of Agriculture, Forest Service, Southern Research Station.
- Horn, S.P., and Kappelle, M. 2009. Fire in *Páramo* Ecosystems in Central and South America. Pp. 505–539 In Cochrane, M.A. (Ed.), *Tropical Fire Ecology: Climate Change, Land Use and Ecosystem Dynamics*. Berlin, Germany: Springer-Praxis.
- Horn, S.P. 2007. Late Quaternary Lake and Swamp Sediments: Recorders of Climate and Environment. Pp. 423–441 In Bundschuh, J. and Alvarado I., G.E. (Eds.), *Central America: Geology, Resources, Hazards*. Volume 1. Leiden, The Netherlands: Taylor & Francis/Balkema.
- Horn, S.P. 2006. Pre-Columbian Maize Agriculture in Costa Rica: Pollen and Other Evidence from Lake and Swamp Sediments. Pp. 367–380 In Staller, J., Tykot, R., and Benz, B. (Eds.), *Histories of Maize: Multidisciplinary Approaches to the Prehistory, Biogeography, Domestication, and Evolution of Maize*. San Diego, CA: Elsevier Press.
- Sanford, Jr., R.L. and Horn, S.P. 2000. Holocene Rain-forest Wilderness: A Neotropical Perspective on Humans as an Exotic, Invasive Species. Pp. 168–173 In Cole, D.N., and McCool, S.F. (Eds.), *Proceedings: Wilderness Science in a Time of Change*, Vol. 3. Ogden, Utah: U.S.D.A, Forest Service, Rocky Mountain Research Station.

Articles

- Horn, S.P., Boehm, M.S., and Ballard, J.P. In press. An Improved Chronology for the Microscopic Charcoal and Pollen Records from Anderson Pond, Tennessee, USA. *Palynology*.
- Horn, S. P., Johanson, E. N., Haberyan, K. A., Boehm, M. S., Johanson, J. L., Sánchez P., M., and Hernández V., M. 2018. Initial Limnological Observations at Five Small Lakes in Southern Pacific Costa Rica. *Cuadernos de Investigación UNED / UNED Research Journal* 10(1): 119–134.
- Kerr, M.T., Horn, S.P., Grissino-Mayer, H.D., and Stachowiak, L.A. 2018. Annual Growth Zones in Stems of *Hypericum irazuense* (Guttiferae) in the Costa Rican Páramos. *Physical Geography* 39(1): 38–50.
- Driese, S.G., Horn, S.P., Ballard, J.P., Boehm, M.B., and Li, Z. 2017. Micromorphology of Late Pleistocene sediments and a New Interpretation of the Holocene Chronology at Anderson Pond, Tennessee, U.S.A. *Quaternary Research* 87: 82–95.
- Wu, J., Porinchu, D.F, and Horn, S.P. 2017. A Chironomid-based Reconstruction of Late Holocene Climate and Environmental Change for Southern Pacific Costa Rica. *The Holocene* 27: 73–84.
- Ballard, J.P., Horn, S.P., and Li, Z.-H. 2017. A 23,000-year Microscopic Charcoal Record from Anderson Pond, Tennessee, USA. *Palynology* 41: 216–219.
- Horn, S.P. 2016. Incendios en los Pinares de las Zonas Montañosas de la República Dominicana: La Visión de Fondo. (Fire in Highland Pine Forests of the Dominican Republic—The Long View.) *Revista Verdor* [Academy of Sciences of the Dominican Republic] 8(2): 102–109.
- Lane, C.S., Horn, S.P., Taylor, Z.P., and Kerr, M.T. 2016. Correlation of Bulk Sedimentary and Compound-Specific $\delta^{13}\text{C}$ Values Indicate Minimal Pre-Aging of n-Alkanes in a Small Tropical Watershed. *Quaternary Science Reviews* 145: 238–242.
- Wu, J., Porinchu, D., Horn, S.P., and Haberyan, K.A. 2015. The Modern Distribution of Chironomid Sub-fossils in Costa Rica and the Development of a Regional Chironomid-based Temperature Inference Model. *Hydrobiologia* 742: 107–127.
- Caffrey, M.A., and Horn, S.P. 2015. Long-Term Fire Trends in Hispaniola and Puerto Rico from Sedimentary Charcoal: A Comparison of Three Records. *The Professional Geographer* 67(2): 229–241.
- Caffrey, M.A., Horn, S.P., Orvis, K.H., and Haberyan, K.A. 2015. Holocene Environmental Change at Laguna Saladilla, Coastal North Hispaniola. *Palaeogeography, Palaeoclimatology, Palaeoecology* 436: 9–22.
- Taylor, Z.P., Horn, S.P., and Finkelstein, D. B. 2015. Assessing Intra-basin Spatial Variability and Isotopic Signatures in the Sediments of a Small Neotropical Lake. *Journal of Paleolimnology* 54: 395–411.
- Harley, G.S., Grissino-Mayer, H.D., Horn, S.P., and Bergh, C. 2014. Fire Synchrony and the Influence of Pacific Climate Variability on Wildfires in the Florida Keys, United States. *Annals of the Association of American Geographers* 104(1): 1–19.

- Lane, C.S., Horn, S.P., and Kerr, M.T. 2014. Beyond the Mayan Lowlands: Impacts of the Terminal Classic Drought in the Caribbean Antilles. *Quaternary Science Reviews*, 86: 89–98.
- Harley, G.L., Grissino-Mayer, H.D., and Horn, S.P. 2013. Fire History and Forest Structure of An Endangered Subtropical Ecosystem in the Florida Keys, U.S.A. *International Journal of Wildland Fire* 22 (3): 394–404.
- Caffrey, M.A. and Horn, S.P. 2013. The Use of Lithium Heteropolytungstate in the Heavy-Liquid Separation of Samples Which Are Sparse in Pollen. *Palynology* 37(1): 143–150.
- Power, M.J., Mayle, F.E., Bartlein, P.J., Marlon, J.R., Anderson, R.S., Behling, H., Brown, K.J., Carcaillet, C., Colombaroli, D., Gavin, D.G., Hallett, D.J., Horn, S.P., Kennedy, L.M., Lane, C., Long, C., Moreno, P.I., Paitre, C., Robinson, G., Taylor, Z., and Walsh, M. 2013. Climate Control of the Biomass-burning Decline in the Americas after AD 1500. *The Holocene* 23(1): 3–13.
- Taylor, Z.P., Horn, S.P. and Finkelstein, D.B. 2013. Maize Pollen Concentrations in Neotropical Lake Sediments as An Indicator of the Scale of Prehistoric Agriculture. *The Holocene* 23(1): 78–84.
- Taylor, Z.P., Horn, S.P., and Finkelstein, D.B. 2013. Pre-Hispanic Agricultural Decline Prior to the Spanish Conquest in Southern Central America. *Quaternary Science Reviews* 73: 196–200.
- Lane, C.S. and Horn, S.P. 2013. Terrestrially-derived N-alkane δD Evidence of Shifting Holocene Paleohydrology in Highland Costa Rica. *Journal of Arctic, Antarctic, and Alpine Research* 45(3): 342–349.
- Daniau, A.-L., Bartlein, P.J., Harrison, S.P., Prentice, I.C., Brewer, S., Friedlingstein, P., Harrison-Prentice, T.I., Inoue, J., Izumi, K., Marlon, J.R., Mooney, S., Power, M.J., Stevenson, J., Tinner, W., Andrić, M., Atanassova, J., Behling, H., Black, M., Blarquez, O., Brown, K.J., Carcaillet, C., Colhoun, E.A., Colombaroli, D., Davis, B.A.S., D’Costa, D., Dodson, J., Dupont, L., Eshetu, Z., Gavin, D.G., Genries, A., Haberle, S., Hallet, D.J., Horn, S.P., Hope, G., Kassa, T.G., Katamura, F., Kennedy, L.M., Kershaw, P., Krivonogov, S., Long, C., Magri, D., Marinova, E., McKenzie, G.M., Moreno, P.I., Moss, P., Neumann, F.H., Norström, E., Paitre, C., Rius, D., Roberts, N., Robinson, G.S., Sasaki, N., Scott, L., Takahara, H., Terwilliger, V., Thevenon, F., Turner, R.B., Valsecchi, V.G., Vannièrè, B., Walsh, M., Williams, N., and Zhang, Y. 2012. Predictability of Biomass Burning in Response to Climate Changes. *Global Biogeochemical Cycles* 26: GB4007, doi:10.1029/2011GB004249.
- Harley, G.L., Grissino-Mayer, H.D., and Horn, S.P. 2011. The Dendrochronology of *Pinus elliottii* in the Lower Florida Keys: Chronology and Climate Response. *Tree-Ring Research* 67(1): 39–50.
- Lane, C.S., Horn, S.P., Mora, C.I., Orvis, K.H., and Finkelstein, D.B. 2011. Sedimentary Stable Carbon Isotope Evidence of Late Quaternary Vegetation and Climate Change in Highland Costa Rica. *Journal of Paleolimnology* 45: 323–338.
- Lane, C.S., Horn, S.P., Orvis, K.H., and Thomason, J.M. 2011. Oxygen Isotope Evidence of Little Ice Age Aridity on the Caribbean Slope of the Cordillera Central, Dominican Republic. *Quaternary Research* 75: 461–470.

- Schlachter, K.J., and Horn, S.P. 2010. Sample Preparation Methods and Replicability in Macroscopic Charcoal Analysis. *Journal of Paleolimnology* 44: 701–708. .
- Taylor, Z.P., Horn, S.P., Mora, C.I.; Orvis, K.H., and Cooper, L.W. 2010. A Multi-proxy Palaeoecological Record of Late-Holocene Forest Expansion in Lowland Bolivia. *Palaeogeography, Palaeoecology, Palaeoclimatology* 293: 98–107.
- Filippelli, G.M., Souch, C., Horn, S.P., and Newkirk, D. 2010. The PreColumbian Footprint on Terrestrial Nutrient Cycling in Costa Rica: Insights from Phosphorous in a Lake Sediment Record. *Journal of Paleolimnology* 43: 843–846.
- Lane, C.S., Horn, S.P., Taylor, Z.P., and Mora, C.I. 2009. Assessing the Scale of Prehistoric Human Impact in the Neotropics Using Stable Carbon Isotope Analyses of Lake Sediments: A Test Case from Costa Rica. *Latin American Antiquity* 20: 120–133.
- Marchant, R., Cleef, A., Harrison, S.P., Hooghiemstra, H., Markgraf, V., van Boxel, J., Ager, T., Almeida, L., Anderson, R., Baied, C., Behling, H., Berrio, J.C., Burbridge R., Björk, S., Bryne, R., Bush, M., Duivenvoorden, J., Flenley, J., De Oliveria, P., Van Geel, B., Graf, K., Gosling, W.D., Haberle, S., van der Hammen, T., Hansen, B., Horn, S., Kuhry, P., Ledru, M.-P., Mayle, F., Leyden, B., Lozano-García, S., Melief, A.M., Moreno, P., Moar, N.T., Prieto, A., van Reenen, G., Salgado-Laboriau, M., Schäbitz, F., Schreve-Brinkman, E.J., and Wille, M. 2009. Pollen-based Biome Reconstructions for Latin America at 0, 6000, and 18 000 radiocarbon years ago. *Climate of the Past* 5: 725–767.
- Lane, C.S., Horn, S.P., Mora, C.I., and Orvis, K.H. 2009. Late-Holocene Paleoenvironmental Change at Mid-Elevation on the Caribbean Slope of the Cordillera Central, Dominican Republic. *Quaternary Science Reviews* 28: 2239–2260.
- Kennedy, L.M. and Horn, S.P. 2008. A Late Holocene Pollen and Charcoal Record from La Selva Biological Station, Costa Rica *Biotropica* 40(1): 11–19.
- Lane, C.S., Horn, S.P., Orvis, K.H., and Mora, C.I. 2008. The Earliest Evidence of Ostionoid Maize Agriculture from the Interior of Hispaniola. *Caribbean Journal of Science* 44(1): 43–52.
- Kennedy, L.M., and Horn, S.P. 2008. Postfire Vegetation Recovery in Highland Pine Forests of the Dominican Republic. *Biotropica* 40(4): 412–421.
- Power, M.J., Marlon, J., Ortiz, N., Bartlein, P.J., Harrison, S.P., Mayle, F.E., Ballouche, A., Bradshaw, R., Carcaillet, C., Cordova, C., Mooney, S., Moreno, P., Prentice, I.C., Thonicke, K., Tinner, W., Whitlock, C., Zhang, Y., Zhao, Y., Anderson, R.S., Beer, R.11, Behling, H., Briles, C., Brown, K.J., Brunelle A, Bush, M., Camill, P, Chu, G.Q., Clark, J., Colombaroli, D., Daniels, M., Dodson, J., Doughty, E., Edwards, M.E., Fisinger, W., Foster, D., Gaillard, M.-J., Gavin, D.G., Gobet, E., Haberle, S., Hallett, D.J., Higuera, P., Hope, G., Horn, S., Inoue, J., Kaltenrieder, P., Kennedy, L., Kong, Z.C., Larsen, C., Long, C.J., Lynch, J., Lynch, B., McGlone, M., Meeks, S., Mensing, S., Meyer, G., Minckley, T., Mohr, J, Newnham, R., Noti, R., Oswald, W., Pierce, J., Richard, P.J.H., Shuman, B.J., Takahara, H., Toney, J., Turney, C., Umbanhower, C., Vandergoes, M.53, Vanniére, B., Vescovi, E., Walsh, M., Wang, X., Williams, N., Wilmschurst, J. Zhang , J.H. 2008. Changes in Fire Activity Since the Last Glacial Maximum: An Assessment Based on a Global Synthesis and Analysis of Charcoal Data. *Climate Dynamics* 30: 887–907.

- Hart, J.L., Horn, S.P., and Grissino-Mayer, H.D. 2008. Fire History from Soil Charcoal in a Mixed Hardwood Forest on the Cumberland Plateau. *Journal of the Torrey Botanical Society* 135(3): 401–410.
- Lane, C.S., Mora, C.I., Horn, S.P., and Orvis, K.H. 2008. High Resolution Analysis of the Sensitivity of Sedimentary Stable Carbon Isotope Signatures to Prehistoric Forest Clearance and Agriculture in the Neotropics. *Journal of Archaeological Science* 35: 2119–2132.
- Driese, S.G., Orvis, K.H., Horn, S.P., Li, Z-H., and Jennings, D.S. 2007. Paleosol Evidence for Quaternary Uplift and for Climate and Ecosystem Changes in the Cordillera de Talamanca, Costa Rica. *Palaeogeography, Palaeoclimatology, Palaeoecology* 248(1–2): 1–23.
- Horn, S.P., and Rodgers III, J.C. 2007. Pollen in the Río Puerto Viejo, Costa Rica. *Brenesia* 67: 1–7.
- Kennedy, L.M., Horn, S.P., and Orvis, K.H. 2006. A 4000-yr Record of Fire and Forest History from Valle de Bao, Cordillera Central, Dominican Republic. *Palaeogeography, Palaeoecology, Palaeoclimatology* 231: 279–290.
- Horn, S.P. and Kennedy, L.M. 2006. Pollen Evidence of the Prehistoric Presence of Cattail (Typhaceae: *Typha*) in Palo Verde National Park, Costa Rica. *Brenesia* 66: 85–87.
- Haberyan, K.A., and Horn, S.P. 2005. Diatom Paleoecology of Laguna Zoncho, Costa Rica. *Journal of Paleolimnology* 33: 361–369.
- Driese, S.G., Li, Z-H, and Horn, S.P. 2005. Late Pleistocene and Holocene Climate and Geomorphic Histories Interpreted from 23,000 ¹⁴C yr B.P. Paleosol and Floodplain Soils, Southeastern West Virginia, USA. *Quaternary Research* 63: 136–149.
- Anchukaitis, K., and Horn, S.P. 2005. A 2000-year Reconstruction of Forest Disturbance from Southern Pacific Costa Rica. *Palaeogeography, Palaeoclimatology, Palaeoecology* 221: 35–54.
- Orvis, K.H., Lane, C.S., and Horn, S.P. 2005. Laboratory Production of Vouchered Reference Charcoal from Small Woody Samples and Non-woody Plant Tissues. *Palynology* 29: 1–11.
- Kennedy, L.M., Horn, S.P., and Orvis, K.H. 2005. Modern Pollen Spectra from the Highlands of the Cordillera Central, Dominican Republic. *Review of Palaeobotany and Palynology* 137: 51–68.
- Speer, J.H., Orvis, K.H., Grissino-Mayer, H.D., Kennedy, L.M., and Horn, S.P. 2004. Assessing the Dendrochronological Potential of *Pinus occidentalis* Swartz in the Cordillera Central of the Dominican Republic. *The Holocene* 14(4): 563–569.
- Lane, C.S., Horn, S.P., and Mora, C.I. 2004. Stable Carbon Isotope Ratios in Lake and Swamp Sediments as a Proxy for Prehistoric Forest Clearance and Crop Cultivation in the Neotropics. *Journal of Paleolimnology* 32: 375–381.
- Arford, M.R. and Horn, S.P. 2004. Pollen Evidence of the Earliest Maize Agriculture in Costa Rica. *Journal of Latin American Geography* 3(1): 108–115.
- Horn, S.P., Sanford, Jr., R.L., Dilcher, D., Lott, T.A., Renne, P. R., Wiemann, M.C., Cozadd, D., and Vargas, O. 2003. Pleistocene Plant Fossils in and Near La Selva Biological Station, Costa Rica. *Biotropica* 35(3): 434–441.

- Haberyan, K.A., Horn, S.P., and Umaña V., G. 2003. Basic Limnology of 51 Lakes in Costa Rica. *Revista de Biología Tropical* 51(1): 107–122.
- Clark, G.M., Horn, S.P., and Orvis, K.H. 2002. High-Elevation Savanna Landscapes in the Cordillera Central, Dominican Republic, Hispaniola: Dambos in the Caribbean? *Mountain Research and Development* 22(3): 288–295.
- Clement, R.M. and Horn, S.P. 2001. PreColumbian Land Use History in Costa Rica: A 3000-year Record of Forest Clearance, Agriculture, and Fires from Laguna Zoncho. *The Holocene* 11(4): 419–426.
- Horn, S.P. and Kennedy, L.M. 2001. Pollen Evidence of Maize Cultivation 2700 B.P. at La Selva Biological Station, Costa Rica. *Biotropica* 33(1): 191–196.
- Horn, S.P., Kennedy, L.M., and Orvis, K.H. 2001. Vegetation Recovery Following a High Elevation Fire in the Dominican Republic. *Biotropica* 33(4): 701–708.
- Horn, S.P. 2001. The Age of the Hule Explosion Crater, Costa Rica, and the Timing of Subsequent Tephra Eruptions: Evidence from Lake Sediments. *Revista Geológica de America Central* 24: 57–66.
- Horn, S.P., Orvis, K.H., Kennedy, L.M., and Clark, G.M. 2000. Prehistoric Fires in the Highlands of the Dominican Republic: Evidence from Charcoal in Soils and Sediments. *Caribbean Journal of Science* 36(1–2): 10–18.
- Orvis, K.H. and Horn, S.P. 2000. Quaternary Glaciers and Climate on Cerro Chirripó, Costa Rica. *Quaternary Research* 54: 24–37.
- Lafon, C.W., Huston, M.A., and Horn, S.P. 2000. Effects of Agricultural Soil Loss on Forest Succession Rates and Tree Diversity in East Tennessee. *Oikos*, 90: 431–44.
- League, B.L. and Horn, S.P. 2000. A 10,000 Year Record of Páramo Fires in Costa Rica. *Journal of Tropical Ecology*, 16: 747–752.

Grant Funding (last 10 years)

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| 2018 | Department of the Interior, National Park Service: Developing a Fire History for the Mesic, Eastern Portion of Great Smoky Mountains National Park; \$51,000. |
| 2018 | East Tennessee State University: Pollen Analysis of Samples from the Rock Creek Mortar Shelter, Tennessee; \$1883. |
| 2018 | Tennessee Valley Authority: Paleoclimate Proxies in Sediments from the Henson Branch Histosol Site, Tennessee; \$25,000. |
| 2017–2020 | National Science Foundation (Geography and Spatial Science): Developing a Network of n-Alkane Hydrogen Isotope Records to Identify Drivers and Impacts of Holocene Droughts; \$351,125 including REU supplement (with C. Lane and D. Gamble). |
| 2017–2019 | National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Holocene Precipitation Variability and its Relationship to Prehistoric Agriculture and Fires; \$15,819 (with M. Kerr, to support his Ph.D.) |

- 2017 Electric Power Research Institute: Paleoflood Investigations on the Upper Tennessee River, Modification 3; \$95,679 (with L. McKay and L. Tran).
- 2017 Tennessee Valley Authority: Radiocarbon Dating of Paleoflood Deposits Near Watts Bar Dam, Meigs County, Tennessee; \$4983.
- 2017–2018 American Philosophical Society: Lake Sediments as Archives of Fire and Environmental History in a Belizean Pine Savanna; \$5000.
- 2017–2018 Mel Marcus Fund for Physical Geography, American Association of Geographers: Lake Sediment Coring with Graduate Students in the Savanna of Southern Belize; \$2000.
- 2017–2018. Carlos C. Campbell Memorial Fellowship, Great Smoky Mountains Conservation Association: Holocene Vegetation and Fire History in Table Mountain Pine Stands in Great Smoky Mountains National Park; \$5000 (with C. Underwood).
- 2016–2019 National Science Foundation (Division of Undergraduate Education): GP-IMPACT: Engagement of Students and Faculty at Community Colleges to Enhance Recruitment to 4-Year Geoscience Programs; \$415,988 (with L. McKay).
- 2016–2017 Electric Power Research Institute: Paleoflood Investigations on the Upper Tennessee River, Modification 2; \$81,496 (with L. McKay and L. Tran).
- 2015–2018 National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Fire, Vegetation and Environmental Interactions Across the Holocene on the U.S. Southeastern Coastal Plain; \$15,387 (with M. Boehm, to support his Ph.D. research).
- 2016 Tennessee Valley Authority: Further Paleoecological Analysis of Sediments From the Henson Branch Histosol Site, Tennessee, \$24,000.
- 2014–2015 United States Geological Survey: Storm Surge Modeling and Ecosystem Services at Cape Lookout National Seashore; \$18,000 (with M.A. Caffrey).
- 2014–2015 Tennessee Valley Authority: Paleoecological Analysis of Sediments at the Highway 79 Henson Branch Histosol Site, Tennessee; \$12,000.
- 2012–2015 National Science Foundation (Geography and Spatial Science): Establishing a Chronology of Late Quaternary Glacial Advances in the Tropical American Cordillera; \$200,000 (with Y. Li).
- 2011–2014 National Science Foundation (Geography and Spatial Science and Population and Community Ecology): Collaborative Research: Late Quaternary Paleoenvironments of Cuatro Ciénegas, Mexico, a Hotspot of Endemism in North America; \$229,414 (in collaboration with T. Minckley at the University of Wyoming).
- 2010–2011 Office of Research, University of Tennessee: Organized Research Unit Funding for the Initiative for Quaternary Paleoclimate Research, \$60,000 (with L. McKay, Z.H. Li, D. Finkelstein, H. Grissino-Mayer, Y. Li, D. Anderson, and C.D. Hulsey).

- 2010–2012 National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Late Quaternary Paleoenvironments and Biota of Cuatro Ciénegas, Mexico; \$11,013 (with M. Valente, to support his Ph.D. research).
- 2009–2015 National Science Foundation (Paleo Perspectives on Climate Change): Collaborative Research: Pleistocene-Holocene Climate Variability of the Southern Appalachian Region, Southeastern U.S; \$329,861 (with Z.-H. Li, in collaboration with S. Driese at Baylor University).
- 2009–2011 National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Holocene Climate and Environmental History of Laguna Saladilla, Dominican Republic;” \$12,000 (with M. Caffrey, to support her Ph.D. research).
- 2009–2011 National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Anthropogenic Impacts on Fire and Forest History in Native Yellow Pine and Mixed Hardwood-Pine Communities of the Southern Appalachians; \$10,550 (with C. Underwood, to support his Ph.D. research).
- 2009–2011 U.S. Fish and Wildlife Service: Sedimentological and Dendrochronological Evidence of Fire History in the National Key Deer Refuge, Florida Keys, USA; \$61,853 (with H.Grissino-Mayer).
- 2008–2011 National Science Foundation (Geography and Spatial Science): Doctoral Dissertation Research: Interpreting Prehistoric Agriculture from Isotope and Pollen Indicators in Neotropical Lake Sediments: Do Multiple Cores Enhance Spatial Resolution?; \$11,388 (with Z. Taylor and D. Finkelstein; to support Z. Taylor’s Ph.D. research).
- 2008–2009 Carlos C. Campbell Memorial Fellowship, Great Smoky Mountains Conservation Association: Using Soil Charcoal as a Proxy for the Reconstruction of Fire Histories in Great Smoky Mountains National Park, USA; \$5000 (with C. Underwood).

Graduate Student Supervision

10 Ph.D. completed and 3 Ph.D. in progress (one co-chaired)

29 M.S. completed and 3 M.S. in progress (one co-chaired)